

# Blood Cancers

**From Exposure to**

# Aviation Fuels

These documents are provided by a veteran who was awarded entitlement for Multiple Myeloma in the hopes that they help other veterans.

Read VRAB Decision: [100005470645](#)

1 novembre 2024,

Bureau de services juridiques des pensions

**Objet : Exposition prolongée aux carburants et additifs aéronautiques et développement d'un myélome multiple chez M. XXX**

Madame, Monsieur,

Je soussignée, Dre Geneviève Lemire, certifie avoir examiné le dossier médical de M. Mercier, ancien technicien en systèmes avioniques des Forces Canadiennes, exposé aux carburants d'aviation JP-4, JP-8 et à l'additif Spec-aid (8Q462W) durant 22 années de service, de 2001 à 2023. Après une évaluation complète, il apparaît que son exposition prolongée et répétée à ces produits chimiques constitue un facteur de risque plausible pour le développement de son myélome multiple diagnostiqué vers la fin de son service militaire.

#### **Exposition et risques associés**

- 1- JP-4 et JP-8 :** Les carburants JP-4 et JP-8 contiennent des substances reconnues pour leurs effets toxiques et potentiellement cancérigènes, notamment le benzène et le naphthalène. Le benzène est un cancérigène documenté, connu pour son effet sur la moelle osseuse et son lien avec des cancers hématologiques. Le naphthalène, également présent dans les carburants, a des effets toxiques sur l'ADN et la moelle osseuse. Une exposition prolongée à ces substances peut provoquer des altérations cellulaires et inflammatoire, un environnement propice au développement de cancers hématologique, dont le myélome multiple.
- 2- Additif Spec-aid (8Q462W) :** cet additive, utilisé dans les carburants aéronautiques pour améliorer leurs performances, est un composé dont l'impact sur la santé humaine à long terme reste préoccupant. Bien que les effets précis de cet additif soient moins bien documentés, son utilisation dans les carburants JP4 et JP-8 expose les techniciens à un cocktail complexe de substances chimiques potentiellement nocives. Cette exposition pourrait contribuer à un effet cumulatif sur le système immunitaire et la moelle osseuse.

- 3- **Facteurs cumulés d'expositions** : M. Mercier a été en contact quotidien au travail avec ces produits pendant plus de deux décennies. Il est bien documenté que l'exposition répétée à des produits chimiques toxiques, même à faibles doses, peut avoir des effets synergiques et augmenter le risque de cancers hématologiques. Le profil d'exposition de M. Mercier, impliquant le benzène, le naphthalène et d'autres agents dans un environnement fermé, augmente significativement son risque de développer des troubles de la moelle osseuse, comme le myélome multiple.

### **Conclusion**

En résumé, il existe des bases scientifiques pour soutenir un lien probable entre l'exposition prolongée de M. Mercier aux carburants JP-4, JP-8, ainsi qu'à l'additif Spec-aid (8Q462W), et le développement de son myélome multiple. Les effets toxiques et cancérigènes des composants présents dans ces substances, associés à la durée et à la régularité de l'exposition, renforcent cette hypothèse.

Je recommande donc que le cas de M. Mercier soit considéré en tenant compte de cette exposition significative et des risques documentés pour la santé associés aux substances auxquelles il a été exposé. Je reste à votre disposition pour toute clarification supplémentaire.

Veuillez agréer, Madame, Monsieur, l'expression de mes salutations distinguées.

Dre XX  
Médecin généraliste  
Médecin de vol Base militaire de Bagotville

## Facture # F-38703-C01

<b>Date de la facture</b>	2024-10-30	<b>Facture #</b>	F-38703-C01
<b>Statut</b>	Non payé	<b>Facturer à</b>	Bureau de services juridiques des pensions 2323, promenade Riverside, Tour Billings, 2e étage, Ottawa, ON, K1A 0P5
<b>Patient</b>	Bureau de services juridiques des pensions 830, avenue Ernest-Gagnon, bureau 305, Complexe Samuel-Holland, Québec, QC, G1S 3R3	<b>Payer à</b>	INTERMED groupe santé 200 - 412 boulevard du Saguenay Est Chicoutimi QC G7H 7Y8 Tél : 418-602-6620 Télécopieur : 418-602-6621

Visites				
Visites	Détails	Sous-Total	Taxes	Total
<b>2024-10-30</b>	Invoice #F-38703-C01			
<b>Analyse de dossier BSJP -- 3 h 30</b>				
Dossier 8441248 - Emmanuel Mercier		980,00 \$	0,00 \$	980,00 \$
			<b>Sous-Total</b>	980,00 \$
			<b>Total</b>	980,00 \$

Palements
Aucun paiement

Sommaire			À partir du mercredi le 30 octobre, 2024 à 11h37					
Montant total facturé au Bureau de services juridiques des pensions	Total payé par le Bureau de services juridiques des pensions	Montant dû par le Bureau de services juridiques des pensions	Montant total facturé à l'assureur	Montant total payé par les assureurs	Montant total dû par les assureurs	Montant total facturé	Total payé	Solde
980,00 \$	0,00 \$	980,00 \$	0,00 \$	0,00 \$	0,00 \$	980,00 \$	0,00 \$	980,00 \$

22.0.1. Lorsque la Régie est d'avis qu'un professionnel de la santé ou un tiers a exigé paiement d'une personne assurée à l'encontre de la présente loi, alors que rien dans les règlements ou les ententes ne le permet ou a exigé plus que le montant qui aurait été payé par la Régie à un professionnel soumis à l'application d'une entente pour les services assurés fournis à une personne assurée qui n'a pas présenté sa carte d'assurance maladie, son carnet de réclamation ou sa carte d'admissibilité, elle rembourse à la personne assurée la somme ainsi versée et en avise par écrit le professionnel de la santé ou le tiers. La Régie peut rembourser une personne assurée, qu'elle ait reçu ou non une demande de remboursement dans les 5 ans suivant la date du paiement.



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AVIS - Cette documentation a été révisée par l'autorité technique et contient des renseignements sur des marchandises contrôlées. Conformément à la DAOD 3003, elle doit être verrouillée lorsqu'elle n'est pas supervisée. À l'intérieur du MDN, l'accès à cette documentation est réservé aux individus certifiés avec le programme de certification des marchandises contrôlées de FATTC. Réglez-vous à FATTC avant de transférer à l'extérieur du MDN. La destruction totale est requise lors de l'élimination.

*Cette procédure est utilisée à tous les jours.*

FIRST LINE MAINTENANCE

PLANE CAPTAIN MANUAL

REFUELLING USING ELECTRICAL POWER

*This WP supersedes WP 009 00 dated 2017-12-08.*

REFERENCE MATERIAL

C-12-188-460/NH-000.....	FUEL SYSTEM
C-12-188-LMM/MM-001.....	LINE MAINTENANCE PROCEDURES
C-12-188-LMM/MM-002.....	LINE MAINTENANCE ACCESS DOORS
C-12-188-SCM/AX-000.....	SOFTWARE CONFIGURATION MANUAL

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*on ravitaille avec le JP-8 ou JP-4.*



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### Record of Applicable Modifications and Changes

Type	Date	Source Data Identification	Date Incorp.	Remarks
CFMI	2006-08-29	C-12-188-000/CD-168	2008-07-01	Completed on all affected aircraft.
CFMI	2008-04-02	C-12-188-000/CD-166	2008-07-01	Completed on all affected aircraft.
<i>CFMI</i>	<i>2019-05-14</i>	<i>C-12-188-000/CF-439</i>	<i>2020-07-01</i>	<i>C21X B2.1</i>
<i>DND 570</i>	<i>2019-02-27</i>	<i>CPC190110</i>	<i>2020-07-01</i>	-

## 1. GENERAL INFORMATION

- 1.1. The aircraft is refuelled through a standard refuel/defuel receptacle in door 8 (Figure 1, Sheet 2). The maximum refuelling pressure is 55 psi. The fuel system can be refuelled without the use of electrical power. After tank maintenance, refuelling must be done using electrical power to verify that all components function properly. Internal tanks are vented through the vent outlets on each vertical stabilizer (Figure 1, Sheet 2).

## 2. REFUELLING PRECAUTIONS

### WARNING

**Aviation turbine fuel is flammable and toxic to eyes, skin and respiratory tract. Skin protection required. Avoid repeated/prolonged contact. Use only in well-ventilated area. Keep away from open flame or other sources of ignition.**

- 2.1. The following procedures apply:
- Never refuel during aircraft maintenance.
  - Aircraft with suspected hot brakes shall not be refuelled.
  - Make sure a bonding wire is attached between aircraft and fuel servicing equipment.
  - On FUEL system control panel, make sure DUMP switch is set to OFF (Figure 1, Sheet 1).
  - Make sure fire-fighting equipment is available.
  - Make sure refuelling nozzle locking device (Figure 1, Sheet 2) on the ground refuel/defuel receptacle is serviceable.
  - Make sure vent outlets on each vertical stabilizer and pressure relief vents on each external tank (if installed) are not obstructed (Figure 1, Sheet 3).
  - Make sure refuelling or defuelling is not done within 100 feet of operating airborne-type radio or radar equipment or within 300 feet of ground radar equipment.
  - Make sure refuelling or defuelling is not done within 50 feet of aircraft with engine(s) operating.
  - Operation of the auxiliary power unit (APU) is prohibited during refuelling.
  - Do not carry or wear loose metal objects, such as knives, keys or other objects that might produce sparks.
  - Never fuel during electrical storms.
  - Do not carry matches or cigarette lighters.
  - Do not wear shoes with exposed nails, metal plates or hobnails.

### NOTE

**Ordnance safetying means replacing any arming lever, safety-pin, electrical interrupt or plug/pin; securing of armament switches; and any applicable action that makes the specific ordnance carried safe.**

- o. All ordnance shall be safetyed.



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- p. Fuel pressure from servicing equipment shall not exceed 35 psi during precheck and towards end of refuelling, and 55 psi during remainder of refuelling. If all foam in a wing tank has been replaced, the first fuelling pressure should not exceed 25 psi.
- q. All persons involved in refuelling shall dissipate static potential by touching or gripping an approved static ground before entering the refuelling area.

### 3. REFUELLING USING ELECTRICAL POWER

#### Support Equipment Required

Nomenclature	Part Number or Type Designation
Power unit, Stewart Stevenson	74507

#### Materials Required

Nomenclature	Specification or Part Number
Turbine fuel - aviation grade	MIL-T-5624, Grade/grade JP-4 or/ou JP-5 (CAGE 81349)
	or
Turbine fuel - aviation grade	MIL-T-83133, Grade/grade JP-8 or/ou JP-8 +100 (CAGE 81349)

### 3.1. PROCEDURES

The following procedures apply:

- a. Observe all refuelling precautions; refer to Paragraph 2.
- b. On EXT LT control panel (Figure 1, Sheet 2), set INTR WING switch to NORM. On FUEL system control panel, set switches as listed below:
  - EXT TANKS (if installed)
  - WING - STOP
  - CTR - STOP
  - EXT TANKS (not installed)
  - WING - NORM
  - CTR - NORM
- c. Open door 8 in accordance with C-12-188-LMM/MM-002.
- d. Connect refuelling hose nozzle bonding wire to the aircraft ground jack.

**WARNING**

**To prevent fuel spillage resulting in possible fire and/or explosion, make sure nozzle is in the locked position.**

- e. Remove cap (Figure 1, Sheet 2) and install refuelling nozzle on ground refuel/defuel receptacle by pushing in and turning clockwise until nozzle resists turning. Lock nozzle in position by setting manual shutoff lever in fully open position (Figure 1, Sheet 2).
- f. Make sure refuelling nozzle engages by tugging counterclockwise on refuelling nozzle locking device. Determine refuelling hose and nozzle engagement by pulling on hose and by making a visual inspection.
- g. On master precheck valve, make sure handle is in UP PRECHECK position (Figure 1, Sheet 2).
- h. Make sure doors 141L/R are closed (C-12-188-LMM/MM-002).
- i. Inspect for red OFF flag and yellow ID flag on FUEL QTY indicator (Figure 1, Sheet 1).

*Compte rendu  
sur MSDS de JP-4  
(benzène)*

# MATERIAL SAFETY DATA SHEET

**MILITARY AVIATION TURBINE FUEL JP-4**

MSDS No.  
APPC501 Ver. 12  
Rev. Date  
12/31/2002

**IMPORTANT:** Read this MSDS before handling and disposing of this product and pass this information on to employees, customers, and users of this product.

## 1. PRODUCT and COMPANY IDENTIFICATION

**Material Identity** Military Aviation Turbine Fuel JP-4

**Trade Name(s)** Military Aviation Turbine Fuel JP-4

**Other Name(s)** JP-4 Jet Fuel, MIL-T-5624L, Amendment 1 Specification Fuel

**Chemical Description** This material is an organic petroleum liquid. This is a complex C4 to C18 hydrocarbon mixture which under normal conditions contains less than 0.4 wt% sulfur compounds.

**Manufacturer's Address**

<p>BP Amoco West Coast Products LLC Carson Business Unit 1801 E. Sepulveda Boulevard Carson, California 90749-6210</p>	<p>BP Amoco West Coast Products LLC Cherry Point Business Unit 4519 Grandview Road Blaine, Washington 98230</p>
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**Telephone Numbers:**

<p>Emergency Health Information: Emergency Spill Information: Other Product Information</p>	<p>1 (800) 447-8735 1 (800) 424-9300 CHEMTREC (USA) 1 (866) 4BP-MSDS (866-427-6737 Toll Free – North America email: <a href="mailto:bpcares@bp.com">bpcares@bp.com</a></p>
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## 2. COMPONENTS and EXPOSURE LIMITS

Component <sup>1</sup>	CAS No.	% Composition By Volume <sup>2</sup>	ACGIH TLV	Exposure Limits		Units	Type
				OSHA PEL <sup>3</sup>			
HYDROCARBONS WITH A BOILING RANGE OF 291°F to 572°F							
	8008-20-6	AP 30 to 70	N/AP	N/AP			
STRAIGHT RUN NAPHTHA							
	64741-41-9	AP 30 to 70	N/AP	N/AP			
which contains:							
BENZENE <sup>(1)(2)(3)(4)</sup>							
	71-43-2	AP 0.6	2.5 0.5 skin	5 1	ppm ppm		STEL TWA
CYCLOHEXANE							
	110-82-7	AP 2	400 300	N/AP 300	ppm ppm		STEL TWA
ETHYLBENZENE <sup>(2)</sup>							
	100-41-4	AP 0.4 to 1	125 100	125 100	ppm ppm		STEL TWA
HEXANE (N-HEXANE)							
	110-54-3	AP 12	50 skin	50	ppm		TWA
TOLUENE							
	108-88-3	AP 2 to 4	N/AP 50 skin	150 100	ppm ppm		STEL TWA
TRIMETHYL BENZENE (ALL ISOMERS)							
	25551-13-7	AP 0.5 to 2	25	25	ppm		TWA

*Sup, porteur attention à la partie 110-82-7  
avec précautions: 1/3  
1/5*

Sorry, I can't fill out the form but can confirm by email. The MSDS sent to you on July 7, 2005 are the most recent and accurate MSDSs for the requested products.

-----Original Message-----

From: Gautreau.JG@forces.gc.ca [mailto:Gautreau.JG@forces.gc.ca]  
Posted At: Monday, July 11, 2005 7:15 AM  
Posted To: MSDS Request Box  
Conversation: msds request  
Subject: RE: msds request

Barbara,  
could you fill out the attachment so that our records can show that we have the most recent and accurate MSDS for the stated products.

Thanks a bunch

Jason

-----Original Message-----

From: MSDS Request Box [mailto:bpcares@bp.com]  
Sent: Thursday, 07 July, 2005 16:58  
To: Gautreau.JG@forces.gc.ca  
Subject: FW: msds request

Hello!

Thank you for using BP products.

We appreciate your commitment to health, safety and the environment.

Sincerely,

Barbara A. Marsh

BP Product Stewardship

150 W. Warrenville Road

Mail Code H-1

Naperville, IL 60563

United States

FOR MSDS REQUESTS:

phone: +1-866-4bp-MSDS (866-427-6737)

fax: +1-630-420-4808

e-mail: bpcares@bp.com <mailto:bpcares@bp.com>

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XYLENE	1330-20-7	AP	2 to 5	150	150	ppm	STEL
				100	100	ppm	TWA

Other applicable exposure guidelines:

STODDARD SOLVENT	8052-41-3			100	100	ppm	TWA
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Since specific exposure standards/control limits have not been established for this material, the exposure limits shown in Section 2 are suggested as exposure control guidelines.

<sup>1</sup> Carcinogen displayed after Component Name. Listed by <sup>(1)</sup> NTP, <sup>(2)</sup> IARC, <sup>(3)</sup> OSHA, <sup>(4)</sup> Other

<sup>2</sup> See Abbreviations on last page

<sup>3</sup> The OSHA exposure limits were changed in 1993 due to a federal court ruling. ARCO has chosen to list the 1989 OSHA exposure limits in this document as they are generally more stringent and therefore more protective than the current exposure limits. (Refer to 29 CFR 1910.1000).

### 3. HAZARD IDENTIFICATION

#### IMMEDIATE HAZARDS

**HIGHLY FLAMMABLE!** OSHA/NFPA Class 1B flammable liquid. Keep away from heat, sparks and open flame.

**ASPIRATION HAZARD!** If swallowed, do not induce vomiting since aspiration into the lungs may cause chemical pneumonia. Obtain prompt medical attention.

May cause irritation or more serious skin disorders! May be harmful if inhaled! Avoid prolonged or repeated liquid, mist, and vapor contact with eyes, skin, and respiratory tract.

May cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, confusion, loss of coordination, fatigue, nausea and labored breathing. May lead to unconsciousness, convulsions, and possibly death.

Wash hands thoroughly after handling.

#### ACUTE HEALTH HAZARDS

##### Routes of Exposure

##### Signs and Symptoms

##### **Inhalation (Primary)**

Exposures at airborne concentrations well above the recommended exposure limits in Section 2 may cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, confusion, loss of coordination, fatigue, nausea, labored breathing and irregular heartbeats. May lead to unconsciousness, convulsions, and possibly death. Airborne concentrations above the recommended exposure limits are not anticipated during normal workplace or refueling activities due to the slow evaporation of this material at ambient temperatures.

##### **Eye Contact**

Not expected to cause prolonged or significant eye irritation.

##### **Skin Contact**

Moderate skin irritation may occur upon short-term exposure.

##### **Ingestion**

**ASPIRATION HAZARD!** This material can enter the lungs during swallowing or vomiting and may cause acute lung inflammation and damage which in severe cases may be fatal. May cause irritation of the mouth, throat, and gastrointestinal tract leading to nausea, vomiting, diarrhea, and restlessness. May cause headache, dizziness, drowsiness, confusion, loss of coordination, fatigue, nausea and labored breathing. May lead to unconsciousness, convulsions, and possibly death.

##### **Summary of Chronic Hazards and Special Health Effects**

Exposures at airborne concentrations well above the recommended exposure limits in Section 2 may aggravate medical conditions such as chronic respiratory diseases, cardiovascular disease, skin diseases, or blood disorders.

Prolonged/repeated skin exposure, inhalation or ingestion of this material above the recommended limits may result in adverse dermal or systemic effects. Avoid prolonged or repeated overexposure.

Neurotoxic effects have been associated with n-hexane, a component of this material. Avoid prolonged or repeated overexposure.



Contains benzene, a chemical known to cause cancer in humans. Repeated and prolonged overexposure to benzene vapors may cause leukemia, aplastic anemia, or other blood disorders, immunotoxicity, reproductive harm or fetal toxicity.

See Section 11 for additional toxicology information.

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#### 4. EMERGENCY and FIRST AID

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<b>Inhalation</b>	Immediately move personnel to area of fresh air. For respiratory distress, give oxygen, rescue breathing or administer CPR (cardiopulmonary resuscitation), if necessary. Obtain prompt medical attention.
<b>Eye Contact</b>	Flush with clean low-pressure water for at least 15 minutes, Occasionally lifting the eye lids. Obtain medical attention.
<b>Skin Contact</b>	Immediately remove contaminated clothing. Wash affected skin thoroughly with soap and water. If there are any signs or symptoms of irritation, obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting since aspiration into the lungs may cause chemical pneumonia. Obtain immediate medical attention.

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**Emergency Medical Treatment Procedures** See above procedures.

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#### 5. FIRE and EXPLOSION

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<b>Flash Point (Method)* +</b>	AP -10 - 30°F (D-56)	<b>NFPA Hazard Rating:</b> <b>Health:</b> 1 = Slight <b>Fire:</b> 3 = High <b>Reactivity:</b> 0 = Insignificant <b>Special:</b> = ---
<b>Autoignition Temperature (Method)*</b>	AP 464°F +	
<b>Flammable Limits (% Vol. in Air)*</b>	<b>Lower</b> AP 1.3 +	
	<b>Upper</b> AP 8.0 +	

\*At Normal Atmospheric Temperature and Pressure

+ Based on NFPA 'Jet Fuel, JP-4'

**Fire and Explosion Hazards** HIGHLY FLAMMABLE! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, these vapors can burn in the open or explode in confined spaces. Being heavier than air, flammable vapors may travel long distances along the ground before reaching a point of ignition and flashing back.

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<b>Extinguishing Media</b>	Foam, Water fog, Dry chemical, Carbon dioxide (CO <sub>2</sub> ) Water and water spray may cool the fire, but may not extinguish the fire.
<b>Special Firefighting Procedures</b>	For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. If firefighters cannot work upwind to the fire, respiratory protection must be worn. Cool tanks and containers exposed to fire with water.

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#### 6. ACCIDENTAL RELEASE MEASURES

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**Precautions if Material is Spilled or Released** Eliminate all potential sources of ignition. Handling equipment and tools should be grounded to prevent sparking. Contain spill, evacuate non-essential personnel, and safely stop flow. Blanket spill with foam or use water fog to reduce vapor cloud. On hard surfaces, spilled material may create a slipping hazard. Equip cleanup crews with proper protective equipment (as specified in section 8) and advise of hazards. Clean up by recovering as much spilled or contaminated materials as possible and placing into closed containers. Consult with an environmental professional for the federal, state and local cleanup and reporting requirements for spills and releases.

**7. HANDLING and STORAGE**

**Handling, Storage and Decontamination Procedures**

Avoid exposure to liquid and gas vapors. Odor is not a reliable warning of overexposure. Use only with adequate ventilation.

Keep away from sources of heat, flames, sparks or other ignition sources. Storage and use areas should be "No Smoking" areas. Containers should be bonded and grounded for transfers to avoid static sparks.

For determining electrical requirements for hazardous (classified) locations, this material should be considered Class 1, Group D.

Empty containers may retain some liquid and vapor residues and, if exposed to an ignition source, may explode.

Outside or detached storage is preferred. Inside storage should be in a standard flammable liquids storage warehouse, room or cabinet. Separate from oxidizing materials.

*survants  
- oil d'avier (poules)  
- changeur (termes)  
- vapours d'essence  
- ont des portes.*

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls**

Where possible, use adequate ventilation to keep vapor and mist concentrations of this material below the occupational exposure limits shown in Section 2.

**Respiratory**

A NIOSH/MSHA-approved air-purifying respirator with an organic vapor cartridge may be appropriate under certain circumstances where airborne concentrations may exceed the exposure limits in Section 2. Where work conditions may generate airborne mists of the material, also use a high-efficiency particulate pre-filter. Consult a health and safety professional for guidance in respirator selection. Respirator use should comply with OSHA 29 CFR 1910.134.

**CAUTION:** The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of the air-purifying respirator.

**Eyes**

Eye protection should be worn. If there is potential for splashing or spraying, chemical protective goggles and a face shield should be worn. If contact lenses are worn, consult an eye specialist or a safety professional for additional precautions. Suitable eye wash water should be available in case of eye contact with this material.

**Skin**

Avoid skin contact with this material. If conditions of use present any potential for skin contact, clean and impervious clothing such as gloves, apron, boots, and facial protection should be worn. Nitrile or Viton protective clothing materials are recommended. When working around equipment or processes which may create the potential for skin contact, full body coverage should consist of impervious boots and oil-resistant coated Tyvek suit or other impervious jacket and pants.

Non-impervious clothing which accidentally becomes contaminated with this material should be removed promptly and not re-worn until the clothing is washed thoroughly and the contamination is effectively removed. Discard soaked leather goods. Avoid prolonged and/or repeated skin contact.

*Training  
- make pass  
- de SA. →*

**Other Hygienic and Work Practices**

Use good personal hygiene practices. If skin contact should occur, material should be removed from the skin with a waterless hand cleaner, and the affected area should then be washed with a mild soap and water. Wash hands and other exposed areas thoroughly before eating, drinking, smoking or using toilet facilities.

**9. PHYSICAL and CHEMICAL PROPERTIES**

<b>Boiling Point:</b>	AP 76°F to 572°F
<b>Viscosity Units, Temp. (Method):</b>	N/P
<b>Dry Point:</b>	N/P
<b>Freezing Point:</b>	LT -72°F

Vapor Pressure, Temp. (Method):	AP 2 to 3 at 100°F (REID-PSIA)
Volatile Characteristics:	Slight
Specific Gravity (H <sub>2</sub> O = 1 @ 39.2°F):	AP 0.76
Vapor Sp. Gr. (Air = 1.0 @ 60°F - 90°F):	AP 3 to 4
Solubility in Water:	Negligible
PH:	N/AP
Appearance and Odor:	Nearly Colorless to light amber-color liquid; petroleum naphtha odor.
Other Physical and Chemical Properties:	Sulfur Content = LT 0.4 wt%

## 10. STABILITY and REACTIVITY

Stability	Stable
Hazardous Polymerization	Not expected to occur
Other Chemical Reactivity	N/AP

Conditions to Avoid	Heat and ignition sources.
Materials to Avoid	Strong acids, alkalis, and oxidizers such as liquid chlorine and oxygen.
Hazardous or Decomposition Products	Burning or excessive heating may produce carbon monoxide and other harmful gases/vapors including oxides of sulfur and nitrogen.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicological Information</b>	The information found in this section is written for medical, toxicology, occupational health and safety professionals. This section provides technical information on the toxicity testing of this or similar materials or its components. If clarification of the technical content is needed, consult a professional in the areas of expertise listed above.
<b>Inhalation</b>	Toxicity studies on this material resulted in LC50 values greater than 5.3 mg/l indicating a low potency.
<b>Eye Contact</b>	No irritation observed in animal studies.
<b>Skin Contact</b>	Animal studies resulted in moderate skin irritation following short term or prolonged/repeated exposure. The acute dermal toxicity tests indicate LD50 values greater than 2.0 g/kg indicating a low potency. Exposure to sunlight does not increase skin irritation. This material appears to be non-sensitizing.
<b>Ingestion</b>	The acute oral toxicity tests produced LD50 values greater than 5.0 g/kg indicating a low potency. There were signs of gastrointestinal tract irritation and central nervous system depression.
<b>Prolonged/Repeated Exposures</b>	<p>Twenty-eight day dermal toxicity studies resulted in moderate skin irritation but no other significant observations or systemic tissue changes characteristic of disease.</p> <p>API conducted chronic dermal carcinogenicity tests on several naphtha streams in mice exposed 50 microliters twice weekly for most of their lifetime (two years). Some naphtha streams produced skin tumors (light catalytically cracked naphtha, heavy catalytically cracked naphtha, and heavy thermally cracked naphtha), whereas other naphtha streams did not produce skin tumors (sweetened naphtha, light catalytically reformed naphtha, and light alkylate naphtha).</p> <p>Prolonged/repeated oral and inhalation exposures to petroleum naphthas have produced kidney damage in male rats. These effects are considered specific to these laboratory animals and not applicable to humans.</p> <p>No reproductive or developmental toxicity and no neurotoxicity were observed in toxicity studies of light alkylate naphtha, light catalytic cracked naphtha, and light catalytic reformed</p>

naphtha.

Exposure to components of this material such as benzene, toluene, xylene, ethylbenzene, trimethylbenzene, and n-hexane has been shown to affect reproductive capacity and/or fetal development in laboratory animals.

Prolonged/repeated dermal exposure to JP-4 resulted in an increased incidence of skin tumors in laboratory animals.

Long term studies with JP-4 Jet fuel vapors resulted in kidney damage and kidney tumors in male rats. These findings are consistent with kidney damage associated with the accumulation of a unique protein in the male rat, alpha2u-globulin. These results have been judged to be of no significance to human health.

Exposures of laboratory animals to some components of this material at very high concentrations, well above the recommended exposure limits in Section 2, have resulted in cardiac sensitization with irregular heartbeats.

Exposure to n-hexane at concentrations considerably higher than the current permissible exposure limit has reportedly been associated with peripheral neuropathy. Commercial hexane exposures up to 9000 ppm were not carcinogenic in laboratory animals.

In animal studies and in workers with chronic benzene poisoning, alterations in structure of chromosomes in bone marrow and white blood cells have been observed.

## 12. ECOLOGICAL INFORMATION

Not Available

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Consult an environmental professional to determine if state or federal regulations would classify spilled or contaminated materials as a hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Comply with all federal, state and local laws pertaining to waste management.

## 14. TRANSPORT INFORMATION

<b>UN Proper Shipping Name</b>	Fuel, aviation, turbine engine
<b>UN Hazard Class</b>	3
<b>UN Number</b>	UN1863
<b>UN Packing Group</b>	PGIII

## 15. REGULATORY INFORMATION

### SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA), TITLE iii

#### Section 311/312 Hazard Categories:

Immediate (acute) health hazard  
 Delayed (chronic) health hazard  
 Fire hazard

#### Section 313:

This product contains the following chemicals subject to the reporting requirements established by SARA Title III

BENZENE  
 CYCLOHEXANE  
 ETHYLBENZENE  
 TOLUENE  
 XYLENE

**TOXIC SUBSTANCES CONTROL ACT (TSCA)**

All components of this product are listed on the TSCA Inventory.

**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)**

This material is covered by CERCLA's PETROLEUM EXEMPTION.

(Refer to 40 CFR 307.14)

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 - PROPOSITION 65 (PROP 65)**

**PROP 65 WARNING LABEL:**

Chemicals known to the State to cause cancer, birth defects or other reproductive harm are found in gasoline, crude oil, and many other petroleum products and their vapors, or result from their use. Read and follow label directions and use care when handling or using all petroleum products.

**WARNING:**

This product contains the following chemical(s) listed by the state of California as known to cause cancer or birth defects or other reproductive harm.

- BENZENE (C) (R)
- NAPHTHALENE (C)
- TOLUENE (R)

Other Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including carbon monoxide, a Prop 65 reproductive toxin.

(C) = Carcinogen

(R) = Birth Defects or other Reproductive Harm

**16. OTHER INFORMATION**

**General Comments**

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the mixture itself.

Abbreviations:	EQ = Equal	AP = Approximately	N/P = No Applicable Information Found
	LT = Less Than	UK = Unknown	N/AP = Not Applicable
	GT = Greater Than	TR = Trace	N/DA = No Data Available

Prepared by: Product Stewardship

**Disclaimer of Liability**

The information in this MSDS was obtained from sources which we believe are reliable. **HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS.**

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. **FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.**

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.



Sorry, I can't fill out the form but can confirm by email. The MSDS sent to you on July 7, 2005 are the most recent and accurate MSDSs for the requested products.

-----Original Message-----

From: Gautreau.JG@forces.gc.ca [mailto:Gautreau.JG@forces.gc.ca]  
Posted At: Monday, July 11, 2005 7:22 AM  
Posted To: MSDS Request Box  
Conversation: Cust ID 2635 FW: msds request  
Subject: RE: Cust ID 2635 FW: msds request

Hi Barbara,  
could you also fill out this attachment for JP-8 so that our records shows that it is the most recent and accurate msds on file.

thanks a bunch

Jason

-----Original Message-----

From: MSDS Request Box [mailto:bpcares@bp.com]  
Sent: Thursday, 07 July, 2005 17:00  
To: Gautreau.JG@forces.gc.ca  
Subject: Cust ID 2635 FW: msds request

Hello!

Thank you for using BP products.

We appreciate your commitment to health, safety and the environment.

Sincerely,

Barbara A. Marsh

BP Product Stewardship

150 W. Warrenville Road

Mail Code H-1

Naperville, IL 60563

United States

FOR MSDS REQUESTS:

phone: +1-866-4bp-MSDS (866-427-6737)

fax: +1-630-420-4808

e-mail: bpcares@bp.com <mailto:bpcares@bp.com>

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**ASPIRATION HAZARD!** If swallowed, do not induce vomiting since aspiration into the lungs may cause chemical pneumonia. Obtain prompt medical attention.

May cause irritation or more serious skin disorders! May be harmful if inhaled! Avoid prolonged or repeated liquid, mist, and vapor contact with eyes, skin, and respiratory tract.

May cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, confusion, loss of coordination, fatigue, nausea and labored breathing. May lead to unconsciousness, convulsions, and possibly death.

Wash hands thoroughly after handling.

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## **ACUTE HEALTH HAZARDS**

### **Routes of Exposure**

### **Signs and Symptoms**

<b>Inhalation (Primary)</b>	Section 2 may cause irritation of the nose, throat, and lungs, headache, dizziness, drowsiness, confusion, loss of coordination, fatigue, nausea, labored breathing and irregular heartbeats. May lead to unconsciousness, convulsions, and possibly death. Airborne concentrations above the recommended exposure limits are not anticipated during normal workplace or refueling activities due to the slow evaporation of this material at ambient temperatures.
<b>Eye Contact</b>	Not expected to cause prolonged or significant eye irritation.
<b>Skin Contact</b>	Moderate skin irritation may occur upon short-term exposure.
<b>Ingestion</b>	ASPIRATION HAZARD! This material can enter the lungs during swallowing or vomiting and may cause acute lung inflammation and damage which in severe cases may be fatal. May cause irritation of the mouth, throat, and gastrointestinal tract leading to nausea, vomiting, diarrhea, and restlessness. May cause headache, dizziness, drowsiness, confusion, loss of coordination, fatigue, nausea and labored breathing. May lead to unconsciousness, convulsions, and possibly death.

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### **Summary of Chronic Hazards and Special Health Effects**

Exposures at airborne concentrations well above the recommended exposure limits in Section 2 may aggravate medical conditions such as skin disorders or chronic respiratory diseases.

Prolonged/repeated skin exposure, inhalation or ingestion of this material above the recommended limits may result in adverse dermal or systemic effects. Avoid prolonged or repeated overexposure.

See Section 11 for additional toxicology information.

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## **4. EMERGENCY and FIRST AID**

<b>Inhalation</b>	Immediately move personnel to area of fresh air. For respiratory distress, give oxygen, rescue breathing or administer CPR (cardiopulmonary resuscitation), if necessary. Obtain prompt medical attention.
<b>Eye Contact</b>	Flush with clean low-pressure water for at least 15 minutes, occasionally lifting the eye lids. Obtain medical attention.
<b>Skin Contact</b>	Immediately remove contaminated clothing. Wash affected skin thoroughly with soap and water. If there are any signs or symptoms of irritation, obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting since aspiration into the lungs may cause chemical pneumonia. Obtain immediate medical attention.

<b>Emergency Medical Treatment Procedures</b>	See above procedures.
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## **5. FIRE and EXPLOSION**

<b>Flash Point (Method) *</b> ("See Fire and Explosion Hazards")	AP 100 to 400°F(D-93)	<b>NFPA Hazard Rating:</b>	
<b>Autoignition Temperature (Method)</b>	AP 410 °F *		<b>Health:</b> 0 = Insignificant
<b>Flammable Limits (% Vol. in Air)</b> <b>Lower</b>	AP 0.7 *		<b>Fire:</b> 2 = Moderate

Upper AP 5.0<sup>+</sup>Reactivity: 0 = Insignificant  
Special: = ---

\* At Normal Atmospheric Temperature and Pressure

\* Based on NFPA 'Fuel Oil No. 1'

**Fire and  
Explosion  
Hazards**

COMBUSTIBLE! When heated above its flash point, this material will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to an ignition source. Mists or sprays may be flammable at temperatures below the normal flash point. For "switch loading" procedures, see Section 7.

**Extinguishing  
Media**

Foam, Dry chemical, Water fog, Carbon Dioxide (CO<sub>2</sub>)  
Water and water spray may cool the fire, but may not extinguish the fire.

**Special  
Firefighting  
Procedures**

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. If firefighters cannot work upwind to the fire, respiratory protection must be worn. Cool tanks and containers exposed to fire with water.

**6. ACCIDENTAL RELEASE MEASURES****Precautions if  
Material is Spilled  
or Released**

Eliminate all potential sources of ignition. Handling equipment and tools should be grounded to prevent sparking. Contain spill, evacuate non-essential personnel, and safely stop flow. Blanket spill with foam or use water fog to reduce vapor cloud. On hard surfaces, spilled material may create a slipping hazard. Equip cleanup crews with proper protective equipment (as specified in Section 8) and advise of hazards. Clean up by recovering as much spilled or contaminated materials as possible and placing into closed containers. Consult with an environmental professional for the federal, state and local cleanup and reporting requirements for spills and releases.

**7. HANDLING and STORAGE****Handling,  
Storage and  
Decontamination  
Procedures**

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when this material is loaded into tanks previously containing gasoline or other low flash point products (see API Publication 2003).  
Avoid exposure to liquid and gas vapors. Odor is not a reliable warning of overexposure. Use only with adequate ventilation.  
Keep away from sources of heat, flames, sparks or other ignition sources. Storage and use areas should be "No Smoking" areas.  
Electrical equipment should follow National Electric Code (NEC) standards.  
Empty containers may retain some liquid and vapor residues and, if exposed to an ignition source, may explode.  
Outside or detached storage is preferred. Inside storage should be in a standard combustible liquids storage warehouse, room or cabinet. Separate from oxidizing materials.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering  
Controls**

Where possible, use adequate ventilation to keep vapor and mist concentrations of this material below the Occupational Exposure Limits shown in Section 2.

**Respiratory**

A NIOSH/MSHA-approved air-purifying respirator with an organic vapor cartridge may be appropriate under certain circumstances where airborne concentrations may exceed the exposure limits in Section 2. Where work conditions may generate airborne mists of the material, also use a high-efficiency particulate pre-filter. Consult a health and safety professional for guidance in respirator selection. Respirator use should comply with OSHA 29 CFR 1910.134.

**CAUTION:** The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of the air-purifying respirator.

**Eyes**

Eye protection should be worn. If there is potential for splashing or spraying, chemical protective goggles and/or a face shield should be worn. If contact lenses are worn, consult

protective goggles and/or a face shield should be worn. If contact lenses are worn, consult an eye specialist or a safety professional for additional precautions. Suitable eye wash water should be available in case of eye contact with this material.

**Skin**

Avoid skin contact with this material. If conditions of use present any potential for skin contact, clean and impervious clothing such as gloves, apron, boots, and facial protection should be worn. Nitrile or Viton protective clothing materials are recommended. When working around equipment or processes which may create the potential for skin contact, full body coverage should consist of impervious boots and oil-resistant coated Tyvek suit or other impervious jacket and pants.

Non-impervious clothing which accidentally becomes contaminated with this material should be removed promptly and not reworn until the clothing is washed thoroughly and the contamination is effectively removed. Discard soaked leather goods. Avoid prolonged and/or repeated skin contact.

**Other Hygienic and Work Practices**

Use good personal hygiene practices. If skin contact should occur, material should be removed from the skin with a waterless hand cleaner, and the affected area should then be washed with a mild soap and water. Wash hands and other exposed areas thoroughly before eating, drinking, smoking or using toilet facilities.

**9. PHYSICAL and CHEMICAL PROPERTIES**

<b>Boiling Point:</b>	AP 291°F to 572°F
<b>Viscosity Units, Temp. (Method):</b>	AP 2 CST at 100°F (D-445)
<b>Dry Point:</b>	N/AP
<b>Freezing Point:</b>	LT -40°F
<b>Vapor Pressure, Temp. (Method):</b>	AP 0.1 at 100°F (REID-PSIA)
<b>Volatile Characteristics:</b>	Slight
<b>Specific Gravity (H<sub>2</sub>O = 1 @ 39.2°F):</b>	AP 0.78 to 0.84
<b>Vapor Sp. Gr. (Air = 1.0 @ 60°F - 90°F):</b>	AP 6
<b>Solubility in Water:</b>	Negligible
<b>PH:</b>	N/AP
<b>Appearance and Odor:</b>	Nearly colorless to light-amber colored liquid; kerosene odor.
<b>Other Physical and Chemical Properties:</b>	Sulfur Content = LT 0.3 wt% Viscosity -4F = LT 8 centistokes Aromatics = LT 25% Olefins = LT 5%

**10. STABILITY and REACTIVITY**

<b>Stability</b>	Stable
<b>Hazardous Polymerization</b>	Not expected to occur.
<b>Other Chemical Reactivity</b>	N/AP

<b>Conditions to Avoid</b>	Heat and ignition sources.
<b>Materials to Avoid</b>	Strong acids, alkalis, and oxidizers such as liquid chlorine and oxygen.
<b>Hazardous or Decomposition Products</b>	Burning or excessive heating may produce carbon monoxide and other harmful gases/vapors including of oxides of sulfur and nitrogen.

**11. TOXICOLOGICAL INFORMATION**

**Supplemental Toxicological Information**

The information found in this section is written for medical, toxicology, occupational health and safety professionals. This section provides technical information on the toxicity testing of this or similar materials or its components. If clarification of the technical content is needed, consult a professional in the areas of expertise listed above.

**Inhalation**

Toxicity studies on a similar material resulted in LC50 values greater than 4.5 mg/l indicating a low potency. However, during exposure the material caused labored breathing, reduced activity and nasal discharge.

**Eye Contact**

Animal studies have been performed on a similar material with minimal to no irritation being reported.

**Skin Contact**

Animal studies with a similar material have resulted in moderate skin irritation following short-term exposure or prolonged/repeated exposure. This material appears to be non-sensitizing. The acute dermal toxicity tests indicate LD50 values greater than 2.0 g/kg indicating a low potency.

**Ingestion**

The acute oral toxicity tests on a similar material indicate LD50 values greater than 5.0 g/kg indicating a low potency. Aspiration can result in a fatal chemical pneumonia.

**Prolonged/ Repeated Exposures**

Twenty-eight day dermal toxicity studies with a similar material resulted in skin irritation and body weight loss but no systemic tissue changes characteristic of disease.

Exposure to components of this material such as trimethylbenzene has been shown to affect reproductive capacity and/or fetal development in laboratory animals.

Dermal and inhalation exposure to some jet fuel mixtures has been shown to reduce or inhibit certain indicators of immune function in mice. The relevance of these findings for humans is under investigation."

This product contains petroleum distillates similar to those shown to produce skin tumors and kidney damage in laboratory animals.

**Additional Information on Naphthalene Toxicity**

Naphthalene has been evaluated for carcinogenicity in laboratory rodents in studies sponsored by the National Toxicology Program (NTP). Results of these studies show some evidence of carcinogenic activity in female mice, and clear evidence of carcinogenic activity in male and female rats. Tumors were observed in the lung of female mice and in the nose of rats. Nonneoplastic lesions of the nose and respiratory tract were also observed in these studies. The International Agency for Research on Cancer has designated naphthalene as "possibly carcinogenic to humans" (Group 2B). Naphthalene has been reported to cause developmental toxicity in mice after oral exposure to relatively high dose levels, but developmental toxicity was not observed in NTP sponsored studies in rats and rabbits. Ingestion or inhalation of naphthalene can result in hemolysis and other blood abnormalities, and individuals (and infants) deficient in glucose-6-phosphatase dehydrogenase may be especially susceptible to these effects. Inhalation of naphthalene may cause headache and nausea. Airborne exposure can result in eye irritation. Naphthalene exposure has been associated with cataracts in animals and humans.

**12. ECOLOGICAL INFORMATION**

Not Available

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods**

Consult an environmental professional to determine if state or federal regulations would classify spilled or contaminated materials as a hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Comply with all federal, state and local laws pertaining to waste management.

**14. TRANSPORT INFORMATION**

<b>UN Proper Shipping Name</b>	Fuel, aviation, turbine engine
<b>UN Hazard Class</b>	3
<b>UN Number</b>	UN 1863
<b>UN Packing Group</b>	PG III

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**15. REGULATORY INFORMATION**


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**SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA), TITLE III****Section 311/312 Hazard Categories:**

Immediate (acute) health hazard  
 Delayed (chronic) health hazard  
 Fire hazard

**Section 313:**

This product contains the following chemicals subject to the reporting requirements established by SARA TITLE III

NAPHTHALENE < 1 percent by weight  
 1,2,4 TRIMETHYL BENZENE 2 percent by weight

**TOXIC SUBSTANCES CONTROL ACT (TSCA)**

All components of this product are listed on the TSCA inventory.

**COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)**

This material is covered by CERCLAs PETROLEUM EXEMPTION.  
 (Refer to 40 CFR 307.14)

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 - PROPOSITION 65**

Chemicals known to the State to cause cancer, birth defects or other reproductive harm are found in gasoline, crude oil, and many other petroleum products and their vapors, or result from their use. Read and follow label directions and use care when handling or using all petroleum products.

**WARNING:**

This product contains the following chemical(s) listed by the state of California as known to cause cancer or birth defects or other reproductive harm.

NAPHTHALENE (C)

Other Proposition 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including carbon monoxide, a Proposition 65 reproductive toxin.

(C) = Carcinogen

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**16. OTHER INFORMATION**


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**General Comments**

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the mixture itself.

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Abbreviations:	EQ = Equal	AP = Approximately	N/P = No Applicable Information Found
	LT = Less Than	UK = Unknown	N/AP = Not Applicable
	GT = Greater Than	TR = Trace	N/DA = No Data Available

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Prepared by: Product Stewardship

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This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.



## Unit

UIC	6752	CENTRE DE TRANSITION BAGOTVILLE
URS	0138	BASE DES FORCES CANADIENNES BAGOTVILLE
Support Unit	0138	BASE DES FORCES CANADIENNES BAGOTVILLE
Region	0	NOT DEFINED
Position No.	384818	RTW
Work phone No.	661-4261	

## Previous SVC

Regular Years	CSS	0
Regular Days		
Reserve Years		
Reserve Days		

## Security

Level	Secret
Effective Date	15-JUL-2013
Exp. Date	15-JUL-2023

## Trade

MOS ID	00136-01	AVS TECH
Affiliation	Fighter	
Seniority Rank	Sgt	
Component	Regular Force	
Element	Land	

## Promotion

Rank	Sgt
Status	
Effective Date	14-OCT-2022
EPZ Date	01-JAN-2022

## CD Forecast --- REFER TO GUARDIAN ---

Base Date	12-MAY-1993	CD2	32
Eligibility Date	12-MAY-2025		
Eligibility Date (YR/DY)	01-JAN-2025		

## Leave

As Of :	30-SEP-2022	For the fiscal year:	2022-2023
Guardian Leave Statistics		Monitor Mass Leave Statistics	
Description	Earned	Taken	Balance
Accumulate	0	0	25
Annual REG	25	17	8
Sick RRF	0	13	-13
Description	Taken		
Annual	62		
Short - Full Day	4		
Sick Leave	13		
Special (Christmas/New Years)			
Statutory holiday	16		
Weekend	42		

## Decoration - Medals

Decoration Name	Decoration Desc	Obtention Date
SSM-NATO	Special Svc Medal-NATO	04-APR-2018
CD1	CD 1st Clasp	02-SEP-2015
CD	Canadian Forces Decoration	03-MAY-2005

## Promotion History

Rank	Rank Category	Effective Date	Action	Action Reason
Sgt	Senior Non-Commissioned Member	02-JUL-2019		Substantive
MCpl	Non-Commissioned Member	29-APR-2010		Substantive
MCpl	Non-Commissioned Member	17-JUL-2009		Acting (Lacks Qualification)
Cpl	Non-Commissioned Member	31-JAN-2005		Qualification Level
Cpl	Non-Commissioned Member	31-OCT-2001		GR1 Conversion
S1	Non-Commissioned Member	30-OCT-2001		GR1 Conversion

## Promotion History

Rank	Rank Category	Effective Date	Action	Action Reason
S1	Non-Commissioned Member	11-MAY-1993		Appointment

## Dependants

Name	Gender	Relationship	Birthdate	Language
Renaud, Annie	Female	Spouse	04-JUL-1984	
Mercier, Marilou	Female	Child	22-JUL-2010	
Mercier, Ariane	Female	Child	22-JUL-2010	

## Education and Training

HRMS :

Start Date	End Date	Type	Course	Establishment
	30-APR-2020	Level A		
	30-APR-2020	Tech Assessor		
	04-NOV-1996	College Education Diploma	Sciences de la nature	Chicoutimi, Collège de
	01-JAN-1996	Post Secondary School		

## Assignment History

UIC	Org Name	Location	Position	Assignment Name	RSN	Date
6752	TC BAGOTVILLE	ALOUETTE QC	RTW		XFR/POS	01-SEP-2023
6871	433 Tac F Sqn	ALOUETTE QC	AVS CF188 ON AC CREW SUPR		XFR/POS	08-SEP-2022
6871	433 Tac F Sqn	ALOUETTE QC	ATTACHED IN		ASG/Attached (M&M)	31-AUG-2022
6752	TC BAGOTVILLE	ALOUETTE QC	RTW		XFR/POS	07-JUN-2022
6871	433 Tac F Sqn	ALOUETTE QC	AT AMCRO JR SUPR		XFR/POS	07-SEP-2021
6752	TC BAGOTVILLE	ALOUETTE QC	RTW		XFR/POS	30-JUL-2021
6752	CENTRE DE TRANSITION BAGOTVILLE	ALOUETTE QC	SPHL - RTW	Posting - CENTRE DE TRANSITION BAGOTVILLE	PST	30-JUL-2021
3230	3 AMS	ALOUETTE QC	RECEIPT		PST/POS	03-SEP-2019
3230	3 AMS	ALOUETTE QC	AVS LAB SUPR		XFR/POS	03-SEP-2019
6532	10 FTTS Det Bagotville	ALOUETTE QC	AVS TRG STDS STAFF		XFR/POS	16-JUL-2019
6532	10 FTTS Det Bagotville	ALOUETTE QC	ATTACHED IN		ASG/Attached (M&M)	16-JUL-2019
3230	3E ESCADRON DE MAINTENANCE AIR	ALOUETTE QC	Posn Chg - AVS CF188 ON AC CREW SUPR	Posting - 3E ESCADRON DE MAINTENANCE AIR	PST	16-JUL-2019
6532	10 FTTS Det Bagotville	ALOUETTE QC	AWS CF188 OTU INSTR JR SUPR		XFR/POS	25-JUL-2018
6532	10 FTTS Det Bagotville	ALOUETTE QC	AVS TRG STDS STAFF		XFR/POS	31-OCT-2017
6532	DETACHEMENT BAGOTVILLE 10E ESCADRON D INSTRUCTION TECHNIQUE APPLIQUEE	ALOUETTE QC	Posn Chg - AVS CF188 OTU INSTR JR SUPR	Posting - DETACHEMENT BAGOTVILLE 10E ESCADRON D INSTRUCTION TECHNIQUE APPLIQUEE	PST	05-OCT-2017
6532	10 FTTS Det Bagotville	ALOUETTE QC	AVS TRG STDS STAFF		XFR/POS	08-SEP-2017
6532	10 FTTS Det Bagotville	ALOUETTE QC	AWS CF188 OTU INSTR		XFR/POS	07-SEP-2017
6532	10 FTTS Det Bagotville	ALOUETTE QC	ATTACHED IN		ASG/Attached (M&M)	07-SEP-2017
			OP REASSURANCE (roto 8)-CF 18 DET	CFTPO Operation Task		15-MAY-2017 - 17-JUN-2017
6871	433 Tac F Sqn	ALOUETTE QC	AT AMCRO JR SUPR		XFR/POS	17-FEB-2017
6871	433E ESCADRON D APPUI TACTIQUE	ALOUETTE QC	Posn Chg - AT AMCRO JR SUPR	Posting - 433E ESCADRON D APPUI TACTIQUE	PST	03-FEB-2017
0772	425 TAC F SQN	ALOUETTE QC	AT AMCRO JR SUPR			28-MAY-2016
6871	433 Tac F Sqn	ALOUETTE QC	AT AMCRO JR SUPR		XFR/POS	07-APR-2016
0772	425 Tac F Sqn	ALOUETTE QC	AT AMCRO JR SUPR		XFR/POS	14-APR-2015
			OP REASSURANCE (roto 2)-1ST LINE	CFTPO Operation Task		04-SEP-2014 - 23-DEC-2014
			OP REASSURANCE (roto 0)-1ST LINE	CFTPO Operation Task		13-JUL-2014 - 03-SEP-2014
0772	425 TAC F SQN	ALOUETTE QC	TECH		XFR/POS	19-JUL-2013

## Assignment History

UIC	Org Name	Location	Position	Assignment Name	RSN	Date
			TF ICELAND (OP IGNITION) (roto 2012)-MAINTENANCE (67)	CFTPO Operation Task		15-MAR-2013 - 20-APR-2013
0772	425 ESCADRON D APPUI TACTIQUE	ALOUETTE QC	Retrn Lv - AVS CF188 ON AC JR SUPR	Return-LOA - 425 ESCADRON D APPUI TACTIQUE	RFL	10-APR-2011
0772	425 ESCADRON D APPUI TACTIQUE	ALOUETTE QC	CF Par - AVS CF188 ON AC JR SUPR	LOA - 425 ESCADRON D APPUI TACTIQUE	LOA	25-JUL-2010
0772	425 TAC F SQN	ALOUETTE QC	TECHNICAL TRG		XFR/POS	19-AUG-2009
0772	425 ESCADRON D APPUI TACTIQUE	ALOUETTE QC	Post Chg - AVS CF188 ON AC JR SUPR	Posting - 425 ESCADRON D APPUI TACTIQUE	PST	31-JUL-2009
3229	1 AMS	COLD LAKE AB	TECH		XFR/POS	16-FEB-2009
3229	1 AIR MAINTENANCE SQUADRON	COLD LAKE AB	GR1 CNV - AVS LAB TECH	Posting - 1 AIR MAINTENANCE SQUADRON	PST	02-APR-2003
0871	CANADIAN FORCES SCHOOL OF AEROSPACE TECHNOLOGY AND ENGINEERING	BORDEN ON	Bas Trg L	Posting - CANADIAN FORCES SCHOOL OF AEROSPACE TECHNOLOGY AND ENGINEERING	PST	06-NOV-2001
0202	CENTRE DE RECRUTEMENT DES FORCES CANADIENNES QUEBEC	QUEBEC QC	Retrn Lv	Return-LOA - CENTRE DE RECRUTEMENT DES FORCES CANADIENNES QUEBEC	RFL	06-NOV-2001
0202	CENTRE DE RECRUTEMENT DES FORCES CANADIENNES QUEBEC	QUEBEC QC	CF Enrol	LOA - CENTRE DE RECRUTEMENT DES FORCES CANADIENNES QUEBEC	LOA	31-OCT-2001
0202	CENTRE DE RECRUTEMENT DES FORCES CANADIENNES QUEBEC	QUEBEC QC	CNV	Rehire - CENTRE DE RECRUTEMENT DES FORCES CANADIENNES QUEBEC	REH	31-OCT-2001
1197	NAVIRE CANADIEN DE SA MAJESTE CHAMPLAIN	ALOUETTE QC	Appt	Hire - NAVIRE CANADIEN DE SA MAJESTE CHAMPLAIN	HIR	11-MAY-1993

Time away from home (last 365 days)                      **0**

Course / Cours

Code - session	Course Title / Titre du cours	Start Date / Date de début	End Date / date de fin
303493	EPC-01-Commun	31-AUG-2022	12-SEP-2022
300034-0122	Prév du harcèlement - superv.	05-FEB-2020	05-FEB-2020
300046-0132	Préparation à l'entrevue	04-FEB-2020	04-FEB-2020
300048-0124	Rédaction du curriculum vitae	03-OCT-2019	03-OCT-2019
117706-0025	RECOVERY AND SALVAGE TEAM.MBR	20-AUG-2019	28-AUG-2019
116570-0340	AVS TECH QL6A	02-JUL-2019	02-JUL-2019
121505	GUARDIAN FUNDAMENTALS	12-JUL-2018	12-JUL-2018
121826	GR1 MITE SCHEDULER/ACTIVATOR	12-JUL-2018	12-JUL-2018
121830	GUARDIAN MITE TRG AUTHORITY	12-JUL-2018	12-JUL-2018
121831	GUARDIAN MITE TRG MANAGER	12-JUL-2018	12-JUL-2018
102172-0085	PAPC MODEL LCM20	23-OCT-2017	26-OCT-2017
302308-0023	Viser la supervision	03-OCT-2017	04-OCT-2017
120674-0004	AC TECH DATA CTRL-OJPR (MRS)	10-JAN-2017	10-JAN-2017
302059	Orientation de SIMDUT	29-SEP-2016	29-SEP-2016
302634	Prévention de la violence	28-SEP-2016	29-SEP-2016
302801	Introduction à l'ACS+	07-SEP-2016	07-SEP-2016
100186-0264	AEROMED TRNG- JET PASSENGER	01-MAY-2016	31-MAY-2016
119720-0065	AIRCRAFT TECH DATA CTRL - DL	25-APR-2016	25-APR-2016
A230F	Sensibilisation à la sécurité	16-MAR-2015	16-MAR-2015
119720-0001	AIRCRAFT TECH DATA CTRL - DL	30-MAY-2014	30-MAY-2014
117733-0675	SUPVR TRG - ALCO/DRUG/GAMBLE	10-MAR-2014	11-MAR-2014
117733-0665	SUPVR TRG - ALCO/DRUG/GAMBLE	27-JAN-2014	28-JAN-2014
300638-0017	Type Indicateur Myers-Brigg	22-JAN-2014	22-JAN-2014
119531-0265	MENTAL FITNESS SUICIDE AWARE	07-NOV-2013	07-NOV-2013
301747	GI pour MDN/FC	31-OCT-2013	31-OCT-2013
301747	GI pour MDN/FC	22-OCT-2013	31-OCT-2013
300062-0048	Connaître mon style de ldrship	11-JUN-2013	12-JUN-2013
114724-0067	COORD DU PHAM	13-MAY-2013	17-MAY-2013
102436-0036	CF188 MAINT - REDRESSE D'URG -	27-SEP-2012	28-SEP-2012
100186-0217	AEROMED TRNG- JET PASSENGER	31-MAR-2012	31-MAR-2012
300530	Intro to Controlled Goods	24-NOV-2011	24-NOV-2011
300545	Protection of Controlled goods	24-NOV-2011	24-NOV-2011
118059-0004	ALR-67 (V) 3 UPGRADE	21-NOV-2011	25-NOV-2011
102383-0032	CF188 ADV EW SYS ON AC MAINT	02-MAY-2011	27-MAY-2011
118854-0005	OSTFM CF188 FACT WAND-ICT	14-APR-2011	15-APR-2011
117568-0046	ENHANCED PLQ	09-MAR-2010	29-APR-2010
100186-0203	AMT JET PASSENGER	30-OCT-2009	30-OCT-2009
102439-0043	FLIR OR-50008/AA OFF-AC MAINT	24-NOV-2008	12-DEC-2008
101864-0004	GROUND SEARCH TEAM MEMBER	01-NOV-2008	08-NOV-2008
114827-0007	EOTS OPERATION AND MAINT	05-MAR-2007	22-MAR-2007
300066-0143	Word Level 1	12-FEB-2007	12-FEB-2007
102048-0043	CF 188 AVIONICS SYSTEMS - ON A	05-SEP-2006	07-DEC-2006
117318-0003	PATS - PORTABLE ADAPTIVE TEST	05-DEC-2005	16-DEC-2005
114603-0299	AIRCRAFT MAINT POLICY-LVL 2	08-JUN-2005	08-JUN-2005
102434-0130	CF188 WIRE BUNDLE/CONNECTOR-	16-MAY-2005	19-MAY-2005
102182-0055	CF188 SERVICING	01-SEP-2004	01-NOV-2004
102311-0098	526 AVS TECH QL5A	10-APR-2003	31-JAN-2005
102102-0018	MOC 500 COMMON	05-SEP-2002	24-OCT-2002

Tech Avio. (Note le 02/11/2022)

Tech de maxime force de 18 (me)

**Course / Cours**

Code - session	Course Title / Titre du cours	Start Date / Date de début	End Date / date de fin
101879-0027	526 AVS TECH QL3	03-SEP-2002	04-MAR-2003
101332-0150	BAEC - NCM	06-AUG-2002	14-AUG-2002
112313-0155	POET	15-NOV-2001	25-JUL-2002
106850	R315 MESO QL3 PT 1 KIN	24-JUL-1998	24-JUL-1998
106851	R315 MESO QL3 PT 1 PH 2 KIN	24-JUL-1998	24-JUL-1998
106844	R315 MESO KIN PROPULSION SYSTEM	19-JUN-1998	19-JUN-1998
106843	R315 MESO KIN AUXILIARY SYSTEM	07-JUN-1998	07-JUN-1998
106852	R315 MESO QL3 PT 1 PH 1 KIN	04-MAY-1998	04-MAY-1998
105999	SHARP - SENSITIZATION CRSE	01-DEC-1997	01-DEC-1997
106127	R315 MESO CERT A CSV	10-JUN-1997	10-JUN-1997
106913	R315 MESO QL2 OJPR KIN	10-JUN-1997	10-JUN-1997
107671-0030	NVL RES OSQ AB(R) CRSE	27-JUN-1994	20-JUL-1994
106107	R315 DMECH QL1 CRSE	24-JUN-1994	24-JUN-1994
108040-0038	NAV RES DES MECH QL1	30-MAY-1994	24-JUN-1994
104915	BASIC RECRUIT	20-AUG-1993	20-AUG-1993
109561-0510	BASIC RECRUIT TRG	28-JUN-1993	20-AUG-1993

**Competencies / Compétences**

Code	Competency description / Description des compétences	Qualification Date / Date de qualification
AJJQ	Recovery and Salvage Team Mbr	28-AUG-2019
AJZU	RQ-AVS Tech Supr (Sgt) Qual Cr	02-JUL-2019
ALQY	Guardian MITE Trg Manager	12-JUL-2018
ALQW	Guardian MITE TASM	12-JUL-2018
ALQV	Guardian MITE Sched/Activ	12-JUL-2018
ALNT	Guardian Fundamentals	12-JUL-2018
AIPU	Port Auto Part Counter LCM20	26-OCT-2017
AGWR	Aircraft Technical Data Contro	10-JAN-2017
AISQ	HPMA Program Coordinator	17-MAY-2013
AGYY	CF188 Maintenance Emergency Re	28-SEP-2012
AHVD	CF188 Advanced EW System On Ai	27-MAY-2011
AHCH	Instructional Techniques Basic	29-APR-2010
AINR	Primary Lead Qual-Common	29-APR-2010
AIIV	CF188 FLIR ON-A/C	12-DEC-2008
AIER	CF188 AVIONICS 1st LINE MAINT	07-DEC-2006
AJEG	Port Adapt Test Set Maint & Op	05-MAY-2006
AGYV	CF188 Electrical Wire Bundle a	19-MAY-2005
ZAHC	AVS TECH QL5A	31-JAN-2005
AGYS	CF188 - Servicing	01-NOV-2004
ZAGV	AVS TECH QL3	04-MAR-2003
AGJL	Environmental Qual - Sea	20-JUL-1994

**Unit Qualifications / Qualifications d'unité**

Domain, Name and Level / Domaine, le nom et le niveau	Qual Date / Date de qual	Valid Until / Valide jusqu'à
GENERAL SAFETY - Air Weapons Safety Brief	14-FEB-2020	14-FEB-2021

**Unit Qualifications / Qualifications d'unité**

Domain, Name and Level / Domaine, le nom et le niveau	Qual Date / Date de qual	Valid Until / Valide jusqu'à
DND/CF APPLICATIONS - Monitor Mass - Gestion SSAM - Supervisor	03-FEB-2020	
Air Force General Qualifications - Annual Tool Control System Brief	06-DEC-2019	06-DEC-2020
GENERAL SAFETY - Air Weapons Safety Brief	06-DEC-2019	06-DEC-2020
GENERAL SAFETY - Fatigue, Risk Management System Brief	06-DEC-2019	06-DEC-2020
Air Force General Qualifications - Human Performance in Military Aviation - Tier 3	18-NOV-2019	18-NOV-2020
CFJSR - 9mm Initial Training (CFJSR)	16-OCT-2019	
Air Force General Qualifications - CF188 AF9000 Indoc Trg	14-MAR-2019	
Base CE & CF RP Ops - CHAINSAW SAFETY - Quebec	20-FEB-2019	
Air Force General Qualifications - AF9000	23-JAN-2019	23-JAN-2020
COMPULSORY TRAINING - Cannabis Briefing	12-OCT-2018	
COMPULSORY TRAINING - Cannabis Briefing	11-OCT-2018	
GENERAL SAFETY - Fatigue, Risk Management System Brief	29-JUN-2018	30-JUN-2019
MANDATORY SAFETY TRAINING - Portable Fire Extinguisher Training (PFET)	16-MAY-2018	16-MAY-2022
ALCOHOL, OTHER DRUGS AND GAMBLING AWARENESS - Mod 01: Substance Use 101	07-APR-2017	07-APR-2022
ALCOHOL, OTHER DRUGS AND GAMBLING AWARENESS - Mod 05: Illegal Drugs & the CF Drug Control Program	07-APR-2017	07-APR-2022
Air Force General Qualifications - CF188 AF9000 Owner Trg	29-NOV-2016	
Air Force General Qualifications - CF188 AF9000 Indoc Trg	29-NOV-2016	
COMPULSORY TRAINING - Operation Honour Briefing	22-NOV-2016	
COMPULSORY TRAINING - Operation Honour Briefing	05-OCT-2015	
COMPULSORY TRAINING - Ethics	05-OCT-2015	05-OCT-2016
GENERAL SAFETY - Air Weapons Safety Brief	05-OCT-2015	05-OCT-2016
COMPULSORY TRAINING - Ethics - General Ethics Training (annual)	04-APR-2014	05-APR-2015
DND/CF APPLICATIONS - Monitor Mass - Gestion SSAM - Basic level	20-AUG-2013	
Operational Training - QNFT (Gas Mask Testing)	12-DEC-2012	13-DEC-2013

**FMS Qualifications / SGF Qualifications Actuelle**

Code	Name / Nom	Permit No / Numéro de permis Qualifier / Qualificatif	Effective Date / Date d'entrée en vigueur	Valid Until / Valide jusqu'à Last Update Mise à jour	
D11	Aircraft Towing Tractor (heavy, mule)	57985	Qualification	04-NOV-2004	11-NOV-2019
D10	Aircraft Towing Tractor (light, mule)	57985	Qualification	04-NOV-2004	11-NOV-2019
G18	Light Utility Vehicles (ATV)	57985	Qualification	25-AUG-2008	11-NOV-2019
A1	SC, SW, C/ALL, SUV, up to 9 passenger (10 including driver)	57985	Qualification	22-JUN-2001	11-NOV-2019
G11	Sled (self-propelled)	57985	Qualification	29-JAN-2008	11-NOV-2019
T1	Trailer (up to 1 ton)	57985	Qualification	02-MAY-2008	11-NOV-2019
F10	Truck bomb lift	57985	Qualification	27-APR-2018	11-NOV-2019
B1	Vehicle (up to and including 1 3/4 ton capacity)	57985	Qualification	22-JUN-2001	11-NOV-2019
B	Air Brake (Commercial)	57985	Specialty	24-MAR-2009	24-MAR-2014
E	DDC	57985	Specialty	13-OCT-2011	13-OCT-2021
H	Ramp DDC	57985	Specialty	28-MAR-2018	27-MAR-2021
F	SBC	57985	Specialty	09-OCT-2008	11-NOV-2019
T	Towing a Trailer	57985	Specialty	02-MAY-2008	11-NOV-2019

MOS ID	Description	Force Generation Baseline (FGB)	Role
00136-01	AVS TECH	Non-Deploy	IBTS Exempt

### IBTS Requirement and Level Obtained

Item	Lvl. Req'd.	Lvl. Obtd.	Qual Date	Valid Until	Activity	Entered by
Pistol	1	1	16-OCT-2019	16-OCT-2021	9mm 16 oct 2019	F60311978 WO Skwarka (SKWARKA.JMA)
PISTOL SAT	1	1	16-OCT-2019	16-OCT-2021	9mm 16 oct 2019	F60311978 WO Skwarka (SKWARKA.JMA)
CBRN	1	1	04-NOV-2019	04-NOV-2022	CBRN/EAQN 4 nov 2019	SKWARKA.JMA U12694
FAid and CPR	1	1	13-FEB-2019	13-FEB-2022	Premier Soins 12-13 fev 2019	C73003447 Cpl Belleville (Belleville.j)
ArmLaw	3	3	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
UseFrc	3	3	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
Media	2	2	07-FEB-2019	07-FEB-2022	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
Stress	3	3	25-FEB-2020	25-FEB-2022		A39418547 MCpl d'Anjou (D'ANJOU.YJ)
PMed	2	2	20-APR-2017	20-APR-2020	Gest. du stress 20 Avril 2017	B39454449 Sgt Dupere (dupere.gj)
InfoSec	2	2	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
CAC	1	1	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
QNFTC4Mask	1	1	12-DEC-2012	12-DEC-2015	EAQN (essai masque C-4) 12-12-12	R23036866 Sgt Doucet (doucet.jjcd)

### IBTS Level Obtained

Item	Lvl. Obtd.	Qual Date	Valid Until	Activity	Entered by
C7A1-C8A1	1	02-JUN-2016	02-JUN-2017	C7 Qual 2 juin 2016	B39454449 MCpl Dupere (dupere.gj)
Pistol	1	16-OCT-2019	16-OCT-2021	9mm 16 oct 2019	F60311978 WO Skwarka (SKWARKA.JMA)
C7 SAT	1	21-AUG-2017	21-AUG-2018	C7 Stal 21 aout 2017 pm	C73003447 Cpl Belleville (Belleville.j)
PISTOL SAT	1	16-OCT-2019	16-OCT-2021	9mm 16 oct 2019	F60311978 WO Skwarka (SKWARKA.JMA)
Nav	1	15-OCT-2015	15-OCT-2018	topo/comm 14-15 oct 15	R28486925 Pte(B) Girard (girard.jmp)
CBRN	1	04-NOV-2019	04-NOV-2022	CBRN/EAQN 4 nov 2019	SKWARKA.JMA U12694
FAid and CPR	1	13-FEB-2019	13-FEB-2022	Premier Soins 12-13 fev 2019	C73003447 Cpl Belleville (Belleville.j)
ArmLaw	3	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
UseFrc	3	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
ROE	3	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
Media	2	07-FEB-2019	07-FEB-2022	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
ECIS	1	15-OCT-2015	15-OCT-2017	topo/comm 14-15 oct 15	R28486925 Pte(B) Girard (girard.jmp)
PFET	1	25-SEP-2013	25-SEP-2017		T19758627 MCpl Carriere (carriere.jas)
Stress	3	25-FEB-2020	25-FEB-2022		A39418547 MCpl d'Anjou (D'ANJOU.YJ)
PMed	2	20-APR-2017	20-APR-2020	Gest. du stress 20 Avril 2017	B39454449 Sgt Dupere (dupere.gj)
InfoSec	2	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
CAC	1	07-FEB-2019	07-FEB-2021	Formation Generale 7 fev 2019	K69485296 Sgt Doucet (Doucet.JRR)
QNFTC4Mask	1	12-DEC-2012	12-DEC-2015	EAQN (essai masque C-4) 12-12-12	R23036866 Sgt Doucet (doucet.jjcd)

CO / Trg Officer Signatures

Date

Name	Level	Qual Date	Valid Until	Time Type	Days
Hearing Conservation				Floating	365
CT - 114 ALSE Brief	Supplemental			Floating	365
QNFT - C5 CBRN General Service Respirator	Supplemental			Floating	1095
Mandatory Critical Incident Taining	Supplemental			Floating	365

01 COMMUNIT

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
500-AMD-01	COMBINED SERVICES UNIT, JET FUEL (CSU)	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Rescind	F17307900 MWO Demers			21-SEP-2009
			Recommended	K69485296 WO Doucet			16-SEP-2009
500-AMG-01	FLOODLIGHT UNIT, ELECTRIC OR DIESEL FUEL	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Grant	V65213036 MWO Harbec			16-NOV-2011
			Recommended	D89154495 WO Trudeau			15-NOV-2011
500-AML-07	HYDRAULIC & OIL FLUID UNIT, HYD FILL & BLEED CART	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Rescind	F17307900 MWO Demers			22-JUN-2010
			Recommended	N12255177 WO Cardinal			21-JUN-2010
500-AML-16	HYDRAULIC FILL & BLEED UNIT, Line Chief Mark 1	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Grant	N688994627 MWO Henry			15-FEB-2012
			Recommended	F80902333 WO Lafond			10-FEB-2012
500-AMM-02	JACKING UNIT, HYDRAULIC & ELECTRIC JACKS	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Recommended	C34478729 WO Pare			14-MAR-2012
			Grant	V65213036 MWO Harbec			14-MAR-2012
500-AMQ-04	MOBILE NITROGEN GENERATOR, DIESEL FUEL (MNG)	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers			21-SEP-2009
			Recommended	K69485296 WO Doucet			16-SEP-2009
500-AMQ-05	2 Bottle Gaseous Nitrogen Cart (P/N 508050)	Authorized	Rescind	F82561065 MWO Cole			24-FEB-2020
			Recommended	D89154495 WO Trudeau			16-NOV-2011
			Grant	V65213036 MWO Harbec			16-NOV-2011
500-AMU-03	POWER UNIT, 60 KVA, DIESEL FUEL (STEWART STEVENSON)	Authorized	Rescind	R64207161 MWO Garceau			01-OCT-2019
			Grant	F17307900 MWO Demers			21-SEP-2009
			Recommended	K69485296 WO Doucet			16-SEP-2009
500-AMU-07	POWER UNIT, 60 KVA, ELECTRIC (60FH61)	Authorized	Rescind	R64207161 MWO Garceau			01-OCT-2019
			Rescind	F17307900 MWO Demers			17-MAY-2010
			Grant				



# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
500-AMU-09	POWER UNIT, 37.5 KVA AC GENERATOR, ELECTRIC (37FH61)	Authorized	Recommended	V10811772 MWO Gauthier			14-MAY-2010
			Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Recommended	V65213036 MWO Harbec			06-DEC-2011
500-ARB-14	10 Ton Tripod Jack (P/N 721000-R1)	Authorized	Grant	V65213036 MWO Harbec			06-DEC-2011
			Rescind				
			Rescinded	B32392420 WO Gagnon			25-OCT-2018
500-ARB-25	Maintenance Platform (P/N 8140092)	Authorized	Grant	F17307900 MWO Demers			22-JUN-2010
			Recommended	N12255177 WO Cardinal			21-JUN-2010
			Rescind				
500-ARB-28	Maintenance Platform (P/N GHE33-1)	Authorized	Rescind	R64207161 MWO Garceau			01-OCT-2019
			Grant	F17307900 MWO Demers			22-JUN-2010
			Recommended	N12255177 WO Cardinal			21-JUN-2010
500-ARB-33	Tow Bar - Universal (P/N 8578-5A)	Authorized	Rescind	R64207161 MWO Garceau			01-OCT-2019
			Grant	F17307900 MWO Demers			22-JUN-2010
			Recommended	N12255177 WO Cardinal			21-JUN-2010
500-MRS-01	Maintenance Work Order Complete	Authorized	Rescind				
			Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Recommended	N29533296 WO Barbeau			31-AUG-2016
500-NTC-01	Tool control Record	Authorized	Grant	F2561065 MWO Cole			31-AUG-2016
			Recommended	V65213036	02-APR-2012	V65213036	02-APR-2012
			Grant	V65213036 MWO Harbec			02-APR-2012
500-NTI-01	Technical Inspector	Authorized	Rescind	V65213036 MWO Harbec			02-APR-2012
			Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Grant	K55834541 CWO Upham			08-NOV-2007
500-NTS-17	Versatest Torque Tester	Authorized	Recommended	K70398779 MWO Miller			07-NOV-2007
			Rescind				
			Rescinded	B32392420 WO Gagnon			25-OCT-2018
526-LTS-28	AN/PSC-501 (V) Portable Adaptive Test Set (PAT5) Operator	Authorized	Recommended	22542507 Civ Pelsche			08-NOV-2007
			Grant	K55834541 CWO Upham			08-NOV-2007
			Rescind				
526-LTS-28	AN/PSC-501 (V) Portable Adaptive Test Set (PAT5) Operator	Authorized	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Grant	R54545799 MWO Cydderman			25-JAN-2006
			Rescind				

# AFHRM Members Authorization Report

Code Title Level

Level

Status

Recommender

Rec Date

SAMS

Auth Date

## Elementary Work

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-EL-06	Interior Light Bulbs	Authorized	Rescind				
			Rescinded	F82561065 MWO Cole		24-FEB-2020	
			Grant	V65213036 MWO Harbec		16-NOV-2011	
188-EL-09	Take SOAP Samples	Authorized	Recommended	D89154495 WO Trudeau			15-NOV-2011
			Rescind				
188-EL-11	RLCS Servicing and Sampling	Authorized	Rescinded	F82561065 MWO Cole			24-FEB-2020
			Grant	V65213036 MWO Harbec		16-NOV-2011	
188-EL-21	Conditional Inspection 8, Arrestor Hook	Authorized	Recommended	D89154495 WO Trudeau			15-NOV-2011
			Rescind				
188-EL-22	Conditional Inspection 18, IFR Probe	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers		22-JUN-2010	
188-EL-29	NACES rear seat Tie/untie	Authorized	Recommended	N12255177 WO Cardinal			21-JUN-2010
			Rescind				
188-EL-30	CF335 A, B, AB, DI and Fluid control	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers		17-MAY-2010	
188-EL-31	Conditional Inspection 27, Inlet Ice Caution	Authorized	Recommended	V10811772 MWO Gauthier			14-MAY-2010
			Rescind				

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Fleet Common  
Code Title Level

Level

Status

Recommender

Rec Date



# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-ACW-03	DMS Weight and Balance Amendment	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Recommended	H35851728 WO Rondeau			05-DEC-2016
			Grant	F82561065 MWO Cote			05-DEC-2016
			Rescind				
188-APP-01	I/C Aircraft Wash	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers			05-OCT-2009
			Recommended	V10811772 MWO Gauthier			01-OCT-2009
			Rescind				
188-APP-02	I/C Emergency Recovery Crew	Authorized	Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Recommended	C11904840 Sgt Boileau			21-NOV-2012
			Grant	V65213036 MWO Harbec			21-NOV-2012
			Rescind				
188-APP-04	I/C Tow Crew	Authorized	Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Recommended	T14535511 MCpl Dionne			19-JAN-2012
			Grant	V65213036 MWO Harbec			19-JAN-2012
			Rescind				
188-APP-05	Tow Crew Driver	Authorized	Rescinded	F82561065 MWO Cote			24-FEB-2020
			Grant	V65213036 MWO Harbec			29-NOV-2011
			Recommended	T14535511 MCpl Dionne			25-NOV-2011
			Rescind				
188-PLT-04	Weapon System Release (Level B)	Authorized	Rescinded	F82561065 MWO Cote			26-OCT-2016
			Recommended	N68994627 MWO Henry			21-APR-2016
			Grant	N68994627 MWO Henry			21-APR-2016
			Rescind				

## Local

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-LOC-10	Technical Assessor	Authorized	Rescind	F82561065 MWO Cote			24-FEB-2020
			Recommended	T47785365 MWO Julien			11-JUL-2008
			Grant	T47785365 MWO Julien			11-JUL-2008
			Rescind				
188-LOC-22	ACA operations - MOB	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Grant	N68994627 MWO Henry			14-JUL-2011
			Recommended	N12255177 WO Cardinal			05-JUL-2011
			Rescind				
188-LOC-23	ACA operations - DOB	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018
			Grant	N68994627 MWO Henry			14-JUL-2011
			Recommended	N12255177 WO Cardinal			05-JUL-2011
			Rescind				

# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-LOC-24	ACA operations - FOL	Authorized	Rescind				
			Rescinded	B32392420 WO Gagnon		25-OCT-2018	
			Grant	N68994627 MWO Henry		14-JUL-2011	
			Recommended	N12255177 WO Cardinal		05-JUL-2011	
188-LOC-29	POM Interview	Authorized	Granted/Authorized	N68994627	29-APR-2016	N68994627	29-APR-2016
			Recommended	N68994627 MWO Henry		29-APR-2016	
			Grant	N68994627 MWO Henry		29-APR-2016	
188-LOC-30	Lvl A Interview	Authorized	Granted/Authorized	N68994627	29-APR-2016	N68994627	29-APR-2016
			Recommended	N68994627 MWO Henry		29-APR-2016	
			Grant	N68994627 MWO Henry		29-APR-2016	
3WG-LBG-02	6 and 7 Hangar Door Operation	Authorized	Rescind				
			Rescinded	R64207161 MWO Garceau		01-OCT-2019	
			Grant	F17307900 MWO Demers		17-MAY-2010	
			Recommended	V10811772 MWO Gauthier		14-MAY-2010	
			Rescind				
3WG-LBG-06	Floor sweeper/Washer	Authorized	Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Grant	F17307900 MWO Demers		17-MAY-2010	
			Recommended	V10811772 MWO Gauthier		14-MAY-2010	
			Rescind				
3WG-LBG-07	Spill Response	Authorized	Rescind				
			Rescinded	R64207161 MWO Garceau		01-OCT-2019	
			Grant	F17307900 MWO Demers		17-MAY-2010	
			Recommended	V10811772 MWO Gauthier		14-MAY-2010	

## Maintenance

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-ADS-50	Air Data System	Level POM	Rescind				
			Rescinded	R64207161 MWO Garceau		01-OCT-2019	
			Grant	F17307900 MWO Demers		01-DEC-2009	
188-BOR-01	Boresighting System	Level POM	Recommended	V24182817 Cpl Labrie			25-NOV-2009
			Rescind				
			Rescinded	R64207161 MWO Garceau		01-OCT-2019	
			Recommended	N12255177 WO Cardinal		14-DEC-2011	
188-COM-50	Communication systems	Level POM	Grant	V65213036 MWO Harbec			14-DEC-2011
			Rescind				
			Rescinded	F82561065 MWO Cote		24-FEB-2020	
188-EPW-50	Power and Lighting Systems	Level POM	Grant	F17307900 MWO Demers			27-MAY-2011
			Recommended	H60055366 WO Cyr		20-MAY-2011	
			Rescind				
188-EPW-50	Power and Lighting Systems	Level POM	Rescind				
			Rescinded	F82561065 MWO Cote		24-FEB-2020	

# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAWS	Auth Date
188-EWS-05	Line Sweep and Functional	Level POM	Recommended	F17307900 MWO Demers			29-APR-2011
			Rescind	F17307900 MWO Demers			29-APR-2011
			Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Grant	K71248886 MWO Daniels			26-MAY-2011
188-EWS-51	Electronic Warfare Systems	Level POM	Recommended	K79792974 MCpl Richard			19-MAY-2011
			Rescind				
			Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Grant	F17307900 MWO Demers			27-MAY-2011
188-FCS-50	FCS System	Level POM	Recommended	H60055365 WO Cyr			20-MAY-2011
			Rescind				
			Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Grant	V65213036 MWO Harbec			03-JUL-2012
188-IDS-50	Identification Systems	Level POM	Recommended	N12255177 WO Cardinal			21-JUN-2012
			Rescind				
			Rescinded	F82561065 MWO Cole			24-FEB-2020
			Grant	F17307900 MWO Demers			27-MAY-2011
188-MCS-50	Mission Computer System	Level POM	Recommended	H60055365 WO Cyr			20-MAY-2011
			Rescind				
			Rescinded	F82561065 MWO Cole			24-FEB-2020
			Grant	F17307900 MWO Demers			26-MAY-2010
188-MDG-50	Display Systems	Level POM	Recommended	H60055365 WO Cyr			20-MAY-2010
			Rescind				
			Rescinded	F82561065 MWO Cole			24-FEB-2020
			Recommended	V65213036 MWO Harbec			22-AUG-2011
188-MSD-50	Status Monitoring Systems	Level POM	Grant	V65213036 MWO Harbec			22-AUG-2011
			Rescind				
			Rescinded	F82561065 MWO Cole			24-FEB-2020
			Recommended	V65213036 MWO Harbec			22-AUG-2011
188-NAV-05	MADCAL & Compass Swing	Level POM	Grant	V65213036 MWO Harbec			22-AUG-2011
			Rescind				
			Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Recommended	V24182817 Cpl Labrie			19-NOV-2009
188-NAV-50	Navigation Systems	Level POM	Grant	F17307900 MWO Demers			19-NOV-2009
			Rescind				
			Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Recommended	V24182817 Cpl Labrie			19-NOV-2009
188-NFP-02	Sniper FLIR Pod System	Level POM	Grant	F17307900 MWO Demers			02-JUN-2011
			Rescind				
			Rescinded	F82561065 MWO Cole			24-FEB-2020
			Recommended	F17307900 MWO Demers			02-JUN-2011

# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-NFP-03	Sniper FLIR Pod	Level POM	Rescind	F82561065 MWO Cote			24-FEB-2020
			Grant	F17307900 MWO Demers			12-SEP-2009
			Recommended	C34449902 WO Martinier			09-SEP-2009
188-RDR-50	Radar Systems	Level POM	Rescind	F82561065 MWO Cote			24-FEB-2020
			Rescind	F17307900 MWO Demers			03-JUN-2010
			Recommended	V24182817 Cpl Labrie			01-JUN-2010
			Rescind				
			Rescind	F82561065 MWO Cote			24-FEB-2020
188-STG-01	Strain Gauge	Level POM	Grant	F17307900 MWO Demers			23-MAR-2010
			Recommended	V24182817 Cpl Labrie			25-NOV-2009
			Rescind				
188-STR-01	Miscellaneous structure	Level POM	Rescind	V65213036 MWO Harbec			09-FEB-2012
			Rescind	F17307900 MWO Demers			22-JUN-2010
			Recommended	V64966134 MCpl Hamel			18-JUN-2010
			Rescind				
			Rescind	R64207161 MWO Garceau			01-OCT-2019
526-LCP-01	AN/AYK-14(V) Digital Data Computer	Level POM	Rescind	V65213036 MWO Harbec			22-MAY-2012
			Rescind	H60055365 WO Cyr			22-MAY-2012
			Reinstate Recommend	V65213036 MWO Harbec			01-DEC-2011
			Rescind	V65213036 MWO Harbec			30-NOV-2011
			Grant	C11904840 Sgt Boileau			29-NOV-2011
526-LCS-25	MX-9965/A Interference Blanker (IBS)	Level POM	Rescind	F17307900 MWO Demers			31-AUG-2009
			Rescind	K55834541 CWO Upham			13-NOV-2007
			Grant	B59092683 MCpl Berthiaume			09-NOV-2007
526-LCS-26	C-1082/A Communication System Control Set (SCCS)	Level POM	Recommended	F17307900 MWO Demers			31-AUG-2009
			Rescind	F16123098 MWO Fortin			05-MAR-2008
			Grant	K55834541 CWO Upham			05-MAR-2008
526-LDR-07	R0508/ASM-62 Signal Data Recorder (SDR)	Level POM	Rescind	F17307900 MWO Demers			31-AUG-2009
			Rescind	K55834541 CWO Upham			29-JUN-2007
			Recommended	B59092683 MCpl Berthiaume			28-JUN-2007
526-LDR-08	CV-3493/ASM-612 Signal Data Converter (SDC)	Level POM	Rescind	F17307900 MWO Demers			31-AUG-2009
			Rescind	B59092683 MCpl Berthiaume			29-MAR-2007
			Grant	K55834541 CWO Upham			29-MAR-2007

# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
526-LEC-08	CF188 Temperature Flow Controller (ECS)	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Recommended	B59092683 MCpl Berthiaume			29-MAR-2007
			Grant	K55834541 CWO Upham			29-MAR-2007
526-LFC-37	CF188 Electronic Equipment Control (EEC)	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Recommended	B59092683 MCpl Berthiaume			29-MAR-2007
			Grant	K55834541 CWO Upham			29-MAR-2007
526-LFC-38	DT-600/ASW-44 Air Data Sensor (ADS) and CP-1334A Air Data Com	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Recommended	B59092683 MCpl Berthiaume			25-JAN-2007
			Grant	K55834541 CWO Upham			25-JAN-2007
526-LID-18	Caution Light Indicator Panel (CLIP)	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Grant	K55834541 CWO Upham			29-JUN-2007
			Recommended	B59092683 MCpl Berthiaume			28-JUN-2007
526-LID-21	CF188 Flap/Landing Gear Indicator	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Grant	K55834541 CWO Upham			29-JUN-2007
			Recommended	B59092683 MCpl Berthiaume			28-JUN-2007
526-LID-22	CF188 AEU-12/A Engine Monitoring Indicator	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Recommended	B59092683 MCpl Berthiaume			25-JAN-2007
			Grant	K55834541 CWO Upham			25-JAN-2007
526-LIT-02	Lighting Assemblies (Indicators & Panel)	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Recommended	B59092683 MCpl Berthiaume			29-MAR-2007
			Grant	K55834541 CWO Upham			29-MAR-2007
526-LRS-27	CP-1326/APG-65 Radar Target Data Processor (RTDP)	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Grant	K55834541 CWO Upham			29-JUN-2007
			Recommended	B59092683 MCpl Berthiaume			28-JUN-2007
526-LRS-31	R-2089/APG-65 Radar Receiver/Extier (RE)	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Grant	K55834541 CWO Upham			29-JUN-2007
			Recommended	B59092683 MCpl Berthiaume			28-JUN-2007

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
526-LRS-32	CP-1345/APG-65 Computer Power Supply (CPS)	Level POM	Rescind				
			Rescinded	F17307900 MWO Demers		31-AUG-2009	
			Recommended	B59092683 MCpl Berthiaume		29-MAR-2007	
			Grant	K55834541 CWO Upham		29-MAR-2007	
526-LTS-27	AN/PSQ-501(V) Portable Adaptive Test Set (PATs) Set-up and Tear-d	Authorized	Rescind				
			Rescinded	F17307900 MWO Demers		14-SEP-2009	
			Reinstated	K55834541 CWO Upham		25-JAN-2007	
			Reinstate Recommend	B59092683 MCpl Berthiaume		21-DEC-2006	
			Rescinded	K55834541 CWO Upham		03-OCT-2006	
			Grant	R54545799 MWO Cyderman		25-JAN-2006	
526-LTS-29	AN/PSQ-501(V) Portable Adaptive Test Set (PATs) Maintainer	Authorized	Recommended	B59092683 MCpl Berthiaume			16-JAN-2006
			Rescind				
526-LWP-02	CP-1342/AYQ-9 (V) Armament Computer (SMSC)	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Recommended	B59092683 MCpl Berthiaume		24-JUL-2007	
			Grant	K55834541 CWO Upham		24-JUL-2007	
			Rescind				
526-LWP-03	KY-851/AYQ-9(V) to KY-855/AYQ-9(V) Decoders.	Level POM	Rescinded	F17307900 MWO Demers			31-AUG-2009
			Grant	K55834541 CWO Upham		29-JUN-2007	
			Recommended	B59092683 MCpl Berthiaume		28-JUN-2007	
			Rescind				
526-LWR-07	Ice Detection Components	Level POM	Rescind				
			Rescinded	F17307900 MWO Demers		31-AUG-2009	
			Grant	K55834541 CWO Upham		29-JUN-2007	
			Recommended	B59092683 MCpl Berthiaume		28-JUN-2007	

### Servicing

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-SRV-01	Fold / Spread Wings	Authorized	Rescind				
			Rescinded	B32392420 WO Gagnon		25-OCT-2018	
			Grant	F17307900 MWO Demers		12-SEP-2009	
188-SRV-03	R / I LOX Converter	Authorized	Recommended	C34478729 WO Pare			11-SEP-2009
			Rescind				
			Rescinded	B32392420 WO Gagnon		25-OCT-2018	
188-SRV-08	Tow Crew member	Authorized	Grant	F17307900 MWO Demers			12-SEP-2009
			Recommended	C34478729 WO Pare		11-SEP-2009	
			Rescind				

# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date
188-SRV-11	Code Loading of Secure Voice KY58	Authorized	Rescinded	R64207161 MWO Garceau			01-OCT-2019
			Grant	F17307900 MWO Demers			12-SEP-2009
			Recommended	C34478729 WO Pare			11-SEP-2009
188-SRV-14	Launch and Recovery	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers			18-JUN-2010
			Recommended	C34478729 WO Pare			17-JUN-2010
188-SRV-15	Hot Turns	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Recommended	T48545395 MCpl Girard			30-MAR-2012
			Grant	V65213036 MWO Harbec			30-MAR-2012
188-SRV-16	LAU-7 N2 Bottle	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers			15-JUN-2011
			Recommended	C34478729 WO Pare			14-JUN-2011
188-SRV-18	Code Loading of Secure Voice RT-1824	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers			18-JUN-2010
			Recommended	C34478729 WO Pare			17-JUN-2010
188-SRV-19	Code Loading of KIV 6	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers			18-JUN-2010
			Recommended	C34478729 WO Pare			17-JUN-2010
188-SRV-20	Code Loading of GPS/EGI	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	V65213036 MWO Harbec			16-NOV-2011
			Recommended	D89154495 WO Trudeau			15-NOV-2011
188-SRV-21	CF 188 Aircraft refueling and defueling	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	F17307900 MWO Demers			17-MAY-2010
			Recommended	V10811772 MWO Gauthier			14-MAY-2010
188-SRV-22	AMU Loading	Authorized	Rescinded	B32392420 WO Gagnon			25-OCT-2018
			Grant	V65213036 MWO Harbec			16-NOV-2011
			Recommended	D89154495 WO Trudeau			15-NOV-2011

# AFHRM Members Authorization Report

Code	Title	Level	Status	Recommender	Rec Date	SAMS	Auth Date	
188-SRV-23	Code Loading of MIDS	Authorized	Rescind	B32392420 WO Gagnon			25-OCT-2018	
			Rescinded					
			Grant	F17307900 MWO Demers				18-JUN-2010
			Recommended	C34478729 WO Pare				17-JUN-2010
188-SRV-24	PLM-4 Servicing	Authorized	Rescind					
			Rescinded	B32392420 WO Gagnon				
			Grant	V65213036 MWO Harbec				03-JUL-2012
			Recommended	N12255177 WO Cardinal				21-JUN-2012
188-SRV-25	FACE II -BLOSCOM	Authorized	Rescind					
			Rescinded	B32392420 WO Gagnon				
			Grant	V65213036 MWO Harbec				05-DEC-2011
			Recommended	D89154495 WO Trudeau				01-DEC-2011
188-SRV-27	Emergency Recovery Crew Member	Authorized	Rescind					
			Rescinded	R64207161 MWO Garceau				
			Grant	K33788704 MWO Boivin				16-OCT-2015
			Recommended	F77595114 WO Hickey				15-OCT-2015
188-SRV-28	Aircraft Jacking Crew Member	Authorized	Rescind					
			Rescinded	B32392420 WO Gagnon				
			Grant	K33788704 MWO Boivin				16-OCT-2015
			Recommended	F77595114 WO Hickey				15-OCT-2015

Bonjour Dr Lemire,

En document, je vous ai inclus les études que nous avons réalisées en 2017 (lors d'entretien dans un réservoir d'essence de CF-18) et en 2022 (lors des opérations de réception de carburant).

Ces deux tâches sont celles qui exposent le plus les travailleurs aux carburants (JP-8, fiche signalétique en document) ainsi que l'additif Spec-aid (utilisé pour augmenter la stabilité du carburant, fiche signalétique en document).

Dans les deux cas, l'exposition des travailleurs était sous le 50% des normes de chaque contaminant à l'étude.

Il est important de savoir qu'entre 2004 et 2006, le carburant utilisé dans les avions à passer du JP-4 (contenant du benzène, étant cancérogène) a dû JP-8 (contenant principalement kérosène).

Nous n'avons malheureusement pas d'étude pour les techniciens en systèmes avioniques dans les hangars directement.

Aussi, pour l'exposition du travailleur pour ces années dans la marine, il serait bon de faire une demande d'accès à l'information dans ces bases d'appartenance pour demander si des rapports ou études ont déjà été réalisés pour ce métier.

Mathieu Tremblay Archibald

Note de service

6600-12 (Méd Prév)

28 janv 2018

Liste de distr

**SUIVI PHASE 2 BAIE DE CARBURANT  
BÂT 216 – LOCAL 105.1 3EMA**

- Réfs: A. Rapport d'échantillonnage, Phase 2, Bât 216 Baie de carburant, 20 juin 2017  
B. Fiche signalétique – Carburacteur A-1  
[https://prodepc.blob.core.windows.net/epcblobstorage/GSAP\\_msds\\_01416021.PDF](https://prodepc.blob.core.windows.net/epcblobstorage/GSAP_msds_01416021.PDF)  
C. Fiche signalétique – JP-4  
[http://eis-dcb-av03393.forces.mil.ca/msdsdoc/eng65/JP-4\\_APPC501.pdf](http://eis-dcb-av03393.forces.mil.ca/msdsdoc/eng65/JP-4_APPC501.pdf)  
D. IRSST – Méthode d'échantillonnage pour le Benzène no. 24-3  
E. IRSST – Méthode d'échantillonnage pour l'Éthylbenzène no. 250-1  
F. IRSST – Méthode d'échantillonnage pour le Kérosène no. 80-1  
G. IRSST – Méthode d'échantillonnage pour le Triméthylbenzène no. 251-1  
H. IRSST – Méthode d'échantillonnage pour le Xylène no. 101-2  
I. TLVs and BEIs Threshold Limit Values & Biological Exposure Indices ACGIH 2017  
J. CSST – Fiche complète pour le Benzène,  
[http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no\\_produit=2543](http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no_produit=2543)  
K. CSST – Fiche complète pour l'Éthylbenzène,  
[http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no\\_produit=3749](http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no_produit=3749)  
L. CSST – Fiche complète pour le Kérosène,  
[http://www.csst.qc.ca/prevention/reptox/pages/fiche-complete.aspx?no\\_produit=37143](http://www.csst.qc.ca/prevention/reptox/pages/fiche-complete.aspx?no_produit=37143)  
M. CSST – Fiche complète pour le Triméthylbenzène,  
[http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no\\_produit=45831](http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no_produit=45831)  
N. CSST – Fiche complète pour le Xylène,  
[http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no\\_produit=92619](http://www.csst.qc.ca/prevention/reptox/Pages/fiche-complete.aspx?no_produit=92619)  
O. C-12-010-040/TR-014, Description et maintenance des réservoirs et des réservoirs souples de carburant d'aéronefs.  
P. C-87-040-000/MS-001, Programme de protection des voies respiratoires du MDN, mai 2006

**SITUATION**

1. Tel que mentionné dans le rapport de la phase 2 en réf A, un échantillonnage annuel en hygiène industrielle concernant l'exposition aux composés organiques volatils (COV) lors des travaux de maintenance à l'intérieur des réservoirs de carburant des CF-18 ont été effectués dans la baie de carburant le 2 oct 2017. Cette étude a été réalisée par M. Mathieu Tremblay-Archibald, technicien en santé occupationnelle ainsi que le Cplc Girard-Dallaire, technicienne en médecine préventive. Nous tenons à remercier le Sgt Blackburn, pour son aide et support dans ce dossier.

## BUT

2. Le but de ces prélèvements était d'évaluer les risques pour la santé des travailleurs ainsi que de vérifier leur exposition aux vapeurs de carburant contenant des COV tels que l'éthylbenzène, le kérosène, le triméthylbenzène et le xylène, lors des procédés effectués dans la baie de carburant mentionnée ci-dessus. Ces contaminants sont les principaux composants du carburéacteur A-1 (réf B) (carburant pour moteurs à turbine adapté à l'avion). Dans l'optique de s'assurer de la santé des travailleurs, même si le benzène n'est pas présent dans la fiche signalétique du Carburéacteur A-1, nous avons toutefois décidé de l'ajouter dans l'analyse pour confirmer son absence, étant donné que l'ancien carburant (JP-4) (réf C) en contenait. Les résultats de cette analyse serviront à établir les directives appropriées concernant les mesures de sécurité à appliquer par les employés dans ces endroits.

## CONTEXTE

3. Le bât 216 de l'unité 3EMA de la BFC Bagotville, dispose d'une baie de carburant située au local 104.1.2. Six employés militaires travaillent à cet endroit. L'horaire de travail est du lundi au vendredi de 7 h 15 à 15 h 15. Cette baie est principalement utilisée pour effectuer la réparation et maintenance des réservoirs d'essence et de la tuyauterie des CF-18.

## OBSERVATIONS

4. Les points importants relevés lors de la journée d'échantillonnage sont les suivants :
- a. lors de l'échantillonnage, le travailleur effectuait des travaux de maintenance dans les réservoirs de carburant dans la baie de carburant. Les réservoirs ont été vidés puis ventilés pendant 24h avant le début des travaux;
  - b. le travailleur à l'intérieur du réservoir portait en continu un masque plein visage avec apport d'air frais respirable pour éviter toute chance de contamination avec les vapeurs de carburant, des gants de nitrile, des bottes imperméables reliées avec du ruban adhésif à ses pantalons, utilisé pour limiter le contact cutané avec le carburant en état liquide ainsi qu'une combinaison de travail, celle-ci n'était toutefois pas imperméable et peut potentiellement s'imbiber de carburant et ainsi être en contact avec la peau. Toutefois, le travailleur portait un gilet à manches longues par-dessus sa combinaison pour limiter le contact cutané;
  - c. lors de l'opération, un appareil à détection du gaz pour l'oxygène (O<sub>2</sub>), la limite inférieure d'explosivité (LIE) ainsi que le total des COV fut utilisé. Un test initial fut effectué avant l'entrée en espace clos du travail, ensuite, l'appareil est resté à l'intérieur de l'espace clos durant toutes les manipulations. Lors de l'échantillonnage, le détecteur a sonné à deux reprises dues à un dépassement des seuils acceptables de celui-ci. Dès que l'alarme s'est fait entendre, le surveillant de l'espace clos a indiqué au travailleur à l'intérieur de sortir immédiatement. Une ventilation a été effectuée pendant environ une dizaine de minutes. Les travaux

ont repris lorsque l'appareil a cessé de sonner.

### PROCÉDURE D'ÉCHANTILLONNAGE

5. Lors de la journée d'échantillonnage, trois pompes de marque SKC Air-Check XR5000 ont été utilisées pour vérifier l'exposition des travailleurs et la concentration présente dans l'air ambiant suivant la méthode d'échantillonnage de l'IRSST pour chaque COV (réfs D,E,F,G et H). Ces pompes ont été étalonnées avant et après utilisation par un étalonneur de type DryCal Defender 520 et ce dernier avait été étalonné par le fabricant le 23 janv 2017. Le débit de ces pompes fût réglé à 0,2 L/min tel que prescrit dans la méthode d'échantillonnage, aucune variation majeure de débit ne fût observée lors de l'échantillonnage. Le média d'échantillonnage des pompes était des tubes de charbon actif 100/50 mg no SKC 226-01. Ces pompes ont été placées de façon stratégique dans la baie de carburant, local 105.1. L'une était sur le travailleur effectuant la maintenance dans le réservoir souple du CF-18, une autre était sur le surveillant d'espace clos et une troisième sur le casier dans la zone de changement à une dizaine de mètres du CF-18. Les pompes étaient attachées à la taille des travailleurs et reliées près de leurs visages afin de simuler les contaminants se rendant dans les voies respiratoires de ceux-ci.

### RÉSULTATS ET INTERPRÉTATION

6. Pour les COV analysés, ils ont été choisis grâce à la fiche signalétique fournie par les ateliers (réf B). Les résultats peuvent être consultés en annexe A :
- a. Benzène : les résultats de l'air pour ce COV sont en dessous de la VEMP de 1.59 mg/m<sup>3</sup> (réf I);
  - b. Éthylbenzène : les résultats de l'air pour ce COV sont en dessous de la VEMP de 86.83 mg/m<sup>3</sup> (réf I);
  - c. Kérosène : les résultats de l'air pour ce COV sont en dessous de la VEMP de 200 mg/m<sup>3</sup> (réf I). Une valeur de 10.23 mg/m<sup>3</sup> a été détectée sur le travailleur à la réception du carburant, ce qui représente une valeur de 5.12% de la norme mentionnée précédemment;
  - d. Triméthylbenzène : les résultats de l'air pour ce COV sont en dessous de la VEMP de 125 mg/m<sup>3</sup> (réf I);
  - e. Xylène : les résultats de l'air pour ce COV sont en dessous de la VEMP de 434 mg/m<sup>3</sup> (réf I).

## RISQUES À LA SANTÉ

7. Bien que les résultats des COV soient en dessous des normes prescrites à la réf I, il est important de connaître les risques pour la santé de chacun des contaminants :

- a. Benzène : selon la réf J, l'inhalation de vapeurs de benzène (300 à 3 000 ppm) peut causer une dépression du système nerveux central se traduisant par des maux de tête, des nausées, de la somnolence, de la fatigue, des vertiges, des tremblements, un délire et une perte de conscience. L'exposition aiguë (5 à 10 minutes) à une forte concentration de benzène (environ 20 000 ppm) peut causer la mort. Le Centre international de recherche sur le cancer (CIRC, 2012) considère que le benzène est cancérigène pour l'homme (groupe 1). L'absorption des vapeurs de benzène par la peau est négligeable alors que l'absorption du benzène liquide est importante. Suite au contact répété ou prolongé, ce produit exerce une action dégraissante sur la peau. Il peut causer des rougeurs, de la desquamation et des fissurations;
- b. Éthylbenzène : selon la réf K, l'inhalation des vapeurs peut causer une dépression du système nerveux central. Des effets tels que de la somnolence, des maux de tête, des étourdissements et des vertiges ont été observés chez des volontaires exposés à des concentrations supérieures à 100 ppm. L'éthylbenzène n'est pas considéré comme un sensibilisant cutané;
- c. Kérosène : selon la réf L, le Kérosène peut causer des irritations cutanées (dermite de contact), aux yeux, et des voies respiratoires supérieures. L'inhalation en aérosol peut causer une dépression du système nerveux central, des maux de tête, des nausées, vomissement, étourdissement;
- d. Triméthylbenzène : selon la réf M, l'inhalation à forte concentration peut causer une dépression possible du système nerveux central et des possibilités de pneumonite chimique suite à l'aspiration pulmonaire du liquide;
- e. Xylène : selon la réf N, l'effet principal du xylène s'exerce sur le système nerveux central. Les symptômes les plus fréquemment rapportés sont des maux de tête, de la fatigue, de l'anxiété, une sensation d'ébriété, de l'irritabilité, des troubles de l'équilibre, du sommeil et de la mémoire. Certaines études épidémiologiques mentionnent également la possibilité d'encéphalopathie toxique chronique et d'atteintes hépatique, rénale, cardiovasculaire et pulmonaire.

## RECOMMANDATIONS

8. En tenant compte des observations ainsi que des résultats recueillis lors de nos interventions, la principale recommandation est la suivante :

- a. la combinaison de travail utilisée par le membre effectuant des travaux dans le réservoir de carburant n'était pas imperméable. De plus, l'intérieur de la zone était propice à produire des fuites puisque le travailleur retirait divers composants de

celle-ci. Tel que décrit à la réf O, il est recommandé de porter une combinaison à trois couches pendant les opérations où du carburant est présent et jusqu'à ce qu'il n'y ait aucune possibilité de fuite de carburant provenant de la dépose des collecteurs, des pompes, des soupapes, etc. Étant donné la nature irritante du carburéacteur, il est important de garder en tête que le contact cutané avec ce contaminant doit être évité.

9. Dans l'objectif de sensibiliser tout le personnel, des séances de formation et d'information sont des éléments importants de la prévention des risques associés à l'exposition professionnelle au COV. Il est de ce fait indispensable d'offrir aux travailleurs des formations portant sur les sujets suivants :

- a. le Système d'information sur les matières dangereuses utilisées au travail (SIMDUT);
- b. les dangers que présentent les COV, y compris les effets sur la santé et la reconnaissance des symptômes s'y rapportant;
- c. les précautions à prendre en matière d'hygiène personnelle, les exigences relatives aux appareils respiratoires de même que les mesures et les pratiques professionnelles à respecter;
- d. l'utilisation et le nettoyage des appareils respiratoires individuels, de même que ce qu'il faut faire lorsqu'ils sont inutilisables.

10. Étant donné les résultats recueillis, confirmant l'absence de benzène dans l'environnement des employés, aucun test médical n'est nécessaire pour ce groupe de travailleurs. Toutefois, le département de médecine préventive effectuera des tests annuels pour effectuer un suivi de l'exposition des travailleurs tel que mentionné au para 1.

11. Nous tenons toutefois à féliciter les membres de l'atelier de la baie de carburant, pour avoir suivi avec assiduité la méthode de travail telle que décrite en réf O et d'avoir corrigé la plupart des problématiques énumérées dans la réf A. Nous vous encourageons donc à continuer les bonnes pratiques instaurées depuis le dernier rapport.

## CONCLUSION

12. Dans le but de protéger la santé et la sécurité des travailleurs, il est important de prendre en considération les recommandations énumérées ci-dessus. Une réponse écrite concernant les actions prises suite aux recommandations mentionnées est appréciée dans les 30 jours suivant la réception de cette note de service. Pour toutes questions concernant ce dossier, veuillez contacter la section de la Médecine Préventive au poste 7299.

Le Médecin-chef de la BFC Bagotville,

//original signé//

Capc M. Casey-Campbell, MD  
7307

Annexes :

Annexe A : Tableau de résultats d'échantillonnage de l'air  
Annexe B : Emplacement des pompes d'échantillonnages

Liste de distr

Exécution

Cmdt 3 EMA

Information

Externe

Adj Doucet  
Tech Méd Prév Régional 2<sup>e</sup> Division

Interne

Superviseur  
OSG  
BSB

Annexe A  
6600-12 (Méd Prév)  
28 janv 2018

RÉSULTATS D'ÉCHANTILLONNAGE DE L'AIR

1. Bât 216 Baie de carburant étude COV daté du 2 oct 2017 :

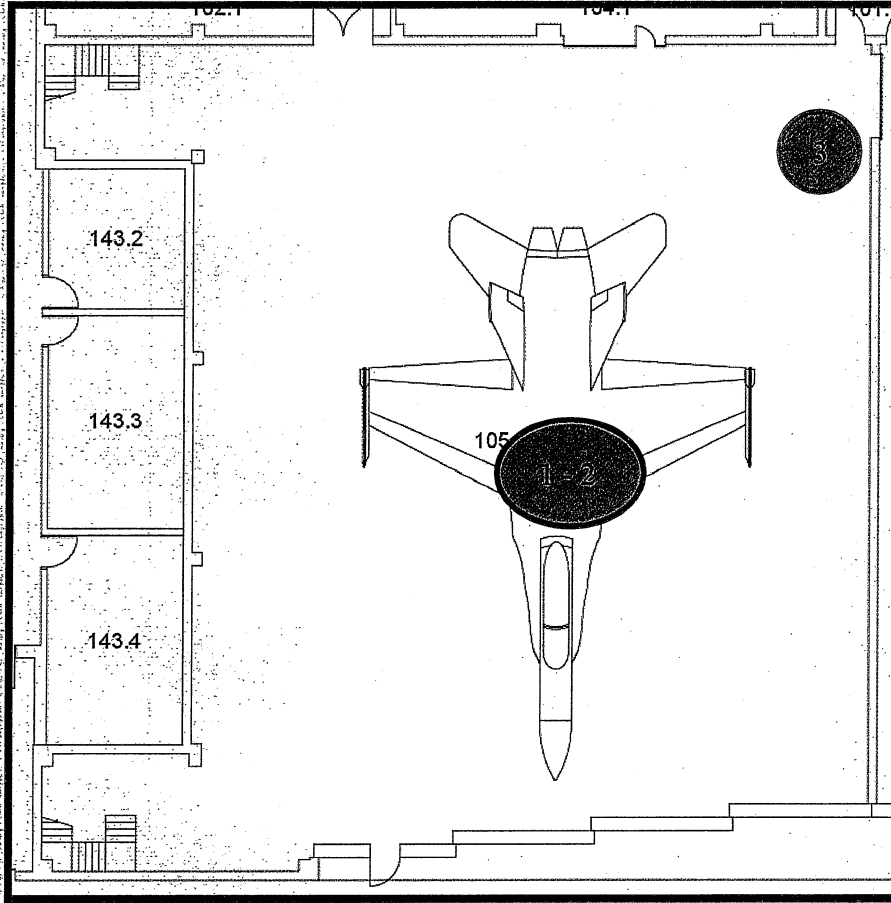
Emplacement des échantillons	Type d'analyse	Durée de l'échantillonnage (min)	Concentration détectée (mg/m <sup>3</sup> )	VEMP pour une exposition de travail de 8 heures (mg/m <sup>3</sup> )	Norme (mg/m <sup>3</sup> )	Exposition / Norme (%)
1- Sur le travailleur dans l'espace clos	Benzène	63	<VMR	0.02	1.59	1.25
	Éthylbenzène		<VMR	0.43	86.83	0.49
	Kérosène		78	10.23	200	5.12
	Triméthylbenzène		<VMR	0.62	123	0.50
	Xylène		<VMR	1.001	434	0.23
2- Sur le surveillant d'espace clos	Benzène	68	<VMR	0.019	1.59	1.19
	Éthylbenzène		<VMR	0.42	86.83	0.48
	Kérosène		<VMR	2.72	200	1.36
	Triméthylbenzène		<VMR	0.61	123	0.49
	Xylène		<VMR	0.99	434	0.22
3- Sur casier en périphérie de la baie	Benzène	72	<VMR	0.020	1.59	1.25
	Éthylbenzène		<VMR	0.43	86.83	0.49
	Kérosène		<VMR	2.79	200	1.395
	Triméthylbenzène		<VMR	0.63	123	0.51
	Xylène		<VMR	1.01	434	0.23
4- BLANC	Benzène	N/A	<VMR	<VMR	1.59	<VMR
	Éthylbenzène		<VMR	<VMR	86.83	<VMR
	Kérosène		<VMR	<VMR	525	<VMR
	Triméthylbenzène		<VMR	<VMR	123	<VMR
	Xylène		<VMR	<VMR	434	<VMR

1. <VMR ceci signifie valeur minimum rapportée par le laboratoire.
2. VEMP, signifie, valeur d'exposition moyenne pondérée /TWA signifie Time weighted average. Le VEMP ou TWA est l'exposition moyenne à un contaminant dans un lieu de travail sur une base de 8 heures par jour et de 40 heures par semaine.

Annexe B  
6600-12.(Méd Prév)  
28 janv 2018

EMPLACEMENT DES POMPES  
D'ÉCHANTILLONNAGES

1. Baie de carburant B216 – 02 oct 2017



- 1 : Pompe sur travailleur dans le réservoir (espace clos)
- 2 : Pompe sur surveillant d'espace clos
- 3 : Pompe en ambiant sur un coffre à outils dans la Baie de carburant

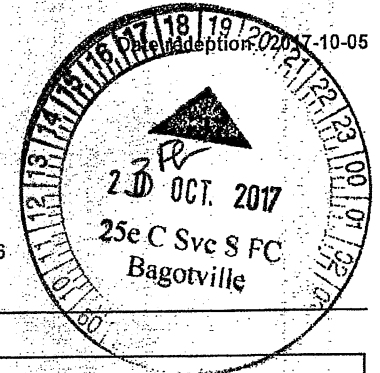


E807181

## Rapport d'analyse environnementale

Demandeur : Gagnon France  
 DÉFENSE NATIONALE BAGOTVILLE  
 25 Centre service de santé des forces Canadiennes  
 Alouette, Québec  
 GOV:1A0

Établissement : □



N° Client : 000497

Bon de Commande : 17-2426

N° Établissement : □

## Résultats analytiques

N° Échant : 90576386T		Média : Tube - 2120		Vol d'échant. (L) :			
IdClient : 90576386		Matériel : C.A.#1, 100/50, (226-01)		Date d'échant. : 2017-10-02		Date d'analyse : 2017-10-17	
Substance	Conc. totale (mg/m <sup>3</sup> )	Sect.2 %	Résultat total (µg)	CVa (%)	Incertitude (µg)	VMR (µg)	N° méthode
Benzène	NA	NA	<VMR	5,40	NA	2	24-3
Éthylbenzène	NA	NA	<VMR	3,40	NA	43	250-1
Xylènes	NA	NA	<VMR	3,50	NA	100	101-2
Triméthylbenzènes	NA	NA	<VMR	7,50	NA	62	251-1
Kérosène	NA	NA	<VMR		NA	275	80-1
Remarques relatives à l'échantillon:							

N° Échant : 90541899		Média : Tube - 2120		Vol d'échant. (L) : 14.30482			
IdClient : 90541899		Matériel : C.A.#1, 100/50, (226-01)		Date d'échant. : 2017-10-02		Date d'analyse : 2017-10-17	
Substance	Conc. totale (mg/m <sup>3</sup> )	Sect.2 %	Résultat total (µg)	CVa (%)	Incertitude (µg)	VMR (µg)	N° méthode
Benzène	NA	0	<VMR	5,40	NA	2	24-3
Éthylbenzène	NA	0	<VMR	3,40	NA	43	250-1
Xylènes	NA	0	<VMR	3,50	NA	100	101-2
Triméthylbenzènes	NA	0	<VMR	7,50	NA	62	251-1
Kérosène	NA	0	<VMR		NA	275	80-1
Remarques relatives à l'échantillon:							



E807181

## Rapport d'analyse environnementale

Date réception : 2017-10-05

Demandeur : Gagnon France  
 DÉFENSE NATIONALE BAGOTVILLE  
 25 Centre service de santé des forces Canadiennes  
 Alouette, Québec  
 GOV 1A0

Établissement : □

N° Client : 000497

Bon de Commande : 17-2426

N° Établissement : □

## Résultats analytiques

N° Échant. : 90576391		Média : Tube - 2120		Vol d'échant. (L) : 13.103055			
IdClient : 90576391		Matériel : C.A.#1, 100/50, (226-01)		Date d'échant. : 2017-10-02		Date d'analyse : 2017-10-17	
Substance	Conc. totale (mg/m <sup>3</sup> )	Sect.2 %	Résultat total (µg)	CVa (%)	Incertitude (µg)	VMR (µg)	N° méthode
Benzène	NA	0	<VMR	5,40	NA	2	24-3
Éthylbenzène	NA	0	<VMR	3,40	NA	43	250-1
Xylènes	NA	0	<VMR	3,50	NA	100	101-2
Triméthylbenzènes	NA	0	<VMR	7,50	NA	62	251-1
Kérosène	78	0	1000		NA	275	80-1
Remarques relatives à l'échantillon:							

N° Échant. : 90576398		Média : Tube - 2120		Vol d'échant. (L) : 14.75748			
IdClient : 90576398		Matériel : C.A.#1, 100/50, (226-01)		Date d'échant. : 2017-10-02		Date d'analyse : 2017-10-17	
Substance	Conc. totale (mg/m <sup>3</sup> )	Sect.2 %	Résultat total (µg)	CVa (%)	Incertitude (µg)	VMR (µg)	N° méthode
Benzène	NA	0	<VMR	5,40	NA	2	24-3
Éthylbenzène	NA	0	<VMR	3,40	NA	43	250-1
Xylènes	NA	0	<VMR	3,50	NA	100	101-2
Triméthylbenzènes	NA	0	<VMR	7,50	NA	62	251-1
Kérosène	NA	0	<VMR		NA	275	80-1
Remarques relatives à l'échantillon:							



E807181

# Rapport d'analyse environnementale

Date réception : 2017-10-05

**Demandeur :** Gagnon Francé  
DÉFENSE NATIONALE BAGOTVILLE  
25 Centre service de santé des forces Canadiennes  
Alouette, Québec  
GOV 1A0

**Établissement :** □

**N° Client :** 000497

**Bon de Commande :** 17-2426

**N° Établissement :** □

## Remarques

Ce rapport correspond à celui de la demande portant initialement le numéro E186576

**Abréviations :** NA (non applicable), VMR (valeur minimale rapportée), CVa (coefficient de variation analytique), R (Voir remarque), NR (Pas de résultat), AQ (Analyse qualitative), AQT (Analyse quantitative)

*Sauf avis contraire, la condition des échantillons à leur réception a été considérée acceptable. Les résultats ne se rapportent qu'aux échantillons soumis à l'analyse. Aucune correction n'a été effectuée pour les témoins soumis à l'analyse. Sauf avis contraire, aucune correction n'a été effectuée sur les résultats en fonction des blancs. Ce rapport ne doit pas être reproduit, sinon en entier, sans l'autorisation écrite du laboratoire. Consulter la partie 2 du Guide d'échantillonnage des contaminants de l'air en milieu de travail pour vous aider à comprendre et interpréter le contenu de ce rapport. Les résultats présentés dans ce rapport sont basés sur les données d'échantillonnage fournies par le demandeur, le cas échéant.  
À moins d'avis contraire, tous les résultats de contrôle de qualité associés aux échantillons se situaient entre les limites acceptables établies et n'affectaient donc pas les résultats rapportés. Les résultats d'analyses ne sont arrondis qu'à la suite de tous les calculs en respectant le nombre de chiffres significatifs propres à la méthode analytique utilisée.  
Les résultats sont rapportés suivant le système d'unités international (SI), lequel utilise les virgules comme séparateur décimal.  
L'incertitude présentée sur ce rapport, attribuable au processus analytique seulement, ne consiste pas en une valeur d'incertitude étendue puisque le facteur de couverture  $k = 2$  (pour un niveau de confiance de 95%) n'est pas appliqué.*

**Statut :** Approuvé

**Dossier :** E17-0988

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**Approuvé par :**

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# SAFETY DATA SHEET

## SPEC-AID\* 8Q462W

### 1. Identification

**Product identifier** SPEC-AID 8Q462W  
**Other means of identification** None.  
**Recommended use** Jet fuel stability additive  
**Recommended restrictions** None known.

#### Company/undertaking identification

SUEZ WTS USA, Inc.  
 4636 Somerton Road  
 Trevose, PA 19053  
 T 215 355 3300, F 215 953 5524

#### Emergency telephone

(800) 877 1940

### 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 3
<b>Health hazards</b>	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 1B
	Specific target organ toxicity, single exposure (inhalation, oral)	Category 1 (central nervous system, kidney, liver)
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure (dermal)	Category 1 (adrenal gland, bone marrow, kidney, liver, thymus gland)
Aspiration hazard	Category 1	
<b>OSHA defined hazards</b>	Not classified.	

#### Label elements



**Signal word** Danger

**Hazard statement** Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to organs (central nervous system, kidney, liver) by ingestion. Causes damage to organs (central nervous system, kidney, liver) by inhalation. Causes damage to organs (adrenal gland, bone marrow, kidney, liver, thymus gland) through prolonged or repeated exposure by skin contact.

## Precautionary statement

### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

### Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTER/doctor. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.

### Storage

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

None.

## 3. Composition/information on ingredients

### Mixtures

Components	CAS #	Percent
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	20 - 40
1,2,4-Trimethylbenzene	95-63-6	10 - 20
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	10 - 20
Phosphonothioic acid, polyisobutenyl derivs., esters with pentaerythritol	68908-58-7	10 - 20
Solvent naphtha (petroleum), light arom.	64742-95-6	10 - 20
BHT, butylated hydroxytoluene	128-37-0	2.5 - 10
Naphthalene	91-20-3	1 - 2.5
Xylene	1330-20-7	1 - 2.5
Cumene	98-82-8	0.1 - 1
Ethylbenzene	100-41-4	0.1 - 1
N,N, Disalicylidene-1,2 Propanediamine	94-91-7	0.1 - 1

### Composition comments

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

## 4. First-aid measures

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.

### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

### Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

### Most important symptoms/effects, acute and delayed

Aspiration may cause pulmonary edema and pneumonitis. Narcosis. Behavioral changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema. Jaundice. Prolonged exposure may cause chronic effects.

**Indication of immediate medical attention and special treatment needed**

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**

Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

**5. Fire-fighting measures**

**Suitable extinguishing media**

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**Fire fighting equipment/instructions**

In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

**Specific methods**

Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**

Flammable liquid and vapor.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

**Environmental precautions**

Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Cumene (CAS 98-82-8)	PEL	245 mg/m3 50 ppm	
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)	PEL	5 mg/m3	Mist.
Ethylbenzene (CAS 100-41-4)	PEL	2000 mg/m3 500 ppm 435 mg/m3	
Naphthalene (CAS 91-20-3)	PEL	100 ppm 50 mg/m3 10 ppm	
Solvent naphtha (petroleum), heavy aromatic (CAS: 64742-94-5)	PEL	400 mg/m3	
Xylene (CAS 1330-20-7)	PEL	100 ppm 435 mg/m3 100 ppm	

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm	
BHT, butylated hydroxytoluene (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapor.
Cumene (CAS 98-82-8)	TWA	50 ppm	
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)	TWA	5 mg/m3	Inhalable fraction.
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Naphthalene (CAS 91-20-3)	TWA	10 ppm	
Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)	TWA	200 mg/m3	Non-aerosol.
Xylene (CAS 1330-20-7)	STEL TWA	150 ppm 100 ppm	

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
1,2,4-Trimethylbenzene (CAS: 95-63-6)	TWA	125 mg/m3	
BHT, butylated hydroxytoluene (CAS 128-37-0)	TWA	25 ppm 10 mg/m3	
Cumene (CAS 98-82-8)	TWA	245 mg/m3 50 ppm	
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)	Ceiling	1800 mg/m3	
Ethylbenzene (CAS 100-41-4)	STEL TWA STEL	10 mg/m3 5 mg/m3 545 mg/m3	Mist. Mist.
Naphthalene (CAS 91-20-3)	TWA STEL	125 ppm 435 mg/m3 100 ppm 75 mg/m3 15 ppm	

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
	TWA	50 mg/m3	
		10 ppm	
Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)	TWA	100 mg/m3	
Xylene (CAS 1330-20-7)	STEL	655 mg/m3	
		150 ppm	
	TWA	435 mg/m3	
		100 ppm	

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Ethylbenzene (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
Naphthalene (CAS 91-20-3)	2.5 µg/l	1-Hydroxypyrene, with hydrolysis (1-HP)	Urine	*
Xylene (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

**US ACGIH Threshold Limit Values: Skin designation**

Naphthalene (CAS 91-20-3)	Danger of cutaneous absorption
Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)	Danger of cutaneous absorption

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Cumene (CAS 98-82-8)	Can be absorbed through the skin.
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**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Eye wash facilities and emergency shower must be available when handling this product. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Splash proof chemical goggles.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Suitable gloves can be recommended by the glove supplier. Glove selection must take into account any solvents and other hazards present.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties**

**Appearance**

**Color** Amber to brown

**Physical state** Liquid

<b>Odor</b>	Strong
<b>Odor threshold</b>	Not available.
<b>Melting point/freezing point</b>	< -51 °F (< -46 °C)
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	117 °F (47 °C) P-M(CC)
<b>Evaporation rate</b>	< 1 (Ether = 1)
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	< 5 mm Hg
<b>Vapor pressure temp.</b>	70 °F (21 °C)
<b>Vapor density</b>	> 1 (Air = 1)
<b>Relative density</b>	0.89
<b>Relative density temperature</b>	70 °F (21 °C)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	< 0.01 %
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	16 cps
<b>Viscosity temperature</b>	70 °F (21 °C)
<b>Other information</b>	
<b>Pour point</b>	< -51 °F (< -46 °C)
<b>Specific gravity</b>	0.89
<b>VOC</b>	63 % (Calculated)
<b>pH (concentrated product)</b>	Not available.
<b>pH in aqueous solution</b>	6.5 (5% EXTRACT)

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur. Contact with oxidizers may cause fire or explosion.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Oxides of carbon, nitrogen and phosphorus evolved in fire.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Harmful if inhaled. Causes damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation.
<b>Skin contact</b>	Causes damage to organs through prolonged or repeated exposure by skin contact. Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.

**Ingestion**

Causes damage to organs by ingestion. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics**

Aspiration may cause pulmonary edema and pneumonitis. Narcosis. Behavioral changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Edema. Jaundice.

**Information on toxicological effects****Acute toxicity**

May be fatal if swallowed and enters airways. Harmful if inhaled. May cause respiratory irritation. May cause an allergic skin reaction.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
SPEC-AID 8Q462W (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Inhalation</i>		
LC50	Rat	10.56 mg/l, 4 Hours, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<b>Components</b>		
<b>Species</b>		
<b>Test Results</b>		
1,2,4-Trimethylbenzene (CAS 95-63-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	18 mg/L, 4 Hour
<i>Oral</i>		
LD50	Rat	5000 mg/kg
BHT, butylated hydroxytoluene (CAS 128-37-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2930 mg/kg
Cumene (CAS 98-82-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	40 mg/l, 4 Hour
<i>Oral</i>		
LD50	Rat	1400 mg/kg
Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5 mg/l, 4 hours
<i>Oral</i>		
LD50	Rabbit	> 5000 mg/kg

Components	Species	Test Results
Ethylbenzene (CAS 100-41-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	15400 mg/kg
<i>Inhalation</i>		
LC50	Rat	17.2 mg/l/4h
<i>Oral</i>		
LD50	Rat	3500 mg/kg
N,N, Disalicylidene-1.2 Propanediamine (CAS 94-91-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	1350 mg/kg
Naphthalene (CAS 91-20-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 16000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
Solvent naphtha (petroleum), light arom. (CAS 64742-95-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5.2 mg/L, 4 Hour
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5.2 mg/L, 4 Hour
<i>Oral</i>		
LD50	Rat	7050 mg/kg
Xylene (CAS 1330-20-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Rat	11.58 mg/l, 4 Hour
<i>Oral</i>		
LD50	Rat	4300 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** This product is not expected to cause respiratory sensitization.

**Skin sensitization** May cause an allergic skin reaction.

Material name: SPEC-AID\* 8Q462W

Version number: 4.0

**Germ cell mutagenicity** May cause genetic defects.

**Carcinogenicity** May cause cancer.

#### ACGIH Carcinogens

BHT, butylated hydroxytoluene (CAS 128-37-0)

A4 Not classifiable as a human carcinogen.

Distillates (petroleum), solvent-dewaxed heavy paraffinic (CAS 64742-65-0)

A4 Not classifiable as a human carcinogen.

Ethylbenzene (CAS 100-41-4)

A3 Confirmed animal carcinogen with unknown relevance to humans.

Naphthalene (CAS 91-20-3)

A3 Confirmed animal carcinogen with unknown relevance to humans.

Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)

A3 Confirmed animal carcinogen with unknown relevance to humans.

Xylene (CAS 1330-20-7)

A4 Not classifiable as a human carcinogen.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

BHT, butylated hydroxytoluene (CAS 128-37-0)

3 Not classifiable as to carcinogenicity to humans.

Cumene (CAS 98-82-8)

2B Possibly carcinogenic to humans.

Distillates (petroleum); solvent-dewaxed heavy paraffinic (CAS 64742-65-0)

3 Not classifiable as to carcinogenicity to humans.

Ethylbenzene (CAS 100-41-4)

2B Possibly carcinogenic to humans.

Naphthalene (CAS 91-20-3)

2B Possibly carcinogenic to humans.

Solvent naphtha (petroleum), light arom. (CAS 64742-95-6)

3 Not classifiable as to carcinogenicity to humans.

Xylene (CAS 1330-20-7)

3 Not classifiable as to carcinogenicity to humans.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Cumene (CAS 98-82-8)

Reasonably Anticipated to be a Human Carcinogen.

Naphthalene (CAS 91-20-3)

Reasonably Anticipated to be a Human Carcinogen.

#### Reproductive toxicity

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. May damage fertility or the unborn child.

#### Specific target organ toxicity - single exposure

Causes damage to organs (central nervous system, kidney, liver) by ingestion. Causes damage to organs (central nervous system, kidney, liver) by inhalation. May cause respiratory irritation.

#### Specific target organ toxicity - repeated exposure

Causes damage to organs (adrenal gland, bone marrow, kidney, liver, thymus gland) through prolonged or repeated exposure by skin contact.

#### Aspiration hazard

May be fatal if swallowed and enters airways.

#### Chronic effects

Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## 12. Ecological information

#### Ecotoxicity

No ecotoxicity data noted for the ingredient(s).

#### Bioaccumulative potential

No data available.

#### Partition coefficient n-octanol / water (log Kow)

Cumene

3.66

Ethylbenzene

3.15

Naphthalene

3.3

Xylene

3.12 - 3.2

#### Mobility in soil

No data available.

#### Other adverse effects

Not available.

#### Persistence and degradability

No data is available on the degradability of this product.

## 13. Disposal considerations

#### Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Local disposal regulations

Dispose in accordance with all applicable regulations.

#### Hazardous waste code

D001: Waste Flammable material with a flash point <140 F.

D018: Waste Benzene

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**DOT**

**UN number** UN1993  
**UN proper shipping name** Flammable liquids, n.o.s. (Xylene, Naphthalene), RQ(Naphthalene, Xylene)  
**Transport hazard class(es)**  
    **Class** 3  
    **Subsidiary risk** -  
**Packing group** III  
**Special precautions for user** Not available.  
**ERG number** 128

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

**IATA**

**UN number** UN1993  
**UN proper shipping name** Flammable liquid, n.o.s. (Xylene, Naphthalene)  
**Transport hazard class(es)**  
    **Class** 3  
    **Subsidiary risk** -  
**Packing group** III  
**Environmental hazards** Yes  
**ERG Code** 128  
**Special precautions for user** Not available.

**IMDG**

**UN number** UN1993  
**UN proper shipping name** FLAMMABLE LIQUID, N.O.S. (Xylene, NAPHTHALENE), RQ(Naphthalene, Xylene), MARINE POLLUTANT  
**Transport hazard class(es)**  
    **Class** 3  
    **Subsidiary risk** -  
**Packing group** III  
**Environmental hazards**  
    **Marine pollutant** Yes  
**EmS** F-E, S-E  
**Special precautions for user** Not available.

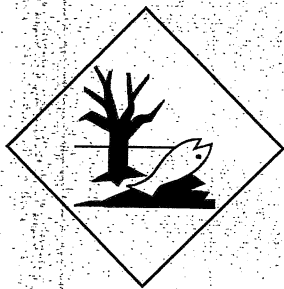
**DOT**



**IATA; IMDG**



Marine pollutant



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

- Cumene (CAS 98-82-8) Listed.
- Ethylbenzene (CAS 100-41-4) Listed.
- Naphthalene (CAS 91-20-3) Listed.
- Xylene (CAS 1330-20-7) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

- Flammable (gases, aerosols, liquids, or solids)
- Acute toxicity (any route of exposure)
- Skin corrosion or irritation
- Serious eye damage or eye irritation
- Respiratory or skin sensitization
- Germ cell mutagenicity
- Carcinogenicity
- Reproductive toxicity
- Specific target organ toxicity (single or repeated exposure)
- Aspiration hazard

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1,2,4-Trimethylbenzene	95-63-6	10 - 20
Cumene	98-82-8	0.1 - 1
Ethylbenzene	100-41-4	0.1 - 1
Naphthalene	91-20-3	1 - 2.5
Xylene	1330-20-7	1 - 2.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

- Benzene (CAS 71-43-2)
- Cresol, mixed isomers (cresylic acid) (CAS 1319-77-3)
- Cumene (CAS 98-82-8)
- Ethylbenzene (CAS 100-41-4)
- Naphthalene (CAS 91-20-3)
- Phenol (CAS 108-95-2)
- Xylene (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

## Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## US state regulations

### California Proposition 65



**WARNING:** WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Cumene (CAS 98-82-8)	Listed: April 6, 2010
Ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004
Naphthalene (CAS 91-20-3)	Listed: April 19, 2002

### US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
-----------------------	---------------------------

### US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

### US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
-----------------------	---------------------------

## 16. Other information, including date of preparation or last revision

Issue date	Feb-20-2015
Revision date	Jul-13-2020
Version #	4.0
NFPA ratings	Health: 4 Flammability: 3 Instability: 0

### NFPA ratings



## List of abbreviations

CAS: Chemical Abstract Service Registration Number  
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.  
ACGIH: American Conference of Governmental Industrial Hygienists  
NOEL: No Observed Effect Level  
STEL: Short Term Exposure Limit  
LC50: Lethal Concentration, 50%  
LD50: Lethal Dose, 50%  
TWA: Time Weighted Average  
BOD: Biochemical Oxygen Demand  
COD: Chemical Oxygen Demand  
TOC: Total Organic Carbon  
IATA: International Air Transport Association  
IMDG: International Maritime Dangerous Goods Code  
NFPA: National Fire Protection Association  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
OSHA: Occupational Safety & Health Administration.

## References:

No data available

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Revision information**

Composition/information on ingredients: Component information  
Exposure controls/personal protection: Eye/face protection  
Stability and reactivity: Conditions to avoid  
Stability and reactivity: Hazardous decomposition products  
Stability and reactivity: Incompatible materials  
Toxicological Information: Toxicological Data  
Regulatory information: California Proposition 65  
Other information, including date of preparation or last revision: List of abbreviations

**Prepared by**

This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300).

\* Trademark of SUEZ. May be registered in one or more countries.



# Safety Data Sheet

**Material Name: Jet Fuel JP-8**

**SDS No. 9946**  
US GHS

**Synonyms:** Military Aviation Jet Fuel JP -8

## \*\*\* Section 1 - Product and Company Identification \*\*\*

### Manufacturer Information

Hess Corporation  
1 Hess Plaza  
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS  
Emergency # 800-424-9300 CHEMTREC  
[www.hess.com](http://www.hess.com) (Environment, Health, Safety Internet Website)

## \*\*\* Section 2 - Hazards Identification \*\*\*

### GHS Classification:

- Flammable Liquids - Category 3
- Skin Corrosion/Irritation - Category 2
- Eye Damage/Irritation - Category 2A
- Carcinogenicity - Category 2
- Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3
- Aspiration Hazard - Category 1
- Hazardous to the Aquatic Environment Chronic - Category 2

### GHS LABEL ELEMENTS

#### Symbol(s)



#### Signal Word

Danger

#### Hazard Statements

- Flammable liquid and vapor.
- Causes skin irritation.
- Causes serious eye irritation.
- Suspected of causing cancer.
- May cause respiratory irritation.
- May cause drowsiness or dizziness.
- May be fatal if swallowed and enters airways.
- Toxic to aquatic life with long lasting effects.

#### Precautionary Statements

##### Prevention

- Keep away from heat/sparks/open flames/hot surfaces. No smoking
- Keep container tightly closed.
- Ground/bond container and receiving equipment.

# Safety Data Sheet

Material Name: Jet Fuel JP-8

Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wash thoroughly after handling.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid breathing fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.

## Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.  
IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting.  
If exposed or concerned: Get medical advice/attention.  
In case of fire: Use water spray, fog or fire fighting foam to extinguish.

## Storage

Store locked up.  
Store in a well-ventilated place. Keep cool.

## Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### \*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

CAS #	Component	Percent
8008-20-6	Kerosene	100
91-20-3	Naphthalene	0.04

A complex combination of hydrocarbons including naphthenes, paraffins, and aromatics.

### \*\*\* Section 4 - First Aid Measures \*\*\*

#### First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

#### First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

# Safety Data Sheet

Material Name: Jet Fuel JP-8

## First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

## First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

### General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

### Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

### Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO<sub>2</sub>, water spray, fire fighting foam, and other gaseous agents.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

### Unsuitable Extinguishing Media

None

### Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

### Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

### Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

# Safety Data Sheet

Material Name: Jet Fuel JP-8

## Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

## Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

## Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

## Prevention of Secondary Hazards

None

* * * <b>Section 7 - Handling and Storage</b> * * *
---

## Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

## Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

## Incompatibilities

Keep away from strong oxidizers.

# Safety Data Sheet

Material Name: Jet Fuel JP-8

## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Component Exposure Limits

#### Kerosene (8008-20-6)

ACGIH: 200 mg/m<sup>3</sup> TWA (application restricted to conditions in which there are negligible aerosol exposures, total hydrocarbon vapor)  
Skin - potential significant contribution to overall exposure by the cutaneous route  
NIOSH: 100 mg/m<sup>3</sup> TWA

#### Naphthalene (91-20-3)

ACGIH: 10 ppm TWA  
15 ppm STEL  
Skin - potential significant contribution to overall exposure by the cutaneous route  
OSHA: 10 ppm TWA; 50 mg/m<sup>3</sup> TWA  
NIOSH: 10 ppm TWA; 50 mg/m<sup>3</sup> TWA  
15 ppm STEL; 75 mg/m<sup>3</sup> STEL

### Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

### Personal Protective Equipment: Respiratory

A NIOSH approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

### Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

### Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

### Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

# Safety Data Sheet

Material Name: Jet Fuel JP-8

<b>Appearance:</b> Pale yellow to water-white.	<b>Odor:</b> Characteristic petroleum distillate odor
<b>Physical State:</b> Liquid	<b>pH:</b> ND
<b>Vapor Pressure:</b> 0.029 psia @ 100 °F (38 °C)	<b>Vapor Density:</b> AP 4.5
<b>Boiling Point:</b> 280 to 572 °F (140 to 300 °C)	<b>Melting Point:</b> ND
<b>Solubility (H2O):</b> Negligible	<b>Specific Gravity:</b> 0.75-0.80
<b>Evaporation Rate:</b> Slow; varies with conditions	<b>VOC:</b> ND
<b>Percent Volatile:</b> 100%	<b>Octanol/H2O Coeff.:</b> ND
<b>Flash Point:</b> >100 °F (38 °C)	<b>Flash Point Method:</b> TCC
<b>Upper Flammability Limit (UFL):</b> 5.0	<b>Lower Flammability Limit (LFL):</b> 0.7
<b>Burning Rate:</b> ND	<b>Auto Ignition:</b> 410°F (210°C)

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

### Chemical Stability

This is a stable material.

### Hazardous Reaction Potential

Will not occur.

### Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

### Incompatible Products

Keep away from strong oxidizers such as nitric and sulfuric acids.

### Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute Toxicity

#### A: General Product Information

Harmful if swallowed.

#### B: Component Analysis - LD50/LC50

##### Kerosene (8008-20-6)

Inhalation LC50 Rat >5.28 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

##### Naphthalene (91-20-3)

Inhalation LC50 Rat >340 mg/m<sup>3</sup> 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

### Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

### Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause mild to moderate irritation.

# Safety Data Sheet

**Material Name:** Jet Fuel JP-8

## Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

## Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

**WARNING:** the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

## Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

## Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

## Carcinogenicity

### A: General Product Information

Dermal carcinogenicity: positive - mice

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

### B: Component Carcinogenicity

#### Kerosene (8008-20-6)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

#### Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)

IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

## Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

## Specified Target Organ General Toxicity: Single Exposure

May cause drowsiness or dizziness.

## Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

## Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

# Safety Data Sheet

Material Name: Jet Fuel JP-8

## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity

#### A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

#### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

##### Naphthalene (91-20-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]
96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

### Persistence/Degradability

No information available.

### Bioaccumulation

No information available.

### Mobility in Soil

No information available.

## \*\*\* Section 13 - Disposal Considerations \*\*\*

### Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

### Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

## \*\*\* Section 14 - Transportation Information \*\*\*

### DOT Information

Shipping Name: Fuel, Aviation, Turbine Engine

UN #: 1863 Hazard Class: 3 Packing Group: II

# Safety Data Sheet

**Material Name:** Jet Fuel JP-8

**Placard:**



**\*\*\* Section 15 - Regulatory Information \*\*\***

## Regulatory Information

### Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

**Naphthalene (91-20-3)**

CERCLA: 100 lb final RQ; 45.4 kg final RQ

**SARA Section 311/312 – Hazard Classes**

<u>Acute Health</u>	<u>Chronic Health</u>	<u>Fire</u>	<u>Sudden Release of Pressure</u>	<u>Reactive</u>
X	X	X	--	--

**SARA SECTION 313 - SUPPLIER NOTIFICATION**

This product may contain listed chemicals below the de minimis levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

### State Regulations

#### Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Kerosene	8008-20-6	No	Yes	No	Yes	Yes	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

**WARNING!** This product contains a chemical known to the state of California to cause cancer.

#### Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

#### Additional Regulatory Information

#### Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC

# Safety Data Sheet

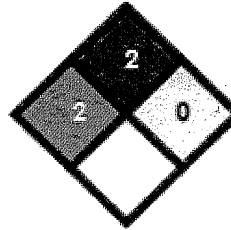
Material Name: Jet Fuel JP-8

Kerosene	8008-20-6	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS

## \*\*\* Section 16 - Other Information \*\*\*

**NFPA® Hazard Rating**

Health	2
Fire	2
Reactivity	0



**HMIS® Hazard Rating**

Health	2	Moderate
Fire	2	Moderate
Physical	0	Minimal

\*Chronic

### Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

### Literature References

None

### Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet