

**JP-4 Fuel (MIL-T-5624)**

Version 1.2

Revision Date 2014-10-10

SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product information**

Product Name : JP-4 Fuel (MIL-T-5624)
Material : 1061880, 1028366, 1024271, 1024270, 1024269, 1105003

Use : Fuel

Company : Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Emergency telephone:**Health:**

866.442.9628 (North America)
1.832.813.4984 (International)

Transport:

North America: CHEMTREC 800.424.9300 or 703.527.3887
Asia: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group
E-mail address : SDS@CPChem.com
Website : www.CPChem.com

SECTION 2: Hazards identification**Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Emergency Overview**Danger**

Form: Liquid **Physical state:** Liquid **Color:** Clear to amber **Odor:** Mild

OSHA Hazards : Flammable Liquid, Carcinogen, Harmful by ingestion.

Classification

: Flammable liquids , Category 1
Skin irritation , Category 2
Germ cell mutagenicity , Category 1B
Carcinogenicity , Category 1B
Specific target organ systemic toxicity - single exposure ,

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Category 3
 Specific target organ systemic toxicity - repeated exposure ,
 Category 1 , Eyes , Blood
 Aspiration hazard , Category 1

Labeling

Symbol(s)



Signal Word

: Danger

Hazard Statements

: H224: Extremely flammable liquid and vapor.
 H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H340: May cause genetic defects.
 H350: May cause cancer.
 H336: May cause drowsiness or dizziness.
 H372: Causes damage to organs (Eyes, Blood) through prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P233 Keep container tightly closed.
 P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P260 Do not breathe dust/fume/gas/mist/vapor/spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P280 Wear protective gloves/ eye protection/ face protection.
 P281 Use personal protective equipment as required.
Response:
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P331 Do NOT induce vomiting.
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/ container to an approved waste

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disposal plant.

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans
	Naphthalene 91-20-3
NTP	Reasonably anticipated to be a human carcinogen
	Naphthalene 91-20-3
ACGIH	Confirmed animal carcinogen with unknown relevance to humans
	Kerosene C9-C16 8008-20-6

SECTION 3: Composition/information on ingredients

Synonyms : Petroleum Naphtha
JP-4 AVIATION TURBINE FUEL
JP-4 (MIL-T-5624)

Molecular formula : Mixture

Component	CAS-No.	Weight %
Kerosene C9-C16	8008-20-6	70 - 90
Hydrodesulfurized Naphtha	64742-73-0	5 - 10
Isopentane	78-78-4	5 - 10
Naphthalene	91-20-3	1 - 5

SECTION 4: First aid measures

- General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.
- If inhaled : Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

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SECTION 5: Firefighting measures

Flash point	:	-23 °C (-9 °F) estimated
Autoignition temperature	:	No data available
Suitable extinguishing media	:	Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical.
Unsuitable extinguishing media	:	High volume water jet.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	:	Wear self contained breathing apparatus for fire fighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Fire and explosion protection	:	Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hazardous decomposition products	:	Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7: Handling and storage**Handling**

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Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection**Ingredients with workplace control parameters****US**

Ingredients	Basis	Value	Control parameters	Note
Kerosene C9-C16	ACGIH	TWA	200 mg/m3	P, A3, Skin, varies,
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
Isopentane	ACGIH	TWA	600 ppm,	
Naphthalene	ACGIH	TWA	10 ppm,	A4, Skin,
	ACGIH	STEL	15 ppm,	A4, Skin,
	OSHA Z-1	TWA	10 ppm, 50 mg/m3	(b),
	OSHA Z-1-A	TWA	10 ppm, 50 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 75 mg/m3	

- (b) The value in mg/m3 is approximate.
 A3 Confirmed animal carcinogen with unknown relevance to humans
 A4 Not classifiable as a human carcinogen
 P Application restricted to conditions in which there are negligible aerosol exposures
 Skin Danger of cutaneous absorption
 varies varies

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 parts per million	1995-03-01

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

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Personal protective equipment

- Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
- Protective measures : Wear full protective clothing and self-contained breathing apparatus.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

- Form : Liquid
- Physical state : Liquid
- Color : Clear to amber
- Odor : Mild

Safety data

- Flash point : -23 °C (-9 °F)
estimated
- Lower explosion limit : 1.3 %(V)
- Upper explosion limit : 8 %(V)

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Oxidizing properties	: no
Autoignition temperature	: No data available
Thermal decomposition	: No data available
Molecular formula	: Mixture
Molecular weight	: No data available
pH	: No data available
pour point	: No data available
Boiling point/boiling range	: 22 °C (72 °F)
Vapor pressure	: 2.00 - 3.00 PSI at 37.8 °C (100.0 °F)
Relative density	: 0.751, 15.6 °C(60.1 °F)
Water solubility	: Negligible
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: No data available
Relative vapor density	: No data available
Evaporation rate	: No data available
Percent volatile	: > 99 %

SECTION 10: Stability and reactivity

Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Thermal decomposition	: No data available
Hazardous decomposition products	: Carbon oxides
Other data	: No decomposition if stored and applied as directed.

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SECTION 11: Toxicological information**JP-4 Fuel (MIL-T-5624)****Acute oral toxicity**

: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity

Kerosene C9-C16

: LC50: >5280milligram per cubic meterExposure time: 4 h
Species: rat

Isopentane

LC50: > 25.3 mg/l
Exposure time: 4 h
Species: rat
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Information given is based on data obtained from similar substances.

Acute dermal toxicity

Kerosene C9-C16

: LD50: >2000 milligram per kilogram
Species: rabbit

JP-4 Fuel (MIL-T-5624)**Skin irritation**

: May cause skin irritation in susceptible persons.

JP-4 Fuel (MIL-T-5624)**Eye irritation**

: Vapors may cause irritation to the eyes, respiratory system and the skin.

Sensitization

Kerosene C9-C16

: Did not cause sensitization on laboratory animals.

Isopentane

Did not cause sensitization on laboratory animals.

Naphthalene

Classification: Did not cause sensitization on laboratory animals.
Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Kerosene C9-C16

: Species: rabbit
Application Route: Dermal
Dose: 0, 200, 1000, 2000 mg/kg
Exposure time: 28 day
Number of exposures: 3 times/wk
Lowest observable effect level: 1,000 mg/kg

Isopentane

Species: rat, male and female
Sex: male and female

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Application Route: Inhalation
 Dose: 668, 2220, 6646 ppm
 Exposure time: 13 wk
 Number of exposures: 6 h/d, 5 d/wk
 NOEL: > 2220 ppm
 Lowest observable effect level: > = 6646 ppm
 Method: OECD Guideline 413
 Target Organs: Kidney

Carcinogenicity

Kerosene C9-C16

: Species: mouse
 Dose: 0, 28.5, 50, 100%
 Exposure time: 104 wks
 Number of exposures: 2, 4, or 7 times/wk
 Remarks: Weak dermal carcinogen

Naphthalene

Species: mouse
 Sex: male
 Dose: 10, 30 ppm
 Exposure time: 105 weeks
 Number of exposures: 6 hours/day, 5 days/week
 Test substance: yes
 Print Date: No information available.
 Remarks: No evidence of carcinogenicity

Species: mouse
 Sex: female
 Dose: 10, 30 ppm
 Exposure time: 105 weeks
 Number of exposures: 6 hours/day, 5 days/week
 Test substance: yes
 Print Date: No information available.
 Remarks: increased incidence of alveolar/bronchiolar adenomas

Species: rat
 Sex: male and female
 Dose: 10, 30, 60 ppm
 Exposure time: 105 weeks
 Number of exposures: 6 hours/day, 5 days/week
 Test substance: yes
 Print Date: No information available.
 Remarks: nose respiratory epithelial adenoma, increased incidence of olfactory neuroblastomas

Reproductive toxicity

Isopentane

: Species: rat
 Sex: male and female
 Application Route: inhalation (vapor)
 Dose: 0, 500, 2000, 7000 ppm
 Number of exposures: 6 h/d 5 d/wk
 Method: OECD Test Guideline 416
 NOAEL Parent: 7000 ppm
 NOAEL F1: 2000 ppm
 NOAEL F2: 2000 ppm
 Information given is based on data obtained from similar substances.

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Species: rat
 Sex: female
 Application Route: oral gavage
 Dose: 0, 100, 300, 1000 mg/kg/d
 Method: OECD Test Guideline 415
 NOAEL Parent: \geq 1,000 mg/kg
 NOAEL F1: \geq 1,000 mg/kg

Species: rat
 Sex: male
 Application Route: oral gavage
 Dose: 0, 100, 300, 1000 mg/kg/d
 Method: OECD Test Guideline 415
 NOAEL Parent: \geq 300 mg/kg

Developmental Toxicity

Kerosene C9-C16

: Species: rat
 Application Route: Inhalation
 Dose: 0, 106, 364 ppm
 Exposure time: 6 hrs/d
 Test period: GD 6-15
 NOAEL Teratogenicity: 364 ppm
 NOAEL Maternal: 364 ppm

Isopentane

Species: rat
 Application Route: oral gavage
 Dose: 0, 100, 500, 1000 mg/kg/d
 Exposure time: GD 6-15
 Number of exposures: daily
 Method: OECD Guideline 414
 NOAEL Teratogenicity: 1,000 mg/kg
 NOAEL Maternal: 1,000 mg/kg
 Information given is based on data obtained from similar substances.

Species: rat
 Application Route: Inhalation
 Dose: 0, 500, 2000, 7000 ppm
 Exposure time: GD 6-15
 Number of exposures: 5 d/wk
 Method: OECD Guideline 414
 NOAEL Teratogenicity: 7000 ppm
 NOAEL Maternal: 500 ppm
 Information given is based on data obtained from similar substances.

Species: rabbit
 Application Route: Inhalation
 Dose: 0, 500, 2000, 7000 ppm
 Exposure time: GD 6-18
 Method: OECD Guideline 414
 NOAEL Teratogenicity: 7000 ppm
 NOAEL Maternal: 7000 ppm
 Information given is based on data obtained from similar substances.

Naphthalene

Species: rabbit

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Application Route: oral gavage
 Dose: 40, 200, 400 mg/kg
 Test period: 29 d, GD 6-18
 NOAEL Teratogenicity: 400 mg/kg

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Aspiration toxicity**

: May be fatal if swallowed and enters airways.
 Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

CMR effects

Hydrodesulfurized Naphtha : Carcinogenicity: Possible human carcinogen
 Mutagenicity: In vivo tests showed mutagenic effects

Isopentane Carcinogenicity: Not available
 Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects
 Teratogenicity: Animal testing did not show any effects on fetal development.
 Reproductive toxicity: Animal testing did not show any effects on fertility.

Naphthalene Carcinogenicity: Limited evidence of carcinogenicity in animal studies

**JP-4 Fuel (MIL-T-5624)
Further information**

: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

SECTION 12: Ecological information**Toxicity to fish**

Kerosene C9-C16 : LL50: 2 - 5 mg/l
 Exposure time: 96 h
 Species: Oncorhynchus mykiss (rainbow trout)
 Method: OECD Test Guideline 203

Isopentane LC50: 4.26 mg/l
 Exposure time: 96 h
 Species: Oncorhynchus mykiss (rainbow trout)
 semi-static test Method: OECD Test Guideline 203
 Information given is based on data obtained from similar substances.

Naphthalene LC50: 3.2 mg/l
 Exposure time: 96 h
 Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates

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Kerosene C9-C16 : EL50: 1.4 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 Method: OECD Test Guideline 202

Isopentane EC50: 2.3 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test Method: OECD Test Guideline 202

Naphthalene LC50: 2.16 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)

Toxicity to algae

Kerosene C9-C16 : EL50: 1 - 3 mg/l
 Exposure time: 72 h
 Species: Raphidocellus subcapitata (algae)
 Method: OECD Test Guideline 201

Isopentane EC50: 7.51 mg/l
 Exposure time: 72 h
 Species: Scenedesmus capricornutum (fresh water algae)
 Growth inhibition Method: OECD Test Guideline 201
 Information given is based on data obtained from similar substances.

Naphthalene EC50: 2.96 mg/l
 Exposure time: 48 h
 Species: Selenastrum capricornutum (algae)

Elimination information (persistence and degradability)

Bioaccumulation

Isopentane : Accumulation in aquatic organisms is unlikely.

Biodegradability : Expected to be ultimately biodegradable

Ecotoxicology Assessment

Acute aquatic toxicity
 Isopentane : Toxic to aquatic life.

Naphthalene : Very toxic to aquatic life.

Chronic aquatic toxicity
 Isopentane : Toxic to aquatic life with long lasting effects.

Naphthalene : Very toxic to aquatic life with long lasting effects.

Results of PBT assessment
 Isopentane : Non-classified PBT substance, Non-classified vPvB substance

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Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, (-23 °C), MARINE POLLUTANT, (ISOPENTANE, NAPHTHALENE)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, (D/E), ENVIRONMENTALLY HAZARDOUS, (ISOPENTANE, NAPHTHALENE)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, ENVIRONMENTALLY HAZARDOUS,

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(ISOPENTANE, NAPHTHALENE)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, I, ENVIRONMENTALLY HAZARDOUS, (ISOPENTANE, NAPHTHALENE)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**SECTION 15: Regulatory information****National legislation**

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

CERCLA Reportable Quantity : 1667 lbs
Isopentane

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : The following components are subject to reporting levels established by SARA Title III, Section 313:

: Naphthalene - 91-20-3

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

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The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

: Isopentane - 78-78-4

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

: Isopentane - 78-78-4

US State Regulations

Pennsylvania Right To Know

: Kerosene C9-C16 - 8008-20-6
Isopentane - 78-78-4
Naphthalene - 91-20-3

New Jersey Right To Know

: Kerosene C9-C16 - 8008-20-6
Isopentane - 78-78-4
Naphthalene - 91-20-3

California Prop. 65
Ingredients

: WARNING! This product contains a chemical known in the State of California to cause cancer.

Notification status

Europe REACH

: A substance or substances in this product is not registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold quantity of the non-regulated substances.

United States of America TSCA

: On the inventory, or in compliance with the inventory

Canada DSL

: All components of this product are on the Canadian DSL.

Australia AICS

: On the inventory, or in compliance with the inventory

New Zealand NZIoC

: Not in compliance with the inventory

Japan ENCS

: Not in compliance with the inventory

Korea KECI

: On the inventory, or in compliance with the inventory

Philippines PICCS

: On the inventory, or in compliance with the inventory

China IECSC

: Not in compliance with the inventory

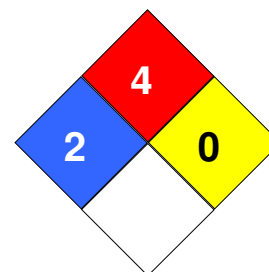
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SECTION 16: Other information

NFPA Classification : Health Hazard: 2
Fire Hazard: 4
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 001927

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Material 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.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical	TWA	Time Weighted Average

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	Substances in China		
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

