SAFETY DATA SHEET

Reference Fuel B

Version 1.5

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

Product information
Product Name: Reference Fuel B
Material: 1097282, 1069683, 1029654, 1030661, 1029655

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:
CHEMTREC 800.424.9300 or 703.527.3887 (int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-1159839431

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.

Classification
Flammable liquids, Category 2
Skin irritation, Category 2
Eye irritation, Category 2A
Reproductive toxicity, Category 2
Specific target organ systemic toxicity - single exposure, Category 3, Central nervous system

SDS Number: 100000013141
Reference Fuel B

Specific target organ systemic toxicity - repeated exposure, Category 2, Inhalation, Auditory organs, color vision
Aspiration hazard, Category 1

Labeling

Symbol(s):  

Signal Word: Danger

Hazard Statements: 
H225: Highly flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H361d: Suspected of damaging the unborn child.
H373: May cause damage to organs (Auditory organs, color vision) through prolonged or repeated exposure if inhaled.

Precautionary Statements:

Prevention:
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.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P331 Do NOT induce vomiting.
P337 + P313 If eye irritation persists: 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 to extinguish.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P404 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:
P501 Dispose of contents/container to an approved waste disposal plant.

Carcinogenicity:

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3: Composition/information on ingredients

Molecular formula: Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td>540-84-1</td>
<td>69-71</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>29-31</td>
</tr>
</tbody>
</table>

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: Immediately flush eye(s) with plenty of water. 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. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point: -12.1 °C (10.2 °F)
Method: Tag closed cup

Autoignition temperature: No data available

Suitable extinguishing media: Alcohol-resistant foam. Carbon dioxide (CO2). 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 firefighting 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

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 : Do not spray on an open flame or any other incandescent
against fire and explosion 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.

Use: Fuel

**SECTION 8: Exposure controls/personal protection**

**Ingredients with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td>ACGIH</td>
<td>TWA</td>
<td>300 ppm, URT irr</td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm, visual impair, female repro, pregnancy loss, BEI, A4,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-2</td>
<td>TWA</td>
<td>200 ppm,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-2</td>
<td>CEIL</td>
<td>300 ppm,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-2</td>
<td>Peak</td>
<td>500 ppm,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-1-A</td>
<td>TWA</td>
<td>100 ppm, 375 mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Z-1-A</td>
<td>STEL</td>
<td>150 ppm, 560 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

A4 Not classifiable as a human carcinogen  
BEI Substances for which there is a Biological Exposure Index or Indices (see BEI® section)  
female repro Female reproductive  
pregnancy loss Pregnancy loss  
URT irr Upper Respiratory Tract irritation  
visual impair Visual impairment

**Immediately Dangerous to Life or Health Concentrations (IDLH)**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>Immediately Dangerous to Life or Health Concentration Value 500 parts per million</td>
<td>1995-03-01</td>
</tr>
</tbody>
</table>

**Biological exposure indices**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Sampling time</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>Toluene: 0.02 mg/l (In blood)</td>
<td>Prior to last shift of workweek</td>
<td>2010-03-01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toluene: 0.03 mg/l (Urine)</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>2010-03-01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o-Cresol: 0.3 mg/g Creatinine (Urine)</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>2010-03-01</td>
</tr>
</tbody>
</table>

**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.

**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.

### SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

**Appearance**

- **Form**: Liquid
- **Physical state**: Liquid
- **Color**: Colorless
- **Odor**: Mild, Hydrocarbon

**Safety data**

- **Flash point**: -12.1 °C (10.2 °F)
  
  Method: Tag closed cup
- **Lower explosion limit**: 1 %(V)
- **Upper explosion limit**: 6.5 %(V)
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Oxidizing properties : No

Autoignition temperature : No data available

Molecular formula : Mixture

Molecular weight : Not applicable

pH : Not applicable

Freezing point : No data available

Pour point : No data available

Boiling point/boiling range : 99 °C (210 °F)

Vapor pressure : 1.50 PSI

at 37.8 °C (100.0 °F)

Relative density : 0.75

at 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 : 3.69

(Air = 1.0)

Evaporation rate : 1

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

Hazardous reactions : Hazardous reactions: Hazardous polymerization does not occur.

Further information: No decomposition if stored and applied as directed.

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

SECTION 11: Toxicological information

Reference Fuel B
Acute oral toxicity : LD50: > 5,000 mg/kg
Method: Acute toxicity estimate

Reference Fuel B
Acute inhalation toxicity : LC50: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Acute toxicity estimate

Reference Fuel B
Acute dermal toxicity : LD50: > 5,000 mg/kg
Method: Acute toxicity estimate

Reference Fuel B
Skin irritation : Skin irritation
largely based on animal evidence.

Reference Fuel B
Eye irritation : Eye irritation
largely based on animal evidence.

Reference Fuel B
Sensitization : Not a skin sensitizer.
largely based on animal evidence.

Reference Fuel B
Repeated dose toxicity : Method: Based on product or component testing, long term repeated exposure may cause damage to the following organs:
Target Organs: Auditory organs
Estimated based on individual component values.

Genotoxicity in vitro
2,2,4-Trimethylpentane (Isooctane) : Test Type: Ames test
Method: Mutagenicity (Escherichia coli - reverse mutation assay)
Result: negative
## Reference Fuel B

### Carcinogenicity

Remarks: Not expected to be carcinogenic based on individual component data.

### Reproductive toxicity

Suspected of damaging fertility or the unborn child.

### Developmental Toxicity

Suspected of damaging fertility or the unborn child.

### Aspiration toxicity

May be fatal if swallowed and enters airways.

### CMR effects

2,2,4-Trimethylpentane: Mutagenicity: Tests on bacterial or mammalian cell cultures.

---

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test Type</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>Test Type: Ames test</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Sister Chromatid Exchange Assay</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Test Type: Mouse lymphoma assay</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Test Type: Cytogenetic assay</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td>Genotoxicity in vivo</td>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td>Test Type: Unscheduled DNA synthesis assay</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: Mouse</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dose: 500 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: negative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Unscheduled DNA synthesis assay</td>
<td>Species: Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dose: 500 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Result: negative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Cytogenetic assay</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Mouse micronucleus assay</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Sister Chromatid Exchange Assay</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Unscheduled DNA synthesis assay</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dose: 500 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Mouse lymphoma assay</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Test Type: Unscheduled DNA synthesis assay</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Species: Mouse</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dose: 500 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Cytogenetic assay</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Test Type: Mouse micronucleus assay</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Reference Fuel B**

Version 1.5

<table>
<thead>
<tr>
<th>Compound</th>
<th>Carcinogenicity</th>
<th>Mutagenicity</th>
<th>Teratogenicity</th>
<th>Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Isooctane)</td>
<td></td>
<td>did not show mutagenic effects.</td>
<td>Teratogenicity: Animal testing did not show any effects on fetal development.</td>
<td>Reproductive toxicity: Animal testing did not show any effects on fertility.</td>
</tr>
<tr>
<td>Toluene</td>
<td>Carcinogenicity: Not classifiable as a human carcinogen.</td>
<td>Mutagenicity: Some evidence of adverse effects on development, based on animal experiments.</td>
<td>Teratogenicity: Some evidence of adverse effects on development, based on animal experiments.</td>
<td>Reproductive toxicity: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.</td>
</tr>
</tbody>
</table>

**Reference Fuel B 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**

**Ecotoxicity effects**

**Toxicity to fish**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50: 1 - 10 mg/l</td>
<td>Species: Fish</td>
</tr>
</tbody>
</table>

**Toxicity to daphnia and other aquatic invertebrates**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50: 1 - 10 mg/l</td>
<td>Species: Daphnia</td>
</tr>
</tbody>
</table>

**Toxicity to algae**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50: 1 - 10 mg/l</td>
<td>Species: algae</td>
</tr>
</tbody>
</table>

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Biodegradability**

This material is not expected to be readily biodegradable.

**Elimination information (persistence and degradability)**

**Results of PBT assessment**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td>Non-classified PBT substance, Non-classified vPvB substance</td>
</tr>
<tr>
<td>Toluene</td>
<td>Non-classified vPvB substance, Non-classified PBT substance</td>
</tr>
</tbody>
</table>

**Additional ecological information**

Very toxic to aquatic life with long lasting effects.

**Ecotoxicology Assessment**

Short-term (acute) aquatic hazard

2,2,4-Trimethylpentane: Very toxic to aquatic life.
Reference Fuel B

Version 1.5

Revision Date 2018-11-27

(ISooctane)
Toluene : Toxic to aquatic life.

Long-term (chronic) aquatic hazard
2,2,4-Trimethylpentane (ISooctane)
Toluene : Very toxic to aquatic life with long lasting effects.
Harmful 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)
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II, MARINE POLLUTANT, (2,2,4-TRIMETHYLSPENTANE (ISOOCTANE))

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II, (-12.1 °C), MARINE POLLUTANT, (2,2,4-TRIMETHYLSPENTANE (ISOOCTANE))

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (2,2,4-TRIMETHYLSPENTANE (ISOOCTANE))
RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II, ENVIRONMENTALLY HAZARDOUS, (2,2,4-TRIMETHYPENTANE (ISOOCTANE))

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II, ENVIRONMENTALLY HAZARDOUS, (2,2,4-TRIMETHYPENTANE (ISOOCTANE))

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 : Flammable (gases, aerosols, liquids, or solids)
Skin corrosion or irritation
Serious eye damage or eye irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard

CERCLA Reportable Quantity : 1428 lbs
2,2,4-Trimethylpentane (Isooctane)
Toluene

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

SARA 302 Threshold Planning Quantity : This material does not contain any components with a section 302 EHS TPQ.

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

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

- Toluene - 108-88-3

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).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
- 2,2,4-Trimethylpentane (Isooctane) - 540-84-1
- Toluene - 108-88-3

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):
- Toluene - 108-88-3

US State Regulations

Pennsylvania Right To Know:
- 2,2,4-Trimethylpentane (Isooctane) - 540-84-1
- Toluene - 108-88-3

California Prop. 65 Components: WARNING This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

- Toluene 108-88-3

Notification status

Europe REACH: This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH).

United States of America (USA) TSCA:
- On the inventory, or in compliance with the inventory

Canada DSL:
- On the inventory, or in compliance with the inventory
SEASON 16: Other information

NFPA Classification : Health Hazard: 2  
                      Fire Hazard: 3  
                      Reactivity Hazard: 0

Further information
Legacy SDS Number : 99370

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 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

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
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<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
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<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
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<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
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<tr>
<td>EC50</td>
<td>Effective Concentration</td>
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<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
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<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
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<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
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<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
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<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
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<tr>
<td>EOSCA</td>
<td>European Offshore Specialty Chemicals Association</td>
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<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
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<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
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<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
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<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
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<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
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<tr>
<td>Symbol</td>
<td>Description</td>
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<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
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<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
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<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
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<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
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<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
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<tr>
<td>LC50</td>
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