SAFETY DATA SHEET

PRF Octane No. Blends 80-98

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

Product information

Product Name: PRF Octane No. Blends 80-98
Material: 1024452, 1024451, 1024450, 1024448, 1024447, 1024446, 1024444, 1024443, 1024442, 1024440, 1024439, 1024438, 1024436, 1024435, 1024434, 1024432, 1024431, 1024430, 1024428, 1024427, 1024426, 1024424, 1024423, 1024422, 1024420, 1024419, 1024418, 1024416, 1024415, 1024414, 1024412, 1024411, 1024410, 1024408, 1024407, 1024406, 1024404, 1024403, 1024402, 1024400, 1024399, 1024398, 1024396, 1024395, 1024394, 1024392, 1024391, 1024390, 1024388, 1024384, 1024383, 1024382, 1024380, 1024379, 1024378, 1024376, 1024372, 1024341, 1024340, 1024339, 1024386, 1024387, 1024385, 1024349, 1024445, 1024441, 1024437, 1024433, 1024429, 1024425, 1024421, 1024342, 1024417, 1024413, 1024409, 1024405, 1024401, 1024397, 1024393, 1024389, 1024385, 1024377, 1024375, 1024374

Use: Reference 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

SDS Number: 100000014260
1/16
SAFETY DATA SHEET

PRF Octane No. Blends 80-98

Version 1.9

Revision Date 2018-08-20

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
- Specific target organ systemic toxicity - single exposure, Category 3, Central nervous system
- 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.
- H336: May cause drowsiness or dizziness.

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.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P280 Wear protective gloves/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.
- P331 Do NOT induce vomiting.
- 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
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

**Synonyms**
Primary Reference Fuel
Octane Reference Fuel

**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>80 - 98</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>142-82-5</td>
<td>0 - 20</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**
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. 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**
-8 °C (18 °F)
Method: Tag closed cup

**Autoignition temperature**
No data available

**Suitable extinguishing media**
Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
SAFETY DATA SHEET

PRF Octane No. Blends 80-98

Version 1.9
Revision Date 2018-08-20

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.

SDS Number:100000014260
4/16
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.

Use: Reference Fuel

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>US</th>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td>ACGIH</td>
<td>TWA</td>
<td>300 ppm</td>
<td>URT irr,</td>
</tr>
<tr>
<td></td>
<td>n-Heptane</td>
<td>OSHA Z-1</td>
<td>TWA</td>
<td>500 ppm, 2,000 mg/m³</td>
<td>(R),</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-1-A</td>
<td>TWA</td>
<td>400 ppm, 1,600 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-1-A</td>
<td>STEL</td>
<td>500 ppm, 2,000 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA</td>
<td>400 ppm</td>
<td>CNS impair, URT irr,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>500 ppm</td>
<td>CNS impair, URT irr,</td>
</tr>
</tbody>
</table>

(b) The value in mg/m³ is approximate.

CNS impair Central Nervous System impairment
URT irr Upper Respiratory Tract irritation

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>n-Heptane</td>
<td>142-82-5</td>
<td>Immediately Dangerous to Life or Health Concentration Value 750 parts per million</td>
<td>1995-03-01</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. Full-Face Air-Purifying Respirator for Organic Vapors, Dusts and Mists. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are
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 workplace. 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

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>gasoline-like</td>
</tr>
</tbody>
</table>

#### Safety data

- **Flash point**: -8 °C (18 °F)  
  Method: Tag closed cup
- **Lower explosion limit**: 1 %(V)
- **Upper explosion limit**: 7 %(V)
- **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**: 96 - 103 °C (205 - 217 °F)
Vapor pressure: 1.70 PSI at 37.8 °C (100.0 °F)
Relative density: 0.693 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 (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 polymerization does not occur.
Further information: No decomposition if stored and applied as directed.
Hazardous reactions: Vapors may form explosive mixture with air.
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

PRF Octane No. Blends 80-98
Acute oral toxicity: LD50: > 5,000 mg/kg
Species: Rat
Method: Acute toxicity estimate

SDS Number: 100000014260
## PRF Octane No. Blends 80-98

### Acute inhalation toxicity
- **LC50:** > 20 mg/l
- **Species:** Rat
- **Test atmosphere:** dust/mist
- **Method:** Acute toxicity estimate

### Acute dermal toxicity
- **LD50:** > 2,000 mg/kg
- **Species:** Rabbit
- **Method:** Acute toxicity estimate

### Skin irritation
- **Skin irritation**

### Eye irritation
- Vapors may cause irritation to the eyes, respiratory system and the skin.

### Sensitization
- Did not cause sensitization on laboratory animals.

### Repeated dose toxicity

<table>
<thead>
<tr>
<th>Compound</th>
<th>Species</th>
<th>Sex</th>
<th>Application Route</th>
<th>Dose</th>
<th>Exposure time</th>
<th>Number of exposures</th>
<th>NOEL</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-Trimethylpentane</td>
<td>Rat, Male and female</td>
<td>Male and female</td>
<td>Inhalation</td>
<td>0, 668, 2220, 6646 ppm</td>
<td>13 weeks</td>
<td>6 hr/day 5 d/wk</td>
<td>8.117 mg/l 2220 ppm</td>
<td>OECD Guideline 413</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>Rat, male</td>
<td>Male</td>
<td>Inhalation</td>
<td>12.47 mg/l</td>
<td>16 wk</td>
<td>12 h/d, 7 d/wk</td>
<td>12.47 mg/l</td>
<td>No adverse effect has been observed in chronic toxicity tests.</td>
</tr>
</tbody>
</table>

### Reproductive toxicity

| Compound                  | Species                  | Sex                | Application Route       | Dose                  | Exposure time | Number of exposures | Method                  | No adverse effect has been observed in chronic toxicity tests. |
|---------------------------|--------------------------|--------------------|-------------------------|-----------------------|---------------|--------------------|-------------------------|
| 2,2,4-Trimethylpentane    | Rat                      | Male and female    | Inhalation              | 12.35 mg/l            | 26 wk         | 6 h/d, 5 d/wk      | OECD Test Guideline 413 |                          |
n-Heptane
Species: Rat
Sex: male and female
Application Route: Inhalation
Dose: 0, 900, 3000, 9000 ppm
Number of exposures: 6 hr/d, 5 d/wk
Test period: 13 wk
Method: OECD Test Guideline 416
NOAEL Parent: 9000 ppm
NOAEL F1: 3000 ppm
NOAEL F2: 3000 ppm
Information given is based on data obtained from similar substances.

Developmental Toxicity
2,2,4-Trimethylpentane (Isocetane)
Species: Rat
Application Route: Inhalation
Dose: 0, 400, 1200 ppm
Number of exposures: 6h/d
Test period: GD6-15
NOAEL Teratogenicity: 1200 ppm
NOAEL Maternal: 1200 ppm
Information given is based on data obtained from similar substances.

PRF Octane No. Blends 80-98
Species: Rat
Application Route: Inhalation
Dose: 0, 900, 3000, 9000 ppm
Number of exposures: 6 hrs/d
NOAEL Teratogenicity: 9000 ppm
NOAEL Maternal: 3000 ppm

Aspiration toxicity: May be fatal if swallowed and enters airways.

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


PRF Octane No. Blends 80-98

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

2,2,4-Trimethylpentane (Isooctane):

LC50: 0.11 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.

n-Heptane

LL50: 5.738 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Method: QSAR modeled data

Toxicity to daphnia and other aquatic invertebrates

2,2,4-Trimethylpentane (Isooctane):

EC50: 0.4 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test Information given is based on data obtained from similar substances.

n-Heptane

EC50: 1.5 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test Toxic to aquatic organisms.

LC50: 0.1 mg/l
Exposure time: 96 h
Species: Mysidopsis bahia (mysid shrimp)
semi-static test Very toxic to aquatic organisms.

Toxicity to algae

2,2,4-Trimethylpentane:

EL50: 2.943 mg/l
### Toxicity to fish (Chronic toxicity)

<table>
<thead>
<tr>
<th>Substance</th>
<th>EL50: 4.338 mg/l</th>
<th>Exposure time: 72 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Heptane</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Species:** Pseudokirchneriella subcapitata (microalgae)
**Method:** QSAR

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>NOELR: 1.284 mg/l</th>
<th>Exposure time: 28 d</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Heptane</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Species:** Oncorhynchus mykiss (rainbow trout)
**Method:** QSAR

### Biodegradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Result: Not readily biodegradable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td></td>
</tr>
</tbody>
</table>

**Method:** OECD Test Guideline 301

**Expected to be inherently biodegradable.**

Information given is based on data obtained from similar substances.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Result: Readily biodegradable. 70 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Heptane</td>
<td></td>
</tr>
</tbody>
</table>

**Testing period: 10 d**

### Results of PBT assessment

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Non-classified PBT substance, Non-classified vPvB substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Heptane</td>
<td></td>
</tr>
</tbody>
</table>

### Additional ecological information

**Ecotoxicology Assessment**

**Short-term (acute) aquatic hazard**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Very toxic to aquatic life.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Very toxic to aquatic life.</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Heptane</td>
<td></td>
</tr>
</tbody>
</table>

**Long-term (chronic) aquatic hazard**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Very toxic to aquatic life with long lasting effects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2,4-Trimethylpentane (Isooctane)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Very toxic to aquatic life with long lasting effects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Heptane</td>
<td></td>
</tr>
</tbody>
</table>

---

SDS Number: 100000014260
n-Heptane: Very 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)**
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II, MARINE POLLUTANT, (2,2,4-TRIMETHYLPENTANE (ISOOCTANE), N-HEPTANE)

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
UN1268, PETROLEUM DISTILLATES, N.O.S., 3, II, (-8 °C), MARINE POLLUTANT, (2,2,4-TRIMETHYLPENTANE (ISOOCTANE), N-HEPTANE)

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

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
UN1268, PETROLEUM PRODUCTS, N.O.S., 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (2,2,4-TRIMETHYLPENTANE (ISOOCTANE), N-HEPTANE)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
UN1268, PETROLEUM PRODUCTS, N.O.S., 3, II, ENVIRONMENTALLY HAZARDOUS, (2,2,4-TRIMETHYLPENTANE (ISOOCTANE), N-HEPTANE)
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**SECTION 15: Regulatory information**

<table>
<thead>
<tr>
<th>National legislation</th>
<th></th>
</tr>
</thead>
</table>
| **SARA 311/312 Hazards** | Flammable (gases, aerosols, liquids, or solids)  
Skin corrosion or irritation  
Specific target organ toxicity (single or repeated exposure)  
Aspiration hazard  |
| **CERCLA Reportable Quantity** | 1020 lbs  
2,2,4-Trimethylpentane (Isooctane)  |
| **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.  |

| SARA 313 Components | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.  |

**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

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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

**US State Regulations**

Massachusetts Right To Know

: n-Heptane - 142-82-5

2,2,4-Trimethylpentane (Isooctane) - 540-84-1

Pennsylvania Right To Know

: 2,2,4-Trimethylpentane (Isooctane) - 540-84-1

n-Heptane - 142-82-5

California Prop. 65 Components

: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**

Europe REACH : On the inventory, or in compliance with the inventory

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

TSCA

Canada DSL : On the inventory, or in compliance with the inventory

Australia AICS : On the inventory, or in compliance with the inventory

New Zealand NZIoC : On the inventory, or in compliance with the inventory

Japan ENCS : On the inventory, or 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 : On the inventory, or in compliance with the inventory
NFPA Classification:
- Health Hazard: 2
- Fire Hazard: 3
- Reactivity Hazard: 0

Further information:
Legacy SDS Number: 28440

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>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Speciality Chemicals Association</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</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>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
</tr>
</tbody>
</table>