

**SECTION 1: Identification of the hazardous chemical or mixture and of the supplier or manufacturer****1.1. GHS product identifier**

Product form : Mixture  
Product name : Octane Booster  
Part Number : 30026

**1.2. Other means of identification**

No additional information available

**1.3. Recommended use of the chemical and restrictions on use**

Use of the substance/mixture : Fuel additives

**1.4. Supplier's details**

Lucas Oil Products, Inc.  
3199 Harrison Way NW  
Corydon, IN 47112  
USA  
T 800-342-2512

**1.5. Emergency phone number**

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week  
Within USA, Canada, Puerto Rico and US Virgin Islands: 1-800-255-3924  
International: 1-813-248-0585  
(collect calls accepted)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GHS MX classification**

|  |      |  |
|--|------|--|
| Flammable liquids Category 4                                     | H227 | Combustible liquid.                              |
| Acute toxicity (oral) Category 4                                 | H302 | Harmful if swallowed.                            |
| Acute toxicity (dermal) Category 5                               | H313 | May be harmful in contact with skin.             |
| Acute toxicity (inhalation:dust,mist) Category 4                 | H332 | Harmful if inhaled.                              |
| Carcinogenicity Category 2                                       | H351 | Suspected of causing cancer.                     |
| Aspiration hazard Category 1                                     | H304 | May be fatal if swallowed and enters airways.    |
| Hazardous to the aquatic environment – Acute Hazard Category 2   | H401 | Toxic to aquatic life.                           |
| Hazardous to the aquatic environment – Chronic Hazard Category 2 | H411 | Toxic to aquatic life with long lasting effects. |

Full text of H statements : see section 16

**2.2. Label elements****GHS MX labelling**

Hazard pictograms (GHS MX) :



Signal word (GHS MX) : Danger  
Hazard statements (GHS MX) : H227 - Combustible liquid  
H302+H332 - Harmful if swallowed or if inhaled  
H304 - May be fatal if swallowed and enters airways

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### Precautionary statements (GHS MX)

H313 - May be harmful in contact with skin  
H351 - Suspected of causing cancer  
H411 - Toxic to aquatic life with long lasting effects  
: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P308+P313 - IF exposed or concerned: get medical advice/attention.  
P312 - Call a POISON CENTER or doctor if you feel unwell.  
P330 - Rinse mouth.  
P331 - Do NOT induce vomiting.  
P370+P378 - In case of fire: Use media other than water to extinguish.  
P391 - Collect spillage.  
P403 - Store in a well-ventilated place.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

### 2.3. Other hazards which do not result in classification

Adverse physicochemical, human health and environmental effects

: Combustible liquid,Suspected of causing cancer,Harmful if inhaled,Harmful if swallowed,Harmful in contact with skin,May be fatal if swallowed and enters airways,Toxic to aquatic life,Toxic to aquatic life with long lasting effects

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name  | Product identifier  | %           | GHS MX classification   |
|---|---------------------|-------------|---|
| Distillates (petroleum), hydrotreated heavy paraffinic                  | CAS-No.: 64742-54-7 | ≥ 40 – < 60 | Asp. Tox. 1, H304   |
| Distillates (petroleum), hydrotreated light                             | CAS-No.: 64742-47-8 | ≥ 40 – < 60 | Acute Tox. 5 (Dermal), H313<br>Asp. Tox. 1, H304  |
| Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- | CAS-No.: 12108-13-3 | ≥ 1 – < 5   | Acute Tox. 3 (Oral), H301<br>Acute Tox. 2 (Dermal), H310<br>Acute Tox. 1 (Inhalation), H330<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Solvent naphtha (petroleum), heavy arom.                                | CAS-No.: 64742-94-5 | ≥ 1 – < 5   | Acute Tox. 5 (Oral), H303<br>Acute Tox. 5 (Dermal), H313<br>Asp. Tox. 1, H304   |

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| Name        | Product identifier | %     | GHS MX classification  |
|-------------|--------------------|-------|--|
| Naphthalene | CAS-No.: 91-20-3   | < 0.5 | Acute Tox. 4 (Oral), H302<br>Carc. 2, H351<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

### SECTION 4: First aid measures

#### 4.1. Description of necessary first aid measures

|   |  |
|---|--|
| First-aid measures general                    | : Call a physician immediately.  |
| First-aid measures after inhalation           | : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell. |
| First-aid measures after skin contact         | : Wash skin with plenty of water. Take off contaminated clothing.  |
| First-aid measures after eye contact          | : Rinse eyes with water as a precaution.   |
| First-aid measures after ingestion            | : Rinse mouth. Do not induce vomiting. Call a physician immediately.   |
| Personal protection for first-aid responders. | : First aid workers will be equipped with suitable personal protective equipment.  |

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

|                                     |   |
|-------------------------------------|---|
| Symptoms/effects after inhalation   | : Harmful if inhaled.                       |
| Symptoms/effects after skin contact | : May be harmful in contact with skin.      |
| Symptoms/effects after eye contact  | : None under normal conditions.             |
| Symptoms/effects after ingestion    | : Harmful if swallowed. Risk of lung edema. |

#### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : Do not use a heavy water stream.               |

#### 5.2. Specific hazards arising from the chemical

|  |                                |
|--|--------------------------------|
| Fire hazard                                      | : Combustible liquid.          |
| Explosion hazard                                 | : No direct explosion hazard.  |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |

#### 5.3. Special protective actions for fire-fighters

|                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.              |

### SECTION 6: Measures to be taken in case of accidental spillage or accidental leakage

#### 6.1. Personal precautions, protective equipment and emergency procedures

|                  |   |
|------------------|---|
| General measures | : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage. |
|------------------|---|

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### 6.1.1. For non-emergency personnel

- Protective equipment
- Emergency procedures
- : Wear recommended personal protective equipment.
- : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing.

### 6.1.2. For emergency responders

- Protective equipment
- Emergency procedures
- : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- : Evacuate unnecessary personnel. Stop leak if safe to do so.

## 6.2. Environmental precautions

Avoid release to the environment.

## 6.3. Methods and material for containment and cleaning up

- For containment
- Methods for cleaning up
- Other information
- : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
- : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- : Dispose of materials or solid residues at an authorized site.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed
- Precautions for safe handling
- Hygiene measures
- : Not expected to present a significant hazard under anticipated conditions of normal use.
- : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
- : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures
- Storage conditions
- Packaging materials
- : Keep in a cool, well-ventilated place away from heat.
- : Store in a well-ventilated place. Keep cool. Store locked up.
- : Always store product in container of same material as original container.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3)

##### Mexico - Occupational Exposure Limits

|                      |  |
|----------------------|--|
| Local name           | 2-Metilciclopentadieniltricarbonilo de manganeso   |
| OEL TWA              | 0.2 mg/m³ como Mn  |
| Remark (MX)          | Daño a sistema nervioso central; daño a pulmón, hígado y riñón; PIEL (Capacidad de la sustancia química para absorberse a través de la piel, las membranas mucosas o los ojos en cantidades significativas, incrementando el riesgo por la exposición a ese contaminante del ambiente) |
| Regulatory reference | NOM-010-STPS-2014  |

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### Naphthalene (91-20-3)

#### Mexico - Occupational Exposure Limits

|                      |   |
|----------------------|---|
| Local name           | Naftaleno   |
| OEL TWA              | 10 ppm  |
| OEL STEL             | 15 ppm  |
| Remark (MX)          | Efecto hematológico; irritación del tracto respiratorio superior y ojos; daño a ojos; A4 (No clasificado como carcinógeno en humano Agente que puede ser cancerígeno para humanos pero que no puede ser concluyentemente asegurado por falta de datos. Estudios in vitro o animales no proveen indicaciones de carcinogenicidad suficientes para clasificar al agente en una de las otras categorías); PIEL (Capacidad de la sustancia química para absorberse a través de la piel, las membranas mucosas o los ojos en cantidades significativas, incrementando el riesgo por la exposición a ese contaminante del ambiente) |
| Regulatory reference | NOM-010-STPS-2014   |

### 8.2. Appropriate engineering controls

|                                  |  |
|----------------------------------|--|
| Appropriate engineering controls | : Ensure good ventilation of the work station. |
| Environmental exposure controls  | : Avoid release to the environment.            |

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

|   |  |
|---|--|
| Personal protective equipment           | : Wear recommended personal protective equipment.                  |
| Hand protection                         | : Protective gloves  |
| Eye protection                          | : Safety glasses   |
| Skin and body protection                | : Wear suitable protective clothing                                |
| Respiratory protection                  | : [In case of inadequate ventilation] wear respiratory protection. |
| Personal protective equipment symbol(s) |  |



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                     |
|---|---------------------|
| Physical state                              | : Liquid            |
| Color                                       | : Black             |
| Odor  | : No data available |
| Odor threshold                              | : No data available |
| pH  | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point                               | : Not applicable    |
| Freezing point                              | : No data available |
| Boiling point                               | : No data available |
| Flash point                                 | : 170 °F            |
| Flammability (solid, gas)                   | : Not applicable    |
| Auto-ignition temperature                   | : No data available |
| Decomposition temperature                   | : No data available |
| Vapor pressure                              | : No data available |
| Relative vapor density at 20°C              | : No data available |
| Relative density                            | : 0.851             |
| Density                                     | : 7.111 lb/gal      |
| Solubility                                  | : No data available |

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|   |                      |
|---|----------------------|
| Partition coefficient n-octanol/water (Log Pow) | : No data available  |
| Partition coefficient n-octanol/water (Log Kow) | : No data available  |
| Viscosity, kinematic                            | : 8.327 mm²/s 40 ° C |
| Viscosity, dynamic                              | : No data available  |
| Explosive properties                            | : No data available  |
| Oxidizing properties                            | : No data available  |
| Explosion limits                                | : No data available  |
| Particle size                                   | : Not Applicable     |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                             |   |
|-----------------------------|---|
| Acute toxicity (oral)       | : Harmful if swallowed.                     |
| Acute toxicity (dermal)     | : May be harmful in contact with skin.      |
| Acute toxicity (inhalation) | : Inhalation:dust,mist: Harmful if inhaled. |

| Octane Booster  |                             |
|---|-----------------------------|
| ATE MX (oral)   | 1309.165 mg/kg body weight  |
| ATE MX (dermal)   | 2168.92 mg/kg body weight   |
| ATE MX (dust, mist)   | 1.996 mg/l/4h               |
| Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) |                             |
| LD50 dermal rabbit  | > 5000 mg/kg Source: IUCLID |
| Distillates (petroleum), hydrotreated light (64742-47-8)            |                             |
| LD50 oral   | 15000 mg/kg                 |

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|                                   |  |
|-----------------------------------|--|
| LD50 oral rat                     | > 5000 mg/kg body weight Animal: rat, Guideline: EPA OTS 798.1175 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method) |
| LD50 dermal rabbit                | > 2000 mg/kg body weight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity), Guideline: OECD Guideline 402 (Acute Dermal Toxicity)              |
| LC50 Inhalation - Rat             | > 5.28 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), 95% CL: 0,42 -   |
| LC50 Inhalation - Rat (Dust/Mist) | > 5.2 mg/l Source: IUCLID  |
| ATE MX (oral)                     | 15000 mg/kg body weight  |
| ATE MX (dermal)                   | 2500 mg/kg body weight   |

### Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3)

|                                |  |
|--------------------------------|--|
| LD50 oral rat                  | 51.8 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity)          |
| LD50 dermal                    | 212.7 mg/kg  |
| LD50 dermal rabbit             | 140 mg/kg (Equivalent or similar to OECD 402, Rabbit, Experimental value, Dermal, 14 day(s))                       |
| LC50 Inhalation - Rat          | 0.08 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male, Experimental value, Inhalation (vapours), 14 day(s)) |
| LC50 Inhalation - Rat (Vapors) | 0.08 mg/l/4h   |
| ATE MX (oral)                  | 51.8 mg/kg body weight   |
| ATE MX (dermal)                | 140 mg/kg body weight  |
| ATE MX (gases)                 | 10 ppmV/4h   |
| ATE MX (vapors)                | 0.08 mg/l/4h   |
| ATE MX (dust, mist)            | 0.08 mg/l/4h   |

### Solvent naphtha (petroleum), heavy arom. (64742-94-5)

|                    |  |
|--------------------|--|
| LD50 oral          | 3690 mg/kg   |
| LD50 oral rat      | > 5000 mg/kg Source: IUCLID  |
| LD50 dermal        | 4100 mg/kg   |
| LD50 dermal rat    | > 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: other: |
| LD50 dermal rabbit | > 2000 mg/kg body weight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity)                   |
| ATE MX (oral)      | 3690 mg/kg body weight   |
| ATE MX (dermal)    | 4100 mg/kg body weight   |

### Naphthalene (91-20-3)

|                    |  |
|--------------------|--|
| LD50 oral          | 533 mg/kg body weight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))                    |
| LD50 oral rat      | > 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)                                      |
| LD50 dermal        | 2500 mg/kg   |
| LD50 dermal rat    | > 16000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s)) |
| LD50 dermal rabbit | 2500 mg/kg Source: ChemIDplus  |

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|  |   |
|--|---|
| ATE MX (oral)  | 533 mg/kg body weight   |
| ATE MX (dermal)  | 2500 mg/kg body weight  |
| Skin corrosion/irritation  | : Not classified  |
| <b>Naphthalene (91-20-3)</b>   |   |
| pH   | No data available in the literature   |
| Serious eye damage/irritation  | : Not classified  |
| <b>Naphthalene (91-20-3)</b>   |   |
| pH   | No data available in the literature   |
| Respiratory or skin sensitization  | : Not classified  |
| Germ cell mutagenicity   | : Not classified  |
| Carcinogenicity  | : Suspected of causing cancer.  |
| <b>Naphthalene (91-20-3)</b>   |   |
| IARC group   | 2B - Possibly carcinogenic to humans  |
| National Toxicity Program (NTP) Status                                     | Reasonably anticipated to be Human Carcinogen   |
| Reproductive toxicity  | : Not classified  |
| <b>Distillates (petroleum), hydrotreated light (64742-47-8)</b>            |   |
| NOAEL (animal/male, F0/P)  | ≥ 3000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 415 [One-Generation Reproduction Toxicity Study (before 9 October 2017)]  |
| <b>Solvent naphtha (petroleum), heavy arom. (64742-94-5)</b>               |   |
| NOAEL (animal/male, F0/P)  | 35 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:    |
| NOAEL (animal/female, F0/P)  | 125 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other: |
| <b>Naphthalene (91-20-3)</b>   |   |
| LOAEL (animal/female, F0/P)  | 50 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:   |
| LOAEL (animal/female, F1)  | 450 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:  |
| NOAEL (animal/female, F0/P)  | 120 mg/kg body weight Animal: rabbit, Animal sex: female, Guideline: other:   |
| STOT-single exposure   | : Not classified  |
| STOT-repeated exposure   | : Not classified  |
| <b>Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)</b> |   |
| LOAEL (oral,rat,90 days)   | 125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)  |
| NOAEC (inhalation,rat,dust/mist/fume,90 days)                              | > 0.98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)   |
| <b>Distillates (petroleum), hydrotreated light (64742-47-8)</b>            |   |
| NOAEL (oral,rat,90 days)   | 750 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)  |
| NOAEL (dermal,rat/rabbit,90 days)  | ≥ 495 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)   |



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| Solvent naphtha (petroleum), heavy arom. (64742-94-5) |   |
|---|---|
| LOAEC (inhalation, rat, vapor, 90 days)               | 4.71 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity: 90-Day Study)  |
| NOAEC (inhalation, rat, vapor, 90 days)               | 2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity: 90-Day Study) |

| Naphthalene (91-20-3)                   |  |
|---|--|
| LOAEL (oral, rat, 90 days)              | 400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)   |
| LOAEC (inhalation, rat, vapor, 90 days) | 0.011 mg/l air Animal: rat, Guideline: EPA OPP 82-4 (90-Day Inhalation Toxicity), Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study) |
| NOAEL (oral, rat, 90 days)              | 200 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)   |
| NOAEL (dermal, rat/rabbit, 90 days)     | 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)   |

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

| Octane Booster       |                   |
|----------------------|-------------------|
| Viscosity, kinematic | 8.327 mm²/s 40 °C |

| Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) |          |
|---|----------|
| Viscosity, kinematic  | 18 mm²/s |
| Hydrocarbon   | Yes      |
| Aliphatic, alicyclic or aromatic hydrocarbon                        | Yes      |

| Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3) |            |
|--|------------|
| Viscosity, kinematic   | 3.65 mm²/s |

| Solvent naphtha (petroleum), heavy arom. (64742-94-5) |             |
|---|-------------|
| Viscosity, kinematic                                  | 2.235 mm²/s |

| Naphthalene (91-20-3) |   |
|-----------------------|---|
| Viscosity, kinematic  | 1 mm²/s (80 °C, OECD 114: Viscosity of Liquids) |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life. Toxic to aquatic life with long lasting effects.  
Hazardous to the aquatic environment, short-term (acute) : Toxic to aquatic life.  
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

| Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7) |                            |
|---|----------------------------|
| LC50 - Fish [1]   | > 5000 mg/l                |
| EC50 - Crustacea [1]  | > 1000 mg/l Source: IUCLID |
| EC50 96h - Algae [1]  | > 1000 mg/l Source: IUCLID |

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| <b>Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3)</b> |   |
|---|---|
| LC50 - Fish [1]   | 0.21 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinus carpio, Semi-static system, Fresh water, Experimental value, Lethal)         |
| EC50 - Crustacea [1]  | 0.83 mg/l (EPA OTS 797.1300, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)                         |
| EC50 96h - Algae [1]  | > 0.46 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum) |

| <b>Naphthalene (91-20-3)</b> |  |
|------------------------------|--|
| LC50 - Fish [1]              | 0.96 ppm (Oncorhynchus gorbuscha, Flow-through system, Salt water, Experimental value, Lethal)                                       |
| EC50 - Crustacea [1]         | 2.16 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect) |
| EC50 72h - Algae [1]         | 0.4 mg/l (Skeletonema costatum, Literature study, Growth rate)   |
| NOEC chronic fish            | 0.12 mg/l  |
| NOEC (chronic)               | 0.59 mg/l Test organisms (species): Daphnia pulex Duration: '125 d'  |
| NOEC chronic crustacea       | 3 mg/l   |

### 12.2. Persistence and degradability

| <b>Octane Booster</b>   |  |
|---|--|
| Persistence and degradability   | Not rapidly degradable   |
| <b>Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)</b>                  |  |
| Persistence and degradability   | Not rapidly degradable   |
| <b>Distillates (petroleum), hydrotreated light (64742-47-8)</b>                             |  |
| Persistence and degradability   | Not rapidly degradable   |
| <b>Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3)</b> |  |
| Persistence and degradability   | Not readily biodegradable in water.                                |
| <b>Solvent naphtha (petroleum), heavy arom. (64742-94-5)</b>                                |  |
| Persistence and degradability   | Not readily biodegradable in water.                                |
| <b>Naphthalene (91-20-3)</b>  |  |
| Persistence and degradability   | Readily biodegradable in the soil, Readily biodegradable in water. |
| Biochemical oxygen demand (BOD)   | 0 g O <sub>2</sub> /g substance                                    |
| Chemical oxygen demand (COD)  | 0.22 g O <sub>2</sub> /g substance                                 |
| ThOD  | 2.99 g O <sub>2</sub> /g substance                                 |

### 12.3. Bioaccumulative potential

| <b>Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)</b> |                        |
|--|------------------------|
| Partition coefficient n-octanol/water (Log Pow)                            | 3.9 – 6 Source: IUCLID |
| <b>Distillates (petroleum), hydrotreated light (64742-47-8)</b>            |                        |
| Partition coefficient n-octanol/water (Log Pow)                            | 3.3 – 6 Source: IUCLID |

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| Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3) |   |
|--|---|
| BCF - Fish [1]   | 400 (24 h, Static system, Fresh water, Experimental value)  |
| Partition coefficient n-octanol/water (Log Pow)                                      | 3.4 (Practical experience/observation, 26 °C)   |
| Bioaccumulative potential  | Low potential for bioaccumulation (BCF < 500).  |
| Solvent naphtha (petroleum), heavy arom. (64742-94-5)                                |   |
| Partition coefficient n-octanol/water (Log Pow)                                      | 2.9 – 6.1   |
| Bioaccumulative potential  | Bioaccumable.   |
| Naphthalene (91-20-3)  |   |
| BCF - Fish [1]   | 23 – 168 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value) |
| Partition coefficient n-octanol/water (Log Pow)                                      | 3.4 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)  |
| Bioaccumulative potential  | Low potential for bioaccumulation (BCF < 500).  |

### 12.4. Mobility in soil

| Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3) |  |
|--|--|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc)                           | 3.4 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value) |
| Ecology - soil   | Low potential for mobility in soil.  |
| Naphthalene (91-20-3)  |  |
| Surface tension  | No data available in the literature  |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc)                           | 2.864 (log Koc, SRC PCKOCWIN v2.0, Calculated value)   |
| Ecology - soil   | Low potential for adsorption in soil.  |

### 12.5. Other adverse effects

Ozone : Not classified

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|  |   |
|--|---|
| Product/Packaging disposal recommendations | : Disposal must be done according to official regulations.  |
| Ecological waste information               | : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself. |
| Regional waste regulation                  | : Disposal must be done according to official regulations.  |
| Additional information                     | : Do not re-use empty containers.   |
| Sewage disposal recommendations            | : Disposal must be done according to official regulations.  |
| Waste treatment methods                    | : Dispose of contents/container in accordance with licensed collector's sorting instructions.   |





## SECTION 14: Transport information

In accordance with NOM / UN RTDG / IMDG / IATA

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| NOM   | UN RTDG   | IMDG   | IATA  |
|---|---|--|---|
| <b>14.1. UN number</b>  |   |  |   |
| 1993  | 1993  | UN3082   | UN3082  |
| <b>14.2. Proper Shipping Name</b>   |   |  |   |
| LIQUIDO INFLAMABLE, N.E.P.  | FLAMMABLE LIQUID, N.O.S.  | ENVIRONMENTALLY<br>HAZARDOUS SUBSTANCE,<br>LIQUID, N.O.S.<br>Methylcyclopentadienyl manganese<br>tricarbonyl | Environmentally hazardous<br>substance, liquid, n.o.s.<br>Methylcyclopentadienyl manganese<br>tricarbonyl |
| <b>14.3. Transport hazard class(es)</b>   |   |  |   |
| 3   | 3   | 9  | 9   |
|  |  |                             |                        |
| <b>14.4. Packing group</b>  |   |  |   |
| III   | III   | III  | III   |
| <b>14.5. Environmental hazards</b>  |   |  |   |
| Dangerous for the environment: Yes  | Dangerous for the environment: Yes  | Dangerous for the environment: Yes<br>Marine pollutant: Yes  | Dangerous for the environment: Yes  |
| No supplementary information available  |   |  |   |

### 14.6. Special precautions for user

#### NOM

Special provisions (NOM/SCT) : 223, 274  
Limited quantities (NOM/SCT) : 5L  
Excepted quantities (NOM/SCT) : E1  
Packing instruction (NOM/SCT) : P001, IBC03, LP01  
Portable tank and bulk container instructions (NOM/SCT) : T4  
Portable tank and bulk container special provisions (NOM/SCT) : TP1, TP29

#### UN RTDG

Special provision (UN RTDG) : 223, 274  
Limited quantities (UN RTDG) : 5L  
Excepted quantities (UN RTDG) : E1  
Packing instruction (UN RTDG) : P001, IBC03, LP01  
Portable tank and bulk container special instructions (UN RTDG) : T4  
Portable tank and bulk container special provisions (UN RTDG) : TP1, TP29

#### IMDG

Special provision (IMDG) : 274, 335, 969, 375  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : LP01, P001  
Packing provisions (IMDG) : PP1  
IBC packing instructions (IMDG) : IBC03

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|                                |   |
|--------------------------------|---|
| Tank instructions (IMDG)       | : T4  |
| Tank special provisions (IMDG) | : TP1, TP29   |
| EmS-No. (Fire)                 | : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE                  |
| EmS-No. (Spillage)             | : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS |
| Stowage category (IMDG)        | : A   |

### IATA

No data available

|  |                         |
|--|-------------------------|
| PCA Excepted quantities (IATA)               | : E1                    |
| PCA Limited quantities (IATA)                | : Y964                  |
| PCA limited quantity max net quantity (IATA) | : 30kgG                 |
| PCA packing instructions (IATA)              | : 964                   |
| PCA max net quantity (IATA)                  | : 450L                  |
| CAO packing instructions (IATA)              | : 964                   |
| CAO max net quantity (IATA)                  | : 450L                  |
| Special provision (IATA)                     | : A97, A158, A197, A215 |
| ERG code (IATA)                              | : 9L                    |

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### **Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7):**

Listed in the INSQ (National Inventory of Chemical Substances)

##### **Distillates (petroleum), hydrotreated light (64742-47-8):**

Listed in the INSQ (National Inventory of Chemical Substances)

##### **Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3):**

Listed in the INSQ (National Inventory of Chemical Substances)

##### **Solvent naphtha (petroleum), heavy arom. (64742-94-5):**

Listed in the INSQ (National Inventory of Chemical Substances)

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

Listed in the INSQ (National Inventory of Chemical Substances)

#### International regulations

##### **Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7):**

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

##### **Distillates (petroleum), hydrotreated light (64742-47-8):**

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

##### **Manganese, tricarbonyl[(1,2,3,4,5-η)-1-methyl-2,4-cyclopentadien-1-yl]- (12108-13-3):**

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Subject to reporting requirements of United States SARA Section 313

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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### Solvent naphtha (petroleum), heavy arom. (64742-94-5):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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

Listed on IARC (International Agency for Research on Cancer)

Listed as carcinogen on NTP (National Toxicology Program)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Subject to reporting requirements of United States SARA Section 313

Listed on the Canadian DSL (Domestic Substances List)

Listed on EPA Hazardous Air Pollutant (HAPS)

Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens

Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits

Listed on INSQ (Mexican National Inventory of Chemical Substances)

## SECTION 16: Other information including those related to the preparation and updating of safety data sheets

Issue date : 4/24/2025

Revision date : 12/18/2025

Supersedes : 10/13/2025

### Full text of hazard classes and H-statements

|      |  |
|------|--|
| H227 | Combustible liquid                                   |
| H301 | Toxic if swallowed                                   |
| H302 | Harmful if swallowed                                 |
| H303 | May be harmful if swallowed                          |
| H304 | May be fatal if swallowed and enters airways         |
| H310 | Fatal in contact with skin                           |
| H313 | May be harmful in contact with skin                  |
| H330 | Fatal if inhaled                                     |
| H332 | Harmful if inhaled                                   |
| H351 | Suspected of causing cancer                          |
| H400 | Very toxic to aquatic life                           |
| H401 | Toxic to aquatic life                                |
| H410 | Very toxic to aquatic life with long lasting effects |
| H411 | Toxic to aquatic life with long lasting effects      |

Safety Data Sheet (SDS), Mexico

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.