

SAFETY DATA SHEET



MAX-BOOST

Section 1. Identification

GHS product identifier : MAX-BOOST
Product code : 301697175039
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Fuel additive.

Uses advised against

None known.

Reason

Supplier's details : Calumet Branded Products, LLC
1060 N Capitol Ave Suite 6-401
Indianapolis, IN 46204
USA
Technical Services:317-328-5660

Emergency telephone number : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (inhalation) - Category 3
ASPIRATION HAZARD - Category 1
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : May be fatal if swallowed and enters airways.
Toxic if inhaled.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

| Ingredient name | % | CAS number |
|--|-----------|------------|
| Distillates (petroleum), hydrotreated light | ≥90 - ≤99 | 64742-47-8 |
| tricarbonyl(methylcyclopentadienyl)manganese | ≤1.5 | 12108-13-3 |
| 1,2,4-trimethylbenzene | ≤0.1 | 95-63-6 |
| benzo[a]pyrene | ≤0.0022 | 50-32-8 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Toxic if inhaled.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : No specific data.

Section 4. First aid measures

- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|--|--|
| Distillates (petroleum), hydrotreated light | ACGIH TLV (United States, 1/2023). [Kerosene as total hydrocarbon vapor] Absorbed through skin. TWA: 200 mg/m ³ , (as total hydrocarbon vapor) 8 hours. |
| tricarbonyl(methylcyclopentadienyl)manganese | ACGIH TLV (United States, 1/2023). Absorbed through skin. TWA: 0.2 mg/m ³ , (as Mn) 8 hours. OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 0.2 mg/m ³ , (as Mn) 8 hours. NIOSH REL (United States, 10/2020). Absorbed through skin. TWA: 0.2 mg/m ³ , (as Mn) 10 hours. OSHA PEL (United States, 5/2018). [Manganese compounds (as Mn)] CEIL: 5 mg/m ³ , (as Mn) CAL OSHA PEL (United States, 5/2018). Absorbed through skin. TWA: 0.2 mg/m ³ , (as Mn) 8 hours. |

Section 8. Exposure controls/personal protection

1,2,4-trimethylbenzene

OSHA PEL 1989 (United States, 3/1989).

[Trimethyl benzene]

TWA: 25 ppm 8 hours.

TWA: 125 mg/m³ 8 hours.

NIOSH REL (United States, 10/2020).

TWA: 25 ppm 10 hours.

TWA: 125 mg/m³ 10 hours.

ACGIH TLV (United States, 1/2023).

TWA: 10 ppm 8 hours.

CAL OSHA PEL (United States, 5/2018).

[trimethylbenzene, all isomers]

TWA: 125 mg/m³ 8 hours.

TWA: 25 ppm 8 hours.

benzo[a]pyrene

None.

Biological exposure indices

| Ingredient name | Exposure indices |
|-----------------|---|
| benzo[a]pyrene | <p>ACGIH BEI (United States, 1/2023)</p> <p>[polycyclic aromatic hydrocarbons]</p> <p>BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek.</p> <p>BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.</p> |

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Purple. [Light]
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : >222°C (>431.6°F)
- Flash point** : Closed cup: 95°C (203°F) [Pensky-Martens]
- Evaporation rate** : 0.19 (butyl acetate = 1)
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Lower: 0.6%
Upper: 5.5%
- Vapor pressure** :

| Ingredient name | Vapor Pressure at 20°C | | | Vapor pressure at 50°C | | |
|---|------------------------|--------------|--------|------------------------|-----|--------|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| Distillates (petroleum), hydrotreated light | 0.22502 to 0.45004 | 0.03 to 0.06 | | | | |

- Relative vapor density** : >1 [Air = 1]

- Relative density** : 0.8063

- Solubility(ies)** :
- | Media | Result |
|------------|-------------|
| cold water | Not soluble |
| hot water | Not soluble |

- Solubility in water** : Not available.

- Partition coefficient: n-octanol/water** : Not applicable.

- Auto-ignition temperature** :
- | Ingredient name | °C | °F | Method |
|--|------------|------------|------------|
| Solvent naphtha (petroleum), heavy arom. | 220 to 250 | 428 to 482 | ASTM E 659 |

- Decomposition temperature** : Not available.

- Viscosity** : Kinematic (40°C (104°F)): 2 mm²/s (2 cSt)

- Flow time (ISO 2431)** : Not available.

Particle characteristics

- Median particle size** : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|---------------------------------|-----------------------|-----------------------|-------------------------|
| Distillates (petroleum), hydrotreated light | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | 247 mg/m ³ | 1 hours |
| | | Rat | 247 mg/m ³ | 1 hours |
| tricarbonyl (methylcyclopentadienyl) manganese | LC50 Inhalation Dusts and mists | Rat | 76 mg/m ³ | 4 hours |
| | LC50 Inhalation Vapor | Rat | 76 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 140 mg/kg | - |
| | LD50 Dermal | Rat | 665 mg/kg | - |
| | LD50 Oral | Rat | 8 mg/kg | - |
| | 1,2,4-trimethylbenzene | LC50 Inhalation Vapor | Rat | 18000 mg/m ³ |
| LD50 Dermal | | Rabbit | >3440 mg/kg | - |
| LD50 Oral | | Rat | 5 g/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|----------------------|---------|-------|-----------------|-------------|
| tricarbonyl (methylcyclopentadienyl) manganese | Skin - Mild irritant | Rabbit | - | 24 hours 100 mg | - |
| | Skin - Mild irritant | Mouse | - | 14 ug | - |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|-------------------------|------|------|--|
| benzo[a]pyrene | - | 1 | Reasonably anticipated to be a human carcinogen. |

Reproductive toxicity

Not available.

Teratogenicity

Section 11. Toxicological information

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|------------------------|--------------------------|-------------------|--|
| 1,2,4-trimethylbenzene | Category 3 Category 3 | - | Respiratory tract irritation Narcotic effects |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

| Name | Result |
|---|--|
| Distillates (petroleum), hydrotreated light 1,2,4-trimethylbenzene | ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : Toxic if inhaled.
Skin contact : No known significant effects or critical hazards.
Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--|------------------------------|-------------------------------|--------------------------|----------------------------|-------------------------------------|
| MAX-BOOST Distillates (petroleum), hydrotreated light tricarbonyl(methylcyclopentadienyl)manganese 1,2,4-trimethylbenzene | 6770.8 N/A 100 5000 | 2018.6 2500 140 2500 | N/A N/A N/A N/A | 5.1 N/A 0.076 18 | N/A N/A N/A N/A |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|--|----------|
| Distillates (petroleum), hydrotreated light 1,2,4-trimethylbenzene benzo[a]pyrene | Acute EC50 >1000 mg/l | Algae | 72 hours |
| | Acute LC50 >1000 mg/l Fresh water | Daphnia | 48 hours |
| | Acute LC50 4910 µg/l Marine water | Crustaceans - <i>Elasmopus pecteniscus</i> - Adult | 48 hours |
| | Acute LC50 7720 µg/l Fresh water | Fish - <i>Pimephales promelas</i> | 96 hours |
| | Acute EC50 5 µg/l Fresh water | Algae - <i>Scenedesmus acutus</i> | 72 hours |
| | Acute LC50 11 mg/l Marine water | Crustaceans - <i>Gammarus duebeni</i> | 48 hours |
| | Acute LC50 0.25 mg/l Fresh water | Daphnia - <i>Daphnia magna</i> - Neonate | 48 hours |
| Chronic NOEC 12 µg/l Marine water | Crustaceans - <i>Eurytemora affinis</i> - Nauplii | 21 days | |

Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|--------------------------|------|----------|
| Distillates (petroleum), hydrotreated light | OECD 301F Ready Biodegradability - Manometric Respirometry Test | 69 % - Readily - 28 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| Distillates (petroleum), hydrotreated light | - | - | Readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-----|-----------|
| tricarbonyl (methylcyclopentadienyl) manganese | 3.4 | - | Low |
| 1,2,4-trimethylbenzene | 3.63 | 243 | Low |
| benzo[a]pyrene | 6.13 | - | High |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | DOT Classification | TDG Classification | IMDG | IATA |
|-----------|--------------------|--------------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: naphthalene
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 Clean Water Act (CWA) 307: naphthalene; ethylbenzene; toluene; benzene; benzo[a]pyrene
 Clean Water Act (CWA) 311: naphthalene; ethylbenzene; toluene; benzene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

| Name | % | EHS | SARA 302 TPQ | | SARA 304 RQ | |
|--|------|------|--------------|-----------|-------------|-----------|
| | | | (lbs) | (gallons) | (lbs) | (gallons) |
| tricarbonyl(methylcyclopentadienyl)manganese | ≤1.5 | Yes. | 100 | 8.7 | 100 | 8.7 |

SARA 304 RQ : 6666.7 lbs / 3026.7 kg [991.6 gal / 3753.8 L]

SARA 311/312

Section 15. Regulatory information

Classification : ACUTE TOXICITY (inhalation) - Category 3
ASPIRATION HAZARD - Category 1

Composition/information on ingredients

| Name | % | Classification |
|---|---------------------------|--|
| Distillates (petroleum), hydrotreated light tricarbonyl (methylcyclopentadienyl) manganese 1,2,4-trimethylbenzene | ≥90 - ≤99 ≤1.5 ≤0.1 | ASPIRATION HAZARD - Category 1 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 2 ACUTE TOXICITY (inhalation) - Category 1 FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 |

SARA 313

| | Product name | CAS number | % |
|--|---|-----------------------|-----------------|
| Form R - Reporting requirements | Tricarbonyl(methylcyclopentadienyl)manganese benzo[a]pyrene | 12108-13-3 50-32-8 | ≤1.5 ≤0.0022 |
| Supplier notification | Tricarbonyl(methylcyclopentadienyl)manganese benzo[a]pyrene | 12108-13-3 50-32-8 | ≤1.5 ≤0.0022 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: METHYLCYCLOPENTADIENYL MANGANESE TRICARBONYL
- New York** : The following components are listed: Manganese, tricarbonyl methylcyclopentadienyl
- New Jersey** : The following components are listed: METHYLCYCLOPENTADIENYL MANGANESE TRICARBONYL
- Pennsylvania** : The following components are listed: MANGANESE, TRICARBONYL[(1,2,3,4,5-.ETA.)-1-METHYL-2,4-CYCLOPENTADIEN-1-YL]-

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Information provided is based on industrial use and may not be relevant to consumer applications.

| Ingredient name | Concentration (%) | No significant risk level | Maximum acceptable dosage level |
|-----------------|-------------------|---------------------------|---------------------------------|
| Naphthalene | 0.0735 | Yes. | - |
| Ethylbenzene | <0.0015 | Yes. | - |
| Toluene | <0.0015 | - | Yes. |
| Benzene | <0.0015 | Yes. | Yes. |
| Benzo[a]pyrene | <0.0015 | Yes. | - |

International lists

National inventory

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory:** All components are listed or exempted.
- New Zealand** : All components are listed or exempted.

Section 15. Regulatory information

| | |
|--------------------------|--|
| Philippines | : All components are listed or exempted. |
| Republic of Korea | : All components are listed or exempted. |
| Taiwan | : All components are listed or exempted. |
| Thailand | : Not determined. |
| Turkey | : Not determined. |
| United States | : All components are active or exempted. |
| Viet Nam | : All components are listed or exempted. |

Section 16. Other information

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

| Classification | Justification |
|--|--------------------|
| ACUTE TOXICITY (inhalation) - Category 3 | Calculation method |
| ASPIRATION HAZARD - Category 1 | Calculation method |
| AQUATIC HAZARD (ACUTE) - Category 3 | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 3 | Calculation method |

History

| | |
|---------------------------------------|--------------|
| Date of issue/Date of revision | : 09/12/2024 |
| Date of previous issue | : 07/31/2023 |
| Version | : 9 |

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| Key to abbreviations | : ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations |
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▣ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.