# SAFETY DATA SHEET

No. 630-A/AA/AAA/2

## Section 1. Identification

**GHS product identifier** : No. 630-A/AA/AAA/2

**Other means of identification** : Not available.

**Product type** : Solid.

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

**Product use** : Petroleum lubricating grease

**Area of application** : Industrial applications.

**Supplier/Manufacturer** : LUBRIPLATE® Lubricants Co.
129 Lockwood St.
Newark, NJ 07105
Telephone no.: 1-973-589-9150

**e-mail address of person responsible for this SDS** : SDS@lubriplate.com

**Emergency telephone number (with hours of operation)** : CHEM-TEL 1-800-255-3924 (24 hour)

## 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** : Not classified.

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 13.1%

**GHS label elements**

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

**Precautionary statements**

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Avoid contact with skin and clothing. Wash thoroughly after handling.

**Hazards not otherwise classified** : Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

# Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

## CAS number/other identifiers

**CAS number** : Not applicable.

**Product code** : Not available.

| Ingredient name | Other names | % | CAS number |
|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | Distillates (petroleum), hydrotreated heavy naphthenic | 60-100 | 64742-52-5 |
| Distillates (petroleum), hydrotreated light naphthenic | Distillates (petroleum), hydrotreated light naphthenic | 30-60 | 64742-53-6 |
| zinc oxide | zinc oxide | 1-5 | 1314-13-2 |
| tris(dipentyldithiocarbamato-S,S')antimony | tris (dipentyldithiocarbamato-S, S')antimony | 1-5 | 15890-25-2 |

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 as hazardous to health and hence require reporting in this section.**

# 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. Get medical attention.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin contact** : Defatting to the skin. May cause skin dryness and irritation.

**Ingestion** : No known significant effects or critical hazards.

## Over-exposure signs/symptoms

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking

## Section 4. First aid measures

**Ingestion** : No specific data.

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**See toxicological information (Section 11)**

## Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media** : Use dry chemical, $CO_2$, alcohol-resistant foam or water spray (fog).

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
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. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised 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).

**Methods and materials for containment and cleaning up**

**Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## Section 6. Accidental release measures

**Large spill** : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. 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).

**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. 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.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | **ACGIH TLV (United States, 6/2013).**<br>TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction<br>**NIOSH REL (United States, 10/2013).**<br>TWA: 5 mg/m³ 10 hours. Form: Mist<br>STEL: 10 mg/m³ 15 minutes. Form: Mist<br>**OSHA PEL (United States, 2/2013).**<br>TWA: 5 mg/m³ 8 hours. |
| Distillates (petroleum), hydrotreated light naphthenic | **ACGIH TLV (United States, 6/2013).**<br>TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction<br>**NIOSH REL (United States, 10/2013).**<br>TWA: 5 mg/m³ 10 hours. Form: Mist<br>STEL: 10 mg/m³ 15 minutes. Form: Mist<br>**OSHA PEL (United States, 2/2013).**<br>TWA: 5 mg/m³ 8 hours. |
| zinc oxide | **NIOSH REL (United States, 10/2013).**<br>CEIL: 15 mg/m³ Form: Dust<br>TWA: 5 mg/m³ 10 hours. Form: Dust and fumes<br>STEL: 10 mg/m³ 15 minutes. Form: Fume<br>**OSHA PEL 1989 (United States, 3/1989).**<br>TWA: 5 mg/m³ 8 hours. Form: Fume<br>STEL: 10 mg/m³ 15 minutes. Form: Fume<br>TWA: 5 mg/m³ 8 hours. Form: Respirable fraction<br>TWA: 10 mg/m³ 8 hours. Form: Total dust<br>**OSHA PEL (United States, 2/2013).**<br>TWA: 5 mg/m³ 8 hours. Form: Fume<br>TWA: 5 mg/m³ 8 hours. Form: Respirable fraction |

## Section 8. Exposure controls/personal protection

| | |
|---|---|
| tris(dipentyldithiocarbamato-S,S')antimony | TWA: 15 mg/m³ 8 hours. Form: Total dust<br>**ACGIH TLV (United States, 6/2013).**<br>TWA: 2 mg/m³ 8 hours. Form: Respirable fraction<br>STEL: 10 mg/m³ 15 minutes. Form: Respirable fraction<br>**ACGIH TLV (United States, 6/2013).**<br>TWA: 0.5 mg/m³, (as Sb) 8 hours.<br>**OSHA PEL 1989 (United States, 3/1989).**<br>TWA: 0.5 mg/m³, (as Sb) 8 hours.<br>**OSHA PEL (United States, 2/2013).**<br>TWA: 0.5 mg/m³, (as Sb) 8 hours.<br>**NIOSH REL (United States, 10/2013).**<br>TWA: 0.5 mg/m³, (as Sb) 10 hours. |

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**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.

**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** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

| | | |
|---|---|---|
| **Appearance** | | |
| **Physical state** | : | Solid. [grease] |
| **Color** | : | Off-white. |
| **Odor** | : | Mineral oil. |
| **Odor threshold** | : | Not available. |
| **pH** | : | Not available. |
| **Melting point** | : | Not available. |
| **Boiling point** | : | >288°C (>550.4°F) |
| **Flash point** | : | Open cup: 204°C (399.2°F) [Cleveland.] |
| **Evaporation rate** | : | <0.01 (butyl acetate = 1) |
| **Flammability (solid, gas)** | : | Not available. |
| **Lower and upper explosive (flammable) limits** | : | Lower: 0.9%<br>Upper: 7% |
| **Vapor pressure** | : | <0.0013 kPa (<0.01 mm Hg) [room temperature] |
| **Vapor density** | : | >5 [Air = 1] |
| **Relative density** | : | 0.95 [Water = 1] |
| **Solubility** | : | Insoluble in the following materials: cold water and hot water. |
| **Solubility in water** | : | Not available. |
| **Partition coefficient: n-octanol/water** | : | Not available. |
| **Auto-ignition temperature** | : | Not available. |
| **Decomposition temperature** | : | Not available. |
| **SADT** | : | Not available. |
| **Viscosity** | : | Kinematic (40°C (104°F)): 1.35 to 1.51 $cm^2/s$ (135 to 151 cSt) |

## 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.<br><br>Under normal conditions of storage and use, hazardous polymerization will not occur. |
| **Conditions to avoid** | : | Keep away from heat, sparks and flame. Keep away from all sources of ignition. |
| **Incompatible materials** | : | Reactive or incompatible with the following materials: oxidizing materials and acids.<br>Incompatibility: Chlorine |
| **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 heavy naphthenic | LD50 Oral | Rat | >5000 mg/kg | - |
| Distillates (petroleum), hydrotreated light naphthenic | LD50 Oral | Rat | >5000 mg/kg | - |
| tris(dipentyldithiocarbamato-S,S')antimony | LD50 Dermal | Rabbit | >16000 mg/kg | - |
| | LD50 Oral | Rat | >16400 mg/kg | - |

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | Skin - Severe irritant | Rabbit | - | 500 milligrams | - |
| zinc oxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary** : The mineral oils in the product contain < 3% DMSO extract (IP 346).

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

| Name | Result |
|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | ASPIRATION HAZARD - Category 1 |
| Distillates (petroleum), hydrotreated light naphthenic | ASPIRATION HAZARD - Category 1 |

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

# Section 11. Toxicological information

**Skin contact** : Defatting to the skin. May cause skin dryness and irritation.

**Ingestion** : No known significant effects or critical hazards.

## Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking

**Ingestion** : No specific data.

## 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** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

## Numerical measures of toxicity

### Acute toxicity estimates

| Route | ATE value |
|---|---|
| Oral | 64701.2 mg/kg |
| Inhalation (dusts and mists) | 194.1 mg/l |

# Section 12. Ecological information

## Toxicity

## Section 12. Ecological information

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| zinc oxide | Acute EC50 0.042 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata - Exponential growth phase | 72 hours |
| | Acute LC50 98 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 1.1 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Chronic NOEC 0.017 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata - Exponential growth phase | 72 hours |

### Persistence and degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| zinc oxide | - | 60960 | high |

### Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

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

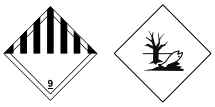
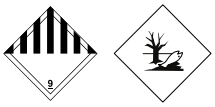
## Section 13. Disposal considerations

**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. 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 | IMDG | IATA |
|---|---|---|---|
| **UN number** | Not regulated. | UN3077 | UN3077 |
| **UN proper shipping name** | - | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, tris (dipentyldithiocarbamato-S,S') antimony). Marine pollutant (zinc oxide, tris (dipentyldithiocarbamato-S,S') antimony) | Environmentally hazardous substance, solid, n.o.s. (zinc oxide, tris (dipentyldithiocarbamato-S,S') antimony) |
| | | | |

## Section 14. Transport information

| | | | |
|---|---|---|---|
| **Transport hazard class(es)** | - | 9  | 9  |
| **Packing group** | - | III | III |
| **Environmental hazards** | No. | Yes. | Yes. |
| **Additional information** | - | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.<br><br>**Emergency schedules (EmS)**<br>F-A, S-F<br><br>**Special provisions**<br>274, 335, 966, 967 | The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.<br>**Passenger and Cargo Aircraft**<br>Quantity limitation: 400 kg<br>Packaging instructions: 956<br>**Cargo Aircraft Only**Quantity limitation: 400 kg<br>Packaging instructions: 956<br>**Limited Quantities - Passenger Aircraft**Quantity limitation: 30 kg<br>Packaging instructions: Y956<br><br>**Special provisions**<br>A97, A158, A179 |

**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 Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.
**Clean Water Act (CWA) 307**: zinc oxide; tris(dipentyldithiocarbamato-S,S')antimony

**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**

No products were found.

# Section 15. Regulatory information

**SARA 304 RQ** : Not applicable.

**SARA 311/312**

**Classification** : Immediate (acute) health hazard

**Composition/information on ingredients**

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|---|---|---|---|---|---|---|
| Distillates (petroleum), hydrotreated heavy naphthenic | 60-100 | No. | No. | No. | Yes. | No. |
| Distillates (petroleum), hydrotreated light naphthenic | 30-60 | No. | No. | No. | Yes. | No. |
| zinc oxide | 1-5 | No. | No. | No. | Yes. | No. |
| tris(dipentyldithiocarbamato-S,S') antimony | 1-5 | No. | No. | No. | Yes. | No. |

**SARA 313**

| | Product name | CAS number | % |
|---|---|---|---|
| **Form R - Reporting requirements** | zinc oxide<br>tris(dipentyldithiocarbamato-S,S')antimony | 1314-13-2<br>15890-25-2 | 1-5<br>1-5 |
| **Supplier notification** | zinc oxide<br>tris(dipentyldithiocarbamato-S,S')antimony | 1314-13-2<br>15890-25-2 | 1-5<br>1-5 |

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: MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED LIGHT NAPHTHENIC; ZINC OXIDE FUME

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: MINERAL OIL (HIGHLY REFINED); OIL MIST, MINERAL; MINERAL OIL (HIGHLY REFINED); OIL MIST, MINERAL; ZINC OXIDE; ANTIMONY compounds

**Pennsylvania** : The following components are listed: ZINC OXIDE (ZNO); ANTIMONY COMPOUNDS

**California Prop. 65**

None of the components are listed.

# Section 16. Other information

**Hazardous Material Information System (U.S.A.)**

| | | |
|---|---|---|
| Health | * | 1 |
| Flammability | | 1 |
| Physical hazards | | 0 |

**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.**

**The customer is responsible for determining the PPE code for this material.**

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

# Section 16. Other information

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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.**

## History

| | | |
|---|---|---|
| **Date of issue/Date of revision** | : | 11/24/2014 |
| **Date of previous issue** | : | No previous validation |
| **Version** | : | 1 |
| **Prepared by** | : | IHS |
| **Key to abbreviations** | : | ATE = Acute Toxicity Estimate<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = Intermediate Bulk Container<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>UN = United Nations |
| **References** | : | HCS (U.S.A.)- Hazard Communication Standard<br>International transport regulations |

**Indicates information that has changed from previously issued version.**

## Notice to reader

**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.**