



# SAFETY DATA SHEET

<b>SECTION 1.0</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
--------------------	---

**Product Identifier**

UNINAP® 100 AC

**Other means of identification**

Base oil - unspecified; Distillates, petroleum, hydrotreated heavy naphthenic; Hydrotreated heavy naphthenic distillate, solvent extract, petroleum; Mineral oil, petroleum distillates, hydrotreated heavy naphthenic; Mineral oil, petroleum distillates, hydrotreated (severe) heavy naphthenic; Distillates (petroleum), hydro-treated heavy naphthenic; Hydrotreated heavy naphthenic distillate solvent extract (petroleum); OILS, MINERAL, HEAVY NAPHTHENIC, HYDROTREATED; OILS, NAPHTHENIC, HYDROGENATED; HYDROTREATED LIGHT PETROLEUM DISTILLATE

**Recommended use (identified)**

Petrochemical industry: Petroleum refining. Naphthenic Lubricant.

**Uses Advised Against**

None known.

**Manufacturer/Importer/Supplier/Distributor Information**

UniSource Energy, LLC.  
40 Shuman Blvd, Suite 290  
Naperville, IL 60563

**E-mail**

orders@unisource-energy.com

**Telephone number**

Phone: 630-470-6030 Fax: 630-470-6031

**Emergency telephone number**

UniSource Energy, LLC.  
1-800-444-5510

CHEMTREC  
1-800-424-9300

<b>SECTION 2.0</b>	<b>HAZARD(S) IDENTIFICATION</b>
--------------------	---------------------------------

**OSHA/HCS status**

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

**Classification of the substance or mixture**

ASPIRATION HAZARD - Category 1

**GHS label elements**

**Signal word**

Danger



# SAFETY DATA SHEET

**Hazard Statement**

May be fatal if swallowed and enters airways.

**Precautionary Statement**
**Prevention**

Not applicable

**Response**

IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting

**Storage**

Store locked up.

**Disposal**

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

**Supplemental Label Elements**

Avoid contact with skin and clothing. Wash thoroughly after handling.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**SECTION 3.0**
**COMPOSITION/INFORMATION ON INGREDIENTS**
**Substance/mixture**

Substance

**Chemical name**

Distillates (petroleum), hydrotreated light naphthenic.

**Other Means of Identification**

Base oil - unspecified; Distillates, petroleum, hydrotreated heavy naphthenic; Hydrotreated heavy naphthenic distillate, solvent extract, petroleum; Mineral oil, petroleum distillates, hydrotreated heavy naphthenic; Mineral oil, petroleum distillates, hydrotreated (severe) heavy naphthenic; Distillates (petroleum), hydro-treated heavy naphthenic; Hydrotreated heavy naphthenic distillate solvent extract (petroleum); OILS, MINERAL, HEAVY NAPHTHENIC, HYDROTREATED; OILS, NAPHTHENIC, HYDROGENATED; HYDROTREATED LIGHT PETROLEUM DISTILLATE

**CAS number/other identifiers**

Ingredient Name	%	CAS number
Distillates (petroleum), hydrotreated light naphthenic	100	64742-52-5

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 or the environment and hence require reporting in this section.**

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

**SECTION 4.0**
**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.



# SAFETY DATA SHEET

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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. 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. 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, acute and delayed****Potential acute health effects****Eye Contact**

No known significant effects or critical hazards.

**Inhalation**

No known significant effects or critical hazards.

**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

**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****Notes to physician**

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Immediate medical attention, special treatment**

No specific treatment.

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**See Toxicological Information (Section 11)**



# SAFETY DATA SHEET

<b>SECTION 5.0</b>	<b>FIRE-FIGHTING MEASURES</b>
--------------------	-------------------------------

**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.

**Hazardous thermal decomposition product**

Decomposition products may include the following materials: carbon dioxide, carbon monoxide

**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 and precautions for firefighters**

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

<b>SECTION 6.0</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
--------------------	------------------------------------

**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. Avoid breathing 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).

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

**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.



# SAFETY DATA SHEET

<b>SECTION 7.0</b>	<b>HANDLING AND STORAGE</b>
--------------------	-----------------------------

## Precautions for safe handling

### Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.

<b>SECTION 8.0</b>	<b>EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
--------------------	--

## Exposure controls

Component	Exposure Limits		
Distillates (petroleum), hydrotreated heavy naphthenic	<b>ACGIH TLV (United States, 3/2018)</b>	TWA	5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction
	<b>OSHA PEL (United States, 5/2018)</b>	TWA	5 mg/m <sup>3</sup> 8 hours.
	<b>NISOH REL (United States 10/2016)</b>	TWA	5 mg/m <sup>3</sup> 10 hours. Form: Mist
		STEL	10 mg/m <sup>3</sup> 15 minutes. Form: Mist

### Engineering measures

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.

### Personal protective equipment

#### Hygiene measures



# SAFETY DATA SHEET

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.

## **Eyeface 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

## **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.

## **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.

<b>SECTION 9.0</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
--------------------	---

<b>Physical state</b>	Liquid
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	165°C (329°F) [Cleveland Open Cup]
<b>Evaporation rate</b>	<0.0372 (butyl acetate = 1)
<b>Flammability (solid, gas)</b>	Not available
<b>Lower and upper explosive (flammable) limits</b>	Not available
<b>Vapor pressure</b>	0.0021 kPa (0.016 mmHg) @ room temperature
<b>Vapor density</b>	Not available
<b>Relative density</b>	0.9
<b>Solubility</b>	Insoluble in the following materials: cold water and hot water.
<b>Partition coefficient n-octanol/water</b>	Not available



# SAFETY DATA SHEET

<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available
<b>Viscosity, Kinematic</b>	0.187 to 0.2183 cm <sup>2</sup> /s (18.7 to 21.83 cSt) (40°C (104°F))
<b>Flow time (ISO 2431)</b>	Not available
<b>Pour Point</b>	-43°C (-45.4°F)

## SECTION 10.0

## 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 11.0

## TOXICOLOGICAL INFORMATION

### Acute toxicity

Product/ingredient name	Result	Species	Dose
Distillates (petroleum), hydrotreated heavy naphthenic	LC <sub>50</sub> Inhalation Dusts and mists	Rat	5.7 mg/l
	LD <sub>50</sub> Dermal	Rabbit	>2000 mg/kg
	LD <sub>50</sub> Oral	Rat	>5000 mg/kg

### Irritation/Corrosion

Not available

### Sensitization

Not available

### Mutagenicity

Not available

### Carcinogenicity

Not available

### Conclusion/Summary

The classification as a carcinogen need not apply as it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

### Reproductive toxicity

Not available



# SAFETY DATA SHEET

**Teratogenicity**

Not available

**Specific target organ toxicity (single exposure)**

Not available

**Specific target organ toxicity (repeated exposure)**

Not available

**Aspiration hazard**

ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure**

Routes of entry not anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Eye contact**

No known significant effects or critical hazards.

**Inhalation**

No known significant effects or critical hazards.

**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

**Short term exposure, Potential delayed effects**

Not available

**Long term exposure, Potential immediate effects**

Not available

**Long term exposure, 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.

**Teratogenicity**

No known significant effects or critical hazards.

**Developmental effects**

No known significant effects or critical hazards.

**Fertility effects**





# SAFETY DATA SHEET

No known significant effects or critical hazards.

## Numerical measures of toxicity

Route	ATE Value
Dermal	2500.01 mg/kg

<b>SECTION 12.0</b>	<b>ECOLOGICAL INFORMATION</b>
---------------------	-------------------------------

### Ecotoxicity

Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic	Acute EC <sub>50</sub> >100 mg/l	Algae	72 ours
	Acute EC <sub>50</sub> >100 mg/l	Crustaceans	48 hours
	Acute LC <sub>50</sub> >100 mg/l	Fish	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy naphthenic	-	-	Inherent

### Bioaccumulative potential

Not available.

### Soil/water partition coefficient (K<sub>oc</sub>)

Not available

### Other adverse effects

No known significant effects or critical hazards.

<b>SECTION 13.0</b>	<b>DISPOSAL CONSIDERATIONS</b>
---------------------	--------------------------------

### Disposal instructions

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.

<b>SECTION 14.0</b>	<b>TRANSPORT INFORMATION</b>
---------------------	------------------------------

DOT



# SAFETY DATA SHEET

**TDG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Special precautions for user** 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 Annex II of MARPOL, 73/78 and the IBC code**

Not available

<b>SECTION 15.0</b>	<b>REGULATORY INFORMATION</b>
---------------------	-------------------------------

**US Federal regulations**

**TSCA 8(a) CDR Exempt/Partial exemption:**

All components are listed or exempted.

**Clean Water Act (CWA) 307**

chrysene

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)**

Not 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.

**SARA 304 RQ**

Not applicable

**SARA 311/312**

**Classification**

ASPIRATION HAZARD - Category 1

**Composition/information on ingredients**

Name	%	Classification
Distillates (petroleum), hydrotreated heavy naphthenic	100	HNOC - Defatting irritant

**SARA 313**

Form R – Reporting Requirements	Product name	CAS Number	%
	Chrysene	218-01-9	0.00034



# SAFETY DATA SHEET

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.

## US State Regulations

### Massachusetts

The following components are listed: OIL MIST, MINERAL

### New York

None of the components are listed.

### New Jersey

The following components are listed: MINERAL OIL (HIGHLY REFINED); OIL MIST, MINERAL

### Pennsylvania

None of the components are listed.

### California

**Warning:** this product can expose you to Chrysene, which is known to the State of California to cause cancer.

For more information go to [www.P65Warnings.ca.gov](http://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
Chrysene	0.0034	Yes-	-

## International regulations

### National Inventory

<b>Australia</b>	All components are listed or exempted
<b>Canada</b>	All components are listed or exempted
<b>China</b>	All components are listed or exempted
<b>Europe</b>	All components are listed or exempted
<b>Japan (ENCS)</b>	All components are listed or exempted
<b>Japan (ISHL)</b>	Not determined.
<b>Malaysia</b>	All components are listed or exempted
<b>New Zealand</b>	All components are listed or exempted
<b>Philippines</b>	All components are listed or exempted
<b>Republic of Korea</b>	All components are listed or exempted
<b>Taiwan</b>	All components are listed or exempted
<b>Thailand</b>	Not determined.
<b>Turkey</b>	All components are listed or exempted
<b>United States</b>	All components are listed or exempted
<b>Viet Nam</b>	Not determined.

## SECTION 16.0

## OTHER INFORMATION

### Procedure used to derive the classification

Classification	Justification
Aspiration Toxicity, Category 1	Expert judgement

### Abbreviations



# SAFETY DATA SHEET

## Abbreviations

A1 = Known Human Carcinogen; A2 = Suspected Human Carcinogen; A3 = Animal Carcinogen; A4 = Not classifiable as a human carcinogen; ACGIH = American Conference of Governmental Industrial Hygienists; ADR = European Road Transport; AICS = Australia Inventory of Chemical Substances; AIHA = American Industrial Hygiene Association; ASTM = American Society of Testing and Materials; ATE = Acute Toxicity Estimation; AU = Australia; Australia AICS = Australian Inventory of Chemical Substances; Autoignition Temperature = The minimum temperature required to initiate combustion in air with no other source of ignition, BCF = Bioconcentration Factor; BEI = - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV, BEL = Biological exposure limits; BOD = Biochemical Oxygen Demand; BTEX = Benzene, Toluene, Ethylbenzene, Xylenes; bw = body weight; bw/day = body weight/day; C = Celsius, CA = Canada, Canada DSL = Domestic Substances List; Canada NDSL = Non-Domestic Substance List; CAS = Chemical Abstracts Service; CEFIC = European Chemical Industry Council; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; CLP = Classification Packaging and Labelling Regulation (Regulation (EU) No. 1272/2008; COC = Cleveland Open Cup; CN = China; China IECSC = Inventory of Existing Chemical Substances In China; CPR= Controlled Products Regulations; CSA = Chemical Safety Assessment; CSR = Chemical Safety Report; CWA = Clean Water Act; DEA – Drug Enforcement Administration; Delisted = Substances Delisted from Report on Carcinogens; DFG = Deutsche Forschungsgemeinschaft; DIN = Deutsches Institut für Normung; DMEL = Derived Minimal Effect Level; DNEL = Derived No Effect Level; DOT = Department of Transportation; DSL = Domestic Substances List (Canada); dw = dry weight; EC = European Commission; EC No. = European Community number; EC50 = Effective Concentration fifty; ECC = European Economic Community; ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals; ECHA = European Chemicals Agency; EC<sub>x</sub> = Effect Concentration associated with x% response; EINECS - European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EL50 = Effective Loading fifty; ENCS = Japan Existing and New Chemical Substances; EPA = Environmental Protection Agency; EPCRA = Emergency Planning and Community Right-to-Know Act of 1986 (USA); EU = European Union; EUH statement = CLP – specific Hazard statement: EWC = European Waste Code; F = Fahrenheit; Flash Point = Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air; fw = fresh water; FOSFA = The Federation of Oils, Seeds and Fats Associations; GHS = Globally Harmonized System of Classification and Labelling of Chemicals; GLP = Good Laboratory Practice; Group 1 = Carcinogenic to Humans; Group 2A = Probably Carcinogenic to Humans; Group 2B = Possibly Carcinogenic to Humans; Group 3 = Not Classifiable; HAPs = Hazardous Air Pollutants; HNOC = Hazards Not Otherwise Classified, IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IBC = Intermediate Bulk Container; IC<sub>50</sub> = Inhibitory Concentration fifty; ICAO = International Civil Aviation Organization; ICL = In Commerce List (Canada); IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life and Health; IL<sub>50</sub> = Inhibitory Level fifty; IMDG = International Maritime Dangerous Goods; IMO = International Maritime Organization; INSHT = National Institute for Health and Safety at Work; INV = Chinese Chemicals Inventory; IOPC = International Oil Pollution Compensation; IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables; IUB = International Union of Biochemistry and Molecular Biology; JP – Japan; , Kow = Octanol/water partition; KECL = Korean Existing and Evaluated Chemical Substances (Korea), Known = Known carcinogen; LC<sub>50</sub> = Lethal Concentration (gases) which kills 50% of the exposed animals, LD<sub>50</sub> = :Lethal Dose (solids & liquids) which kills 50% of the exposed animals; . LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading; LL<sub>50</sub> = Lethal Loading fifty; LEL = The lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.; LogPow = logarithm of the octanol/water partition coefficient; LOLI = List of Lists™ - ChemADVISOR's Regulatory Database; LRT = Lower Respiratory Tract, MARPOL = International Convention for the Prevention of Pollution from Ships; MARPOL 73/78 = International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978; MAK = Maximum Concentration Value in the Workplace; MEL = Maximum Exposure Limits; mg/m<sup>3</sup> = : Concentration expressed in weight of substance per volume of air, mg/kg = Quantity of material, by weight, administered to a test subject, based on their body weight in kg, MEPC = Marine Environment Protection Committee; MEX = NOM-002-SCT/2003 List of Hazardous Substances and materials Most Commonly Transported; MEXICO = Mexico Occupational Exposure Limits; mw = marine water; NDSL = Non-Domestic Substances List (Canada); NE = Not Established; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NOAEL = No Observed Adverse Effect Level; NOEC/NOEL = No Observed Effect Concentration / No Observed Effect Level; NTP = National Toxicology Program; NZ = New Zealand; NZIoC = New Zealand Inventory of Chemicals; OECD = Organization for Economic Co-operation and Development; OE-HPV = Occupational Exposure - High Production Volume; or = occasional release; OSHA = U.S. Occupational Safety and Health Administration; OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limits; PAH = Polycyclic Aromatic Hydrocarbon; PBT = Persistent, Bioaccumulative and Toxic; PEL = Permissible Exposure Limit (OSHA); PH= Philippines; PICCS = Philippines Inventory of Chemicals and Chemical Substances; ppm =



# SAFETY DATA SHEET

Concentration expressed in parts of material per million parts of air or water, PMCC = Pensky Martin Closed Cup; PNEC = Predicted No Effect Concentration; Present = Carcinogen or potential carcinogen to be identified under OSHA's Hazard Communication Standard; RCRA = Resource Conservation and Recovery; REACH = Registration Evaluation And Authorization Of Chemicals; RID = European Rail Transport; RRN = REACH Registration Number: Reasonably Anticipated = Reason Anticipated to be a Human Carcinogen; RQ = Reportable Quantity; RTECS = Registry of Toxic Effects of Chemical Substances®; RTK = Right To Know; SARA = Superfund Amendments and Reauthorization Act; S\* = Skin notation; SEN = Sensitizer notation. May reflect risk of dermal and/or inhalation sensitization (consult ACGIH documentation); SKIN\_DES = Skin Designation; Skin notation = Potential for cutaneous absorption; STEL = Short Term Exposure Limit (15 minutes); SCBA = Self-Contained Breathing Apparatus; SDWA = Safe Drinking Water Act; STOT = Specific Target Organ Toxicity, STEL = Short Term Exposure Limit (15 minutes); STOT = Specific Target Organ Toxicity; STV = Short Term Value (same as STEL); TDG Transportation of Dangerous Goods (Transport Canada); TDLo, = the lowest dose to cause a symptom, TSCA = Toxic Substance Control Act; TCLo = the lowest concentration to cause a symptom; TDo, LDLo, and LDo, or TC, TCo, LCLo, and LCo, the lowest dose (or concentration) to cause lethal or toxic effects, TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value (ACGIH); TRA = Targeted Risk Assessment; TSCA = Toxic Substances Control Act ; TWA = Time Weighted Average (8 hours); Under Consideration = Under Consideration by the National Toxicology Program; UEL = The highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.; UN = United Nations; URT = Upper Respiratory Track, US = United States; UVCB = Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials (UVCB Substance) on the TSCA Inventory vPvB = very Persistent and very Bioaccumulative; WHMIS = Worker Hazardous Materials Information System (Canada)

## Disclaimer

The information presented herein has been compiled from sources considered to be dependable and is accurate as of the date of preparation of this Safety Data Sheet. However, Seller does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license. All materials may present unknown hazards and should be used with caution. In addition, no responsibility can be assumed by the Seller for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the material. Seller assumes no responsibility for injury to Buyer or to third persons or any damage to any property. Buyer assumes all such risks.