

# SAFETY DATA SHEET

<b>SECTION 1.0</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
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**Product Identifier**

UNISHIELD® 62 TOM

**Other means of identification**

Premium Inhibited Insulating Oil (Type 2)

**Recommended use (identified)**

Electrical Insulating Oil

**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>
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**Classification of the substance or mixture**

Mixture

**OSHA/HCS status**

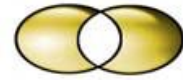
Aspiration hazard : Category 1

**GHS label elements**



**Signal word**

Danger



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## Hazard Statement

### Physical Hazards

Not classified as a physical hazard under GHS guidelines

### Health Hazards

May be fatal if swallowed and enters airways

### Environmental Hazards

Not classified as an environmental hazard under GHS guidelines

## Precautionary Statement

### Prevention

No precautionary phrases

### Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor

Do NOT induce vomiting

### Storage

Store locked up

### Disposal

Dispose of contents/ container to an approved waste disposal plant

Hazardous components which must be listed on the label:

Contains Distillates (petroleum), hydrotreated light paraffinic.

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

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Used oil may contain harmful impurities.

Not classified as flammable but will burn.

## SECTION 3.0

## COMPOSITION/INFORMATION ON INGREDIENTS

### Substance/mixture

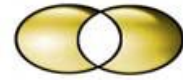
Mixture

### Chemical name

Highly refined mineral oil containing <3% (w/w) DSM extract, according to IP346

### CAS number/other identifiers

Ingredient Name	%	CAS number
Distillates (petroleum) hydrotreated light paraffinic	>98	64742-55-8
2,6 Di-tert-Butyl-p-Cresol (BHT)	<1	128-37-0
Acrylic Copolymer	<1	Proprietary
Modifier	<1	Proprietary



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<b>SECTION 4.0</b>	<b>FIRST AID MEASURES</b>
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## Description of necessary first aid measures

### Eye contact

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention

### Inhalation

No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

### Skin contact

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention

### Ingestion

If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

### Most important symptoms, acute and delayed

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Ingestion may result in nausea, vomiting and/or diarrhea.

### Indication of immediate medical attention and special treatment needed

#### Protection of first-aiders

When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

#### Immediate medical attention, special treatment

Treat symptomatically. Call a doctor or poison control center for guidance

<b>SECTION 5.0</b>	<b>FIRE-FIGHTING MEASURES</b>
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### Suitable extinguishing media

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

### Unsuitable extinguishing media

Do not use water in a jet.



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**Specific hazards arising from the chemical**

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.

**Specific extinguishing methods**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Special protective equipment and precautions for firefighters**

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

**SECTION 6.0****ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

**Environmental precautions**

Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Local authorities should be advised if significant spillages cannot be contained.

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

Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

**Additional advice**

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

**SECTION 7.0****HANDLING AND STORAGE****Technical measures**

Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols.

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.



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## Precautions for safe handling

Avoid prolonged or repeated contact with skin. Avoid inhaling vapor and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

## Avoidance of contact

Strong oxidizing agents.

## Conditions for safe storage, including any incompatibilities

### Other data

Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers.

### Packaging material

Suitable material: For containers or container linings, use mild steel or high density polyethylene.

Unsuitable material: PVC.

### Container advice

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

## SECTION 8.0

## EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure controls

Component	Exposure Limits	
	Distillates (petroleum) hydrotreated light paraffinic	ACGIH TLV
OSHA PEL		5 mg/m <sup>3</sup> (mist)
2.6 Di-tert-Butyl-p-Cresol (BHT)	ACGIH TLV	5 mg/m <sup>3</sup> 8 hrs.
	OSHA PEL	2 mg/m <sup>3</sup> 8 hrs.
	NIOSH TWA	10 mg/m <sup>3</sup> 10 hrs.

### Monitoring methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or con-tact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods  
<http://www.cdc.gov/niosh/>

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods



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<http://www.osha.gov/>

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances

<http://www.hse.gov.uk/>

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany

<http://www.dguv.de/inhalt/index.jsp>

L'Institut National de Recherche et de Sécurité, (INRS), France <http://www.inrs.fr/accueil>

## Engineering measures

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.

### Appropriate measures:

Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

### General Information:

Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## Personal protective equipment

### Respiratory protection

No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapors [Type A/Type P boiling point >65°C (149°F)].

### Hand protection

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

For continuous contact we recommend gloves with break-through time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-



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term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.

## Eye protection

If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

## Skin and body protection

Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.

## Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

## Environmental exposure controls

### General advice

Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being dis-charged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapor

## SECTION 9.0

## PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Liquid
<b>Color</b>	Clear
<b>Odor</b>	Slight hydrocarbon
<b>Odor threshold</b>	Data not available
<b>pH</b>	Not applicable
<b>Pour point</b>	< -33°C / -27°F
<b>Initial boiling point and boiling range</b>	> 280°C / 536°F estimated value(s)
<b>Flash point</b>	> 170°C / 338°F Method: COC
<b>Evaporation rate</b>	Data not available
<b>Flammability (solid, gas)</b>	Data not available
<b>Upper explosive (flammable) limits</b>	Typical 10 %(V)
<b>Lower explosive (flammable) limits</b>	Typical 1 %(V)
<b>Vapor pressure</b>	< 0.5 Pa (20°C / 68°F) estimated value(s)
<b>Relative vapor density</b>	>1 estimated value(s)



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<b>Relative density</b>	0.900 (15°C / 59°F)
<b>Density</b>	900 kg/m <sup>3</sup> (15°C / 59°F)
<b>Solubility in water</b>	negligible
<b>Solubility in other solvents</b>	Data not available
<b>Partition coefficient n-octanol/water</b>	P <sub>ow</sub> > 6 (based on information on similar product)
<b>Auto-ignition temperature</b>	> 320°C / 608°F
<b>Viscosity, dynamic</b>	Data not available
<b>Viscosity, kinematic</b>	9.0 - 11.0 mm <sup>2</sup> /s (40°C / 104 °F)
<b>Conductivity</b>	This material is not expected to be a static accumulator
<b>Decomposition temperature</b>	Data not available

## SECTION 10.0

## STABILITY AND REACTIVITY

### Chemical stability

Stable

### Possibility of hazardous reactions

Reacts with strong oxidizing agents.

### Conditions to avoid

Extremes of temperature and direct sunlight

### Incompatible materials

Strong oxidizing agents.

### Hazardous decomposition products

Hazardous decomposition products are not expected to form during normal storage

## SECTION 11.0

## TOXICOLOGICAL INFORMATION

Information given is based on data on the components of the base oil and the toxicology of similar products.

### Irritation/Corrosion

#### Skin

Not irritating to skin., Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

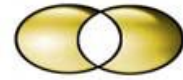
#### Eyes

Expected to be slightly irritating.

### Sensitization

#### Skin





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Not expected to be a skin sensitizer

## **Germ cell mutagenicity**

Not expected to be mutagenic

## **Carcinogenicity**

Not expected to be carcinogenic

### **IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### **ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### **OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### **NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

## **Reproductive toxicity**

Not expected to impair fertility., Not expected to be a developmental toxicant

## **Specific Target Organ Toxicity – single exposure**

Not expected to be a hazard.

## **Specific Target Organ Toxicity – repeated exposure**

Not expected to be a hazard.

## **Aspiration hazard**

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal

## **Information on the likely routes of exposure**

### **Potential acute health effects**

#### **Inhalation**

LC<sub>50</sub> (Rat): > 5 mg/l

Exposure time: 4 h

Remarks: Low toxicity by inhalation.

#### **Skin Contact**

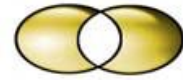
LD<sub>50</sub> (Rabbit): > 5,000 mg/kg

Remarks: Low toxicity:

#### **Oral**

LD<sub>50</sub> (rat): > 5,000 mg/kg

Remarks: Expected to be of low toxicity:



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## Further information

Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal., ALL used oil should be handled with caution and skin contact avoided as far as possible.

Slightly irritating to respiratory system

<b>SECTION 12.0</b>	<b>ECOLOGICAL INFORMATION</b>
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Information given is based on data on the components of the base oil and the toxicology of similar products

### Ecotoxicity

#### Toxicity to fish (Acute toxicity)

Expected to be practically nontoxic:  
LL/EL/IL<sub>50</sub> > 100 mg/l

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

Expected to be practically nontoxic:  
LL/EL/IL<sub>50</sub> > 100 mg/l

#### Toxicity to algae (Acute toxicity)

Remarks: Expected to be practically nontoxic:  
LL/EL/IL<sub>50</sub> > 100 mg/l

#### Toxicity to fish (Chronic toxicity)

NOEC/NOEL expected to be > 10 - <= 100 mg/l

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

NOEC/NOEL expected to be > 10 - <= 100 mg/l

#### Toxicity to bacteria (Acute toxicity)

Expected to be practically nontoxic:  
LL/EL/IL<sub>50</sub> > 100 mg/l

### Persistence and degradability

#### Biodegradability

Expected to be inherently biodegradable

### Bioaccumulative potential

Has the potential to bioaccumulate

### Mobility in soil

Remarks: Liquid under most environmental conditions. If it enters soil, it will adsorb to soil particles and will not be mobile.

### Other adverse effects

No data available



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## Additional ecological information

Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential. Films formed on water may affect oxygen transfer and damage organisms. May cause physical fouling of aquatic organisms.

<b>SECTION 13.0</b>	<b>DISPOSAL CONSIDERATIONS</b>
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## Disposal instructions

### Waste from residues

Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Local regulations may be more stringent than regional or national requirements and must be complied with.

### Contaminated packaging

Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

<b>SECTION 14.0</b>	<b>TRANSPORT INFORMATION</b>
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### DOT (49 CFR Parts 171-180)

Not regulated as a dangerous good

### IATA-DGR

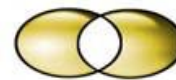
Not regulated as a dangerous good

### IMDG

Not regulated as a dangerous good

### Transport in bulk according to Annex II of MARPOL, 73/78 and the IBC code

Pollution category	Not applicable
Ship type	Not applicable
Product name	Not applicable
Special precautions	Not applicable



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## Special precautions for user

Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

## Additional information

MARPOL Annex 1 rules apply for bulk shipments by sea.

<b>SECTION 15.0</b>	<b>REGULATORY INFORMATION</b>
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Information given is based on data on the components of the base oil and the toxicology of similar products

## US Federal regulations

### OSHA Hazards

No OSHA hazards

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ., Our supplier of the base oil classifies their material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 311/312 Hazards

Immediate (Acute) Health Hazard

### SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

### SARA 313

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

### Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

### TSCA

All components listed.

## US State Regulations

### Pennsylvania Right To Know

Distillates (petroleum), hydrotreated light paraffinic 64742-55-8

### California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other re-productive harm.



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The components of this product are reported in the following inventories:

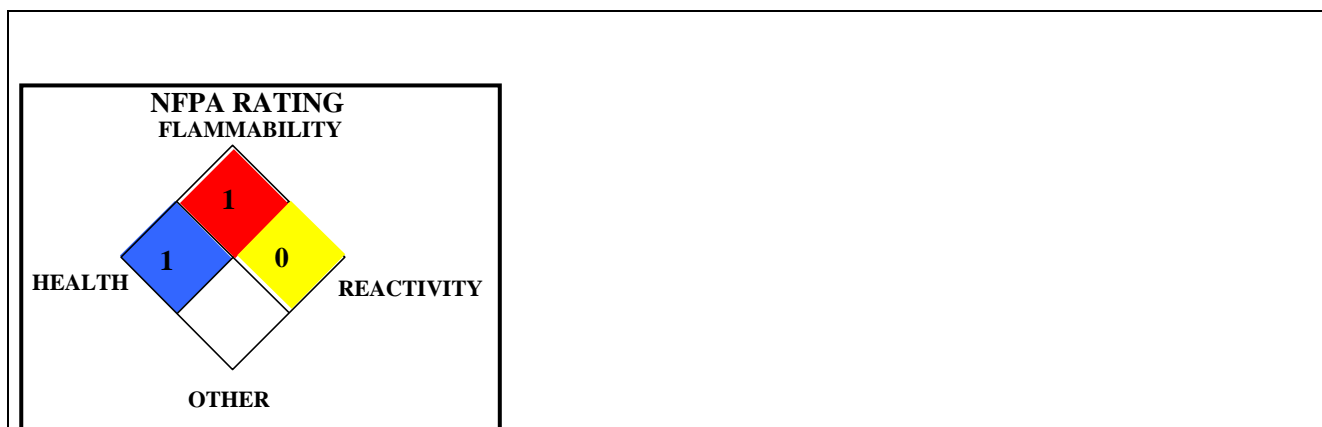
**EINECS**

All components listed or polymer exempt.

**DSL**

All components listed

<b>SECTION 16.0</b>	<b>OTHER INFORMATION</b>
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## Abbreviations

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = European Road Transport; AICS = Australia Inventory of Chemical Substances; ASTM = American society of Testing and Materials; ATE = Acute Toxicity Estimation; AU = Australia; 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; C = Celsius, CA = Canada, 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; CPR= Controlled Products Regulations; CWA = Clean Water Act; DEA – Drug Enforcement Administration; 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); EC = European Commission; EC50 = Effective Concentration fifty; ECC = European Economic Community; ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals; ECHA = European Chemicals Agency; 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; 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. GHS = Globally Harmonized System of Classification and Labelling of Chemicals; HAPs = Hazardous Air Pollutants; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IBC = Intermediate Bulk Container; IC50 = Inhibitory Concentration fifty; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to



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Life and Health; IL50 = Inhibitory Level fifty; IMDG = International Maritime Dangerous Goods; 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; JP = Japan; , Kow = Octanol/water partition; KECI = Korea Existing Chemicals Inventory, 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; MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution; 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, 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; NOEC/NOEL = No Observed Effect Concentration / No Observed Effect Level; NTP = National Toxicology Program; NZ = New Zealand; OE\_HPVS = Occupational Exposure - High Production Volume; OSHA = U.S. Occupational Safety and Health Administration; 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 = Concentration expressed in parts of material per million parts of air or water, PMCC = Pensky Martin Closed Cup; PNEC = Predicted No Effect Concentration; RCRA = Resource Conservation and Recovery; REACH = Registration Evaluation And Authorization Of Chemicals; RID = European Rail Transport; RRN = REACH Registration Number: RQ = Reportable Quantity; RTECS = Registry of Toxic Effects of Chemical Substances®; RTK = Right To Know; SARA = Superfund Amendments and Reauthorization Act; SKIN\_DES = Skin Designation; STEL = Short Term Exposure Limit (15 minutes); SCBA = Self-Contained Breathing Apparatus; SDWA = Safe Drinking Water Act; STOT = Specific Target Organ Toxicity, TDLo, = the lowest dose to cause a symptom, 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); 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; US = United States; UVCB = Unknown, of Variable Composition, or of Biological Origin; 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.