



SAFETY DATA SHEET

SECTION 1.0	PRODUCT AND COMPANY IDENTIFICATION
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Product Identifier

UNINAP® 100 YN

Other Means of Identification

Base oil

Product Type

Liquid

Recommended use (identified)

Distribution of substance - Industrial
 Explosives manufacture and use - Professional
 Formulation and (re)packing of substances and mixtures - Industrial
 Lubricants - Industrial
 Lubricants - Professional
 Manufacture of substance - Industrial
 Metal working fluids/rolling oils - Industrial
 Metal working fluids/rolling oils - Professional
 Polymer processing - Industrial
 Polymer processing - Professional
 Road and construction applications - Professional
 Rubber production and processing - Industrial
 Use as binders and release agents - Industrial
 Use as binders and release agents - Professional
 Use in agrochemicals - Professional
 Uses in Coatings - Industrial
 Uses in Coatings - Professional
 Water treatment chemicals - Industrial
 Water treatment chemicals - Professional

Uses Advised Against

This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier.

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

SECTION 2.0	HAZARD(S) IDENTIFICATION
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OSHA/HCS Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the Substance or Mixture

Not classified

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.

Hazards not Otherwise Classified

Air contaminants may be formed during use of the product.

SECTION 3.0

COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture

Substance

Chemical Name

Distillates (petroleum), hydrotreated heavy naphthenic

Other Means of Identification

Base oil

CAS Number

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

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



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Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist.

Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If victim is unconscious and: If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.

Skin contact

Wash with soap and water. Remove contaminated clothing and shoes. Handle with care and dispose in a safe manner. Seek medical attention if skin irritation, swelling or redness develops and persists. Accidental high-pressure injection through the skin requires immediate medical. Do not wait for symptoms to develop.

Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Potential acute health effects

Eye contact

Eye contact may cause redness and transient pain.

Inhalation

Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Skin contact

No known significant effects or critical hazards.

Ingestion

Few or no symptoms expected. If any, slight nausea might occur.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary

Notes to physician

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

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply. Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.

See toxicological information (Section 11)

SECTION 5.0

FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable Extinguishing Media

Do not use direct water jets on the burning product; they could cause splattering and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Specific Hazards Arising from the Chemical

In a fire or if heated, a pressure increase will occur, and the container may burst. This substance will float and can be reignited on surface water.

Hazardous Thermal Decomposition Products



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Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H₂S, SO_x (sulfur oxides) or sulfuric acid and unidentified organic and inorganic compounds.

Special Protective Actions for Firefighters

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 Firefighters

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

SECTION 6.0

ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

For non-emergency personnel

Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind/keep distance from source. In case of large spillages, alert occupants in downwind areas.

Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapors will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations.

Note: recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

For emergency personnel

Small spillages: normal antistatic working clothes are usually adequate.

Large spillages: full body suit of chemically resistant and thermal resistant material should be used.

Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: gloves made of PVA are not water-resistant and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated.

Respiratory protection: A half or full-face respirator with filter(s) for organic vapors (and when applicable for H₂S) a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.

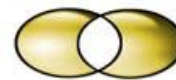
Environmental Precautions

Prevent product from entering sewers, rivers or other bodies of water. If necessary, dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations.

In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents.

If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.

Methods and Materials for Containment and Cleaning Up



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Small spill

Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.

Large spill

Large spillages may be cautiously covered with foam, if available, to limit vapor cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. See Section 8 for information on appropriate personal protective equipment.

SECTION 7.0

HANDLING AND STORAGE

Precautions for Safe Handling

General information

Obtain special instructions before use. Hazard of slipping on spilled product. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use and store only outdoors or in a well-ventilated area.

Avoid release to the environment.

Protective measures

Do not ingest. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing.

Prevent the risk of slipping. Take precautionary measures against static discharge. Avoid splash filling of bulk volumes when handling hot liquid product.

Note: See Section 8 for information on appropriate personal protective equipment. See section 13 for waste disposal information.

Advice on general occupational hygiene

Ensure that proper housekeeping measures are in place. Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash hands thoroughly after handling. Change contaminated clothes at the end of working shift. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage, including any incompatibilities

Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Store separately from oxidizing agents.

Recommended materials for containers, or container linings use mild steel, stainless steel. Not suitable: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.



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SECTION 8.0	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Occupational Exposure Limits

Ingredient name	Exposure limits	
Oil mist for Base oil component(s)	ACGIH TLV (United States, 3/2016).	TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction
	OSHA PEL 1989 (United States, 3/1989).	TWA: 5 mg/m ³ 8 hours. Form: Mist
	OSHA PEL (United States, 6/2016).	TWA: 5 mg/m ³ 8 hours.
	NIOSH REL (United States, 10/2016).	TWA: 5 mg/m ³ 10 hours. STEL: 10 mg/m ³ 15 minutes.

Recommended Monitoring Procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate Engineering Controls

Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.

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 Protective Measures, such as Personal Protective Equipment

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. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.

Eye/Face protection

Recommended: safety glasses with side-shields

Hand protection

4 - 8 hours (breakthrough time): nitrile rubber

Body protection

Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.

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

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. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.



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SECTION 9.0	PHYSICAL AND CHEMICAL PROPERTIES
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Physical state	Liquid
Color	Light yellow
Odor	Odorless/Light petroleum
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	-45°C (-49°F)
Initial boiling point and boiling range	>250°C (>482°F)
Flash point, Closed cup	>170°C (>338°F) [Pensky-Martens.]
Flash point, Open cup	>180°C (>356°F) [Cleveland Open Cup]
Burning time	Not applicable.
Burning rate	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	160 Pa @ 100 °C
Vapor density	Not available.
Relative density	Not available.
Solubility	Insoluble in water
Partition coefficient n-octanol/water	2 to 6
Auto-ignition temperature	>270°C (>518°F)
Decomposition temperature	>280°C (>536°F)
Kinematic Viscosity @ 104°F (40°C)	0.22 cm ² /s (22 cSt)

SECTION 10.0	STABILITY AND REACTIVITY
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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

Oxidizing agent.

Incompatible Materials

Keep away from extreme heat and oxidizing agents.

Hazardous Decomposition Products

Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H₂S, SO_x (sulfur oxides) or sulfuric acid and unidentified organic and inorganic compounds.

SECTION 11.0	TOXICOLOGICAL INFORMATION
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Acute toxicity

Ingredient name	Result	Species	Dose	Exposure	Remarks
Distillates (petroleum), hydrotreated heavy naphthenic	LC ₅₀ Inhalation Dusts and mists	Rat	>5,53 mg/l	4 hours	EMBSI 1988a (similar material)
	LD ₅₀ Dermal	Rabbit	>5000 mg/kg	-	API 1982 (similar material)
	LD ₅₀ Oral	Rat	>5000 mg/kg	-	API 1986a (similar material)

Conclusion/Summary

No known significant effects or critical hazards.

Irritation/Corrosion

Ingredient name	Result	Species	Score	Observation	Remarks
Distillates (petroleum), hydrotreated heavy naphthenic	Skin - Non-irritant to skin.	Rabbit	0 to 0.8	24 – 74 hrs.	UBTL 1984e (similar material)
	Eyes - Non-irritating to the eyes.	Rabbit	0.17 to 0.33	24 – 74 hrs.	UBTL 1984i (similar material)

Conclusion/Summary

Skin: No known significant effects or critical hazards.

Eyes: No known significant effects or critical hazards.

Respiratory: No known significant effects or critical hazards.

Sensitization

Ingredient name	Route of Exposure	Species	Results	Remarks
Distillates (petroleum), hydrotreated heavy naphthenic	Skin	Guinea pig	Not sensitizing	UBTL 1984j, k, (similar material)

Conclusion/Summary

Skin: No known significant effects or critical hazards.

Respiratory: No known significant effects or critical hazards.

Mutagenicity

Ingredient name	Test	Experiment	Result	Remarks
Distillates (petroleum), hydrotreated heavy naphthenic	OECD 473 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Subject: Mammalian-Animal Metabolic activation: With and without	Negative	-

Conclusion/Summary

No known significant effects or critical hazards.

Carcinogenicity

Ingredient name	Result	Species	Dose	Exposure	Remarks
Distillates (petroleum), hydrotreated heavy naphthenic	Negative - Dermal	Mouse - Female	0.22 to 0.25 ml	78 weeks; various	DOAK 1983, McKee 1989 (similar material)

Conclusion/Summary

The base oil in this product is based on a severely hydrotreated distillate; (pressure is above 800 psi at normal process temperature, see Federal Register vol. 50 No. 245 December 20, 1985). The product should not be regarded as a carcinogen.

Teratogenicity

Ingredient name	Result	Species	Dose	Exposure	Remarks
Distillates (petroleum), hydrotreated heavy naphthenic	Negative – Dermal	Rat	0 to 2000 mg/kg/day	-	-

Conclusion/Summary

Based on available data, the classification criteria are not met.



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Aspiration Hazard

Not available.

Information on the likely Routes of Exposure

Not available.

Potential Acute Health Effects
Eye contact

Eye contact may cause redness and transient pain.

Inhalation

Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Skin contact

No known significant effects or critical hazards.

Ingestion

Few or no symptoms expected. If any, slight nausea might occur.

Potential chronic health effects
Carcinogenicity

The base oil(s) in this product is based on a severely hydrotreated distillate. The product should not be regarded as a carcinogen.

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.

SECTION 12.0	ECOLOGICAL INFORMATION
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Toxicity

Ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated heavy naphthenic	Acute EL ₅₀ >10000 mg/l	Aquatic invertebrates	96 hrs.
	Acute LL ₅₀ >100 mg/l	Fish	96 hrs.
	Acute NOEL >100 mg/l	Algae	72 hrs.
	Chronic NOEL 10 mg/	Aquatic invertebrates	21 days

Conclusion/Summary

No known significant effects or critical hazards.

Persistence and Degradability
Conclusion/Summary

Inherently biodegradable.

Bioaccumulative Potential

Ingredient name	LogPow	BCF	Potential
Distillates (petroleum), hydrotreated heavy naphthenic	2 to 6	<500	Low

Conclusion/Summary

The product has a potential to bioaccumulate.

Mobility in Soil
Soil/water partition coefficient (KOC)

Not available.

Mobility



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High mobility in soil predicted, based on log Kow > 3.0.

Other Adverse Effects

Insoluble in water. Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

SECTION 13.0

DISPOSAL CONSIDERATIONS

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. 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 14.0

TRANSPORT INFORMATION

	DOT Classification	IMDG	IATA
UN Number	Not regulated.	Not regulated.	Not regulated.
UN Proper Shipping Name	-	-	-
Transport Hazard Class(es)	-	-	-
Packaging Group	-	-	-
Environmental Hazards	No.	No.	No.
Additional Information	-	-	-

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 I of MARPOL 73/78 and the IBC Code

Mineral oil.

SECTION 15.0

REGULATORY INFORMATION

US Federal Regulations

OSHA/HCS status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

HCS Classification

Not classified.

TSCA 8(a) CDR Exempt/Partial exemption



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This material is listed or exempted.

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

Not listed.

SARA 311/312 Composition/information on ingredients

No products were found.

State Regulations

California Proposition 65

Not listed.

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

National Inventory

Australia	This material is listed or exempted
Canada	This material is listed or exempted
China	This material is listed or exempted
Europe	This material is listed or exempted
Japan ENCS	This material is listed or exempted
Japan ISHL	This material is listed or exempted
Malaysia	This material is listed or exempted
New Zealand	This material is listed or exempted
Philippines	This material is listed or exempted
Republic of Korea	This material is listed or exempted
Taiwan	This material is listed or exempted
United States TSCA 8b	This material is listed or exempted

SECTION 16.0

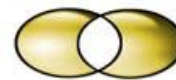
OTHER INFORMATION

Abbreviations



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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; 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, 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); dw = dry weight; EC = European Commission; EC50 = Effective Concentration fifty; ECC = European Economic Community; ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals; ECHA = European Chemicals Agency; EC_x = 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; 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; GHS = Globally Harmonized System of Classification and Labelling of Chemicals; GLP = Good Laboratory Practice; 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 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, LC₅₀ = Lethal Concentration (gases) which kills 50% of the exposed animals, LD₅₀ = :Lethal Dose (solids & liquids) which kills 50% of the exposed animals; . LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading; LL₅₀ = 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 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/m³ = : 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, 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; NOEC/NOEL = No Observed Effect Concentration / No Observed Effect Level; NTP = National Toxicology Program; NZ = New Zealand; 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; 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; S* = Skin notation; 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, 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); 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)



SAFETY DATA SHEET

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.