

SAFETY DATA SHEET

For Emergency Call: Searing Industries (909) 948-3030

Section 1: Identification

Product Name: Ornamental Squares and Rectangles, Mechanical Rounds and Specialty Ovals.
(Hot Rolled Pickled and Oiled Steel)

CAS Number: 65997-19-5

Manufacturer: Searing Industries

8901 Arrow Route • Rancho Cucamonga, CA 91730 • (909) 948-3030

5310 Clear Creek Pkwy. • Cheyenne, WY 82007 • (800) 874-4412

Section 2: Hazard(s) Identification

Classification

H317 - Sensitization, Skin - Category 1A

H351 – Carcinogenicity – Category 2

Label Elements



WARNING

May cause an allergic skin reaction. (H317)

Suspected of causing cancer. (H351)

CAUTION

Welding, fabricating or processing of these products may release metallic fumes and particles that can cause respiratory tract irritation and flu-like symptoms when inhaled or irritate the eyes.

Precautionary Statement(s)

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves when handling.

IF ON SKIN: Wash with plenty of water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If exposed or concerned: Get medical advice/attention.

Wear approved respiratory protection.

Section 3: Composition/Information on Ingredients

NAME	% WEIGHT	CAS NUMBER
Iron	>97	7439-89-6
Manganese	0.10-1.65	7439-96-5
Copper	0.35 max	7440-50-8
Nickel	0.10 max	7440-02-0
Chromium Alloy	0.20 max	7440-47-3
Vanadium	0.04 max	7440-62-2
Carbon	0.30 max	7440-44-0
Silicon	0.04 max	7440-21-3
Phosphorus	0.025 max	7723-14-0
Sulfur	0.025 max	7704-34-9
Molybdenum	0.060 max	7439-98-7
Aluminum	0.08 max	7429-90-5
Columbium	0.070 max	7440-03-1
Tin	0.020 max	7440-31-5
Nitrogen	0.012 max	7727-37-9
Titanium	0.080 max	7440-32-6
Calcium	0.006 max	7440-70-2
Boron	0.005 max	7440-42-8

Section 4: First-Aid Measures

EYES: If irritation or redness develops from dust exposure, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

SKIN: First aid is not normally required. However, it is good practice to wash any material from the skin.

INHALATION: First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek immediate medical attention.

INGESTION: First aid is not normally required. However, if dust is swallowed and symptoms develop, seek medical attention.

Section 5: Fire-Fighting Measures

No unusual fire or explosive hazards are expected. However, dust powder or fumes are flammable or explosive when exposed to heat or flames. For fires involving powder or dust, use dry chemicals, sand, earth, water spray or regular foam.

NFPA Fire Rating	Health Hazard	0
	Flammability	0 (2*)
	Reactivity	0

Key: Least = 0, Slight = 1, Moderate = 2, High = 3, Extreme = 4

*If dust is formed

Section 6: Accidental Release Measures

These products are in solid form. A spill or catastrophic release to the environment of any of the constituents is not possible.

Section 7: Handling and Storage

These products tolerate a wide variety of indoor and outdoor storage conditions without creating any health or environmental hazards.

These products will react with strong acids resulting in the release of flammable hydrogen gas.

Section 8: Exposure Controls/Personal Protection

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Particulates, not otherwise specified if generated	10 mg/m ³ total 3 mg/m ³ respirable	None	15 mg/m ³ total 5 mg/m ³ respirable	None
Chromium Alloy	0.5 mg/m ³	None	1 mg/m ³	None
Iron (oxide dust & fume)	5 mg/m ³ - respirable	None	10 mg/m ³	None
Manganese	0.02 mg/m ³ - respirable 0.1 mg/m ³ - inhalable	None	None	5 mg/m ³ (CEILING)
Nickel	1.5 mg/m ³ 0.2 mg/m ³ (insoluble)	None	1 mg/m ³	None

PERSONAL PROTECTION:

RESPIRATORY: NIOSH/MSHA-approved dust and fume respirators should be used to avoid excessive inhalation of particulate. Appropriate respirator selection depends on the magnitude of exposure.

SKIN: Protective gloves should be worn as required for welding, burning, or handling operations.

EYE: Use safety glasses or goggles for welding, burning, sawing, brazing, grinding, or machining operations.

VENTILATION: Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding, or machining to prevent excessive dust or fume exposure.

Section 9: Physical and Chemical Properties

Appearance: Metallic gray

Upper/Lower flammability or explosive limits: Will not combust

Odor: Odorless

Vapor pressure: Not applicable

Physical State: Solid

Melting Point: 2750°F

Solubility in water: Insoluble

Specific Gravity: 7.85

Section 10: Stability and Reactivity

Stability: Stable under normal conditions of storage and handling.

Conditions to avoid: Storage near strong oxidizers.

Incompatibility: Avoid contact with strong oxidizers.

Hazardous Decomposition Products: Thermal decomposition may release hazardous metal fumes.

Hazardous Polymerization: Not applicable.

Section 11: Toxicological Information

Information on the Toxicological Effects of Substances / Mixture

<u>Acute Toxicity</u>	<u>Hazard</u>	<u>LC50/LD50 Data</u>
Inhalation	Non-hazardous	LC50>5 mg/l (dust)
Skin Absorption	Non-hazardous	LD50>2000 mg/kg
Ingestion	Non-hazardous	LD50>5000 mg/kg

Note: Steel products, under normal conditions, do not present an inhalation, ingestion, or skin hazard. However, operations such as welding, grinding, sawing and burning, which may cause airborne particulates or fume formation, may present a health hazard.

Skin Corrosion / Irritation: Contact with dusts or particulates produced by cutting, welding, or grinding may be abrasive and cause mild irritation to the skin. Particulates may cause a red-brown pigmentation of the skin following repeated exposure.

Serious Eye Damage / Irritation: Contact with dusts or particulates produced by cutting, welding or grinding may be abrasive and cause irritation to the eyes and cause stinging, watering and redness.

Signs and Symptoms: Effects of overexposure may include irritation of the nose, throat, and digestive tract.
Respiratory Sensitization: Not expected to be a respiratory sensitizer.

Cancer: No information available on the cancer hazard of this material. However, nickel, a component, has been identified as a cancer hazard.

Reproductive Toxicity: No Information available on the reproductive hazard of this material. However, manganese, a component, has demonstrated some effects on the male reproductive system. These effects are not sufficient enough to classify the material as a reproductive hazard.

Specific Target Organ Toxicity (Single Exposure): Not expected to cause effects from single exposure.

Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ effects from repeated exposure. Although Nickel has effects on the respiratory system, it is in this material below 1%.

Aspiration Hazard: Not applicable.

Section 11 continued

Manganese CAS # 7439-96-5

Repeated administration of manganese resulted in limited evidence of male reproductive effects in laboratory animals. The adverse effects included decreased spermatids, spermatocytes and degeneration of seminiferous tubules. Chronic administration of certain inorganic manganese salts has resulted in limited evidence of central nervous system effects in laboratory animals. The effects included degenerative changes in basal ganglionic cells. These effects do not meet the criteria for classifying it as a reproductive toxicant.

Nickel CAS # 7440-02-0

There is limited evidence in animals for the carcinogenicity of metallic nickel, nickel monoxides, nickel hydroxides and crystalline nickel sulfides, and limited evidence in animals for other nickel compounds (e.g., alloys, arsenides and nickel carbonyl). Occupational exposure has been associated with cancer of the lung and nasal cavity. Nickel and nickel compounds have been identified as carcinogens by NTP and IARC.

Welding Fumes

Welding fumes may be different in composition from the original welding product, with the chief component being ordinary oxides of metal being welded. Chronic health effects (including cancer) have been associated with the fumes and dusts of individual component metals, and welding fumes as a general category have been listed by IARC as a carcinogen. There is also limited evidence that welding fumes may cause adverse reproductive and fetal effects. Evidence is stronger where welding materials contain known reproductive toxicants.

This material/product contains chemicals known to the State of California to cause cancer and/or reproductive toxicity that may be released during welding.

Section 12: Ecological Information

This material is not classified as hazardous to the aquatic environment. Components greater than or equal to 1% are not classified as hazardous.

Section 13: Disposal Considerations

The generator of waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

These products, as well as any scrap material generated from their use, are usually recycled and reused. This material, if discarded as produced, is considered to be non-hazardous under RCRA. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Section 14: Transportation Information

Transportation of these products is not regulated under the U.S. Department of Transportation Hazardous Materials Regulations, or by the United Nations Recommendations on the Transport of Dangerous Goods.

Section 15: Regulatory Information

Component	TSCA inventory	DSL	SARA 313 (Deminimis)	SARA 302	SARA 304	CERCLA RQ	CAA 112(r)	CA Prop 65
Aluminum	X	X	X (1%)	---	---	---	---	---
Carbon	X	X	---	---	---	---	---	---
Chromium Alloy	X	X	X (1%)	---	X	5000	X as Chromium Compounds	---
Columbium	X	X	---	---	---	---	---	---
Copper	X	X	X (1%)	---	X	5000	---	---
Iron	X	X	---	---	---	---	---	---
Manganese	X	X	X (1%)	---	---	---	X as Manganese Compounds	---
Molybdenum	X	X	---	---	---	---	---	---
Nickel	X	X	X (0.1%)	---	X	100	X as Nickel Compounds	X
Nitrogen	X	X	---	---	---	---	---	---
Phosphorus	X	X	X (1%)	X	X	1	X	---
Silicon	X	X	---	---	---	---	---	---
Sulfur	X	X	---	---	---	---	---	---
Tin	X	X	---	---	---	---	---	---
Titanium	X	X	---	---	---	---	---	---
Vanadium	X	X	*X (1%)	---	---	---	---	---

*Except when used in alloys

⚠️ WARNING: This product can expose you to chemicals including nickel, which is known to the State of California to cause cancer, and chromium (hexavalent compounds) from welding fumes, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Sections 311/312: This product has been reviewed according to the EPA “Hazard Categories” promulgated under Sections 311 and 312 of SARA Title III and is considered, under applicable definitions, to meet the following categories:

Acute: No Chronic: Yes Fire: No Pressure Hazard: No Reactivity: No

This material has not been identified as a carcinogen by NTP, IARC or OSHA.

U.S. FEERAL REGULATIONS:

OSHA: These products are not classified as Hazardous Substances under 29 CFR 1900.1200

TSCA: All ingredients appear on inventory.

CERCLA: While alloys are listed, a release above reportable thresholds is unlikely.

SARA TITLE III, Sections 302, 311/312: Not applicable to these products.



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Section 15 Continued

These products contain toxic chemicals which are subject to the reporting requirements of **Section 313** of **SARA TITLE III** of 1986 and **40CFR part 372**. The following chemicals contained in this material are subject to the reporting requirements of Section 313:

Chemical	CAS Number	Typical Weight Percentage
Aluminum	7429-90-5	0.08 max
Chromium Alloy	7440-47-3	0.20 max
Copper	7440-50-8	0.35 max
Manganese	7439-96-5	0.10-1.65
Nickel	7440-02-0	0.10 max
Phosphorus	7723-14-0	0.025 max
Vanadium	7440-62-2	0.04 max

Section 16: Documentary Information

Issue Date: February 11, 2022

Previous Issue Date: January 27, 2021

Reason for Revision: Periodic review. No major changes.

This product is typically coated with an oil to prevent oxidation. Hazards associated with exposure to the oil are not covered on this SDS. An accompanying SDS specific to the hazards associated with the oil must be used with this SDS. If the oil SDS is not included with this SDS, contact Searing Industries for a copy of the oil SDS.

Lead, cadmium, mercury, chromium VI, PBB' or PBDE's are not present. All manufactured Hot Rolled Pickled products are ROHS, REACH and LBC (Living Building Challenge) compliant. No 3TG (3TG = Tin, tungsten, tantalum, gold) elements are sourced, required, or contained necessary to the manufacture of Hot Rolled Pickled products.

The information in this document is believed to be correct as of the date issued. However, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information or the product, the safety of this product, or the hazards related to its use. This information and the product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

Section 1: Identification

Product Name: Rustilo DW 90 HF

SDS #: 468914

Historic SDS #: 09081

Code: 468914-US03

Product Use: Corrosion preventative. For specific application advice see appropriate Technical Data Sheet or consult the company representative.

Manufacturer: Castrol Industrial North America, Inc.

150 W. Warrenville Road

Naperville, IL 60563

EMERGENCY SPILL INFORMATION: 1 (800) 424-9300 CHEMTREC (USA)

Section 2: Hazards Identification

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

Classification: ASPIRATION HAZARD - Category 1

Label Elements:



DANGER

May be fatal if swallowed and enters airways.

Precautionary Statements

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

Store locked up.

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

Hazards not otherwise classified: Defatting to the skin.

Section 3: Composition/Information on ingredients

Mixture of highly refined mineral oil additives.

Ingredient Name	CAS Number	Percentage
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	≥50 - ≤75
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	≥25 - ≤50
Calcium bis(dinonylnaphthalenesulphonate)	57855-77-3	≤5
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	≤3
(Z)-N-methyl-N-(1-oxo-9-octadecenyl)glycine	110-25-8	≤3
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	95-38-5	≤3

Section 3 Continued

2-(2-butoxyethoxy)ethanol

112-34-5

≤3

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 to the environment and hence require reporting in this section.

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

Section 4: First Aid Measures

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

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

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.

Protection of the 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.

Most important symptoms/effects, acute and delayed: See Section 11 for more detailed information on health effects and symptoms.

Notes to physician: Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspired on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

Specific treatments: No specific treatment.

Section 5: Fire Fighting Measures

In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray. Do not use water jet.

In a fire or if heated, a pressure increase will occur and the container may burst.

Combustion products may include the following: Carbon Dioxide, Carbon Monoxide, Sulfur Oxides, and Metal Oxide.

Swarf fires - Neat metal working oils may fume, thermally decompose or ignite if they come into contact with red hot swarf. To minimise the generation of red hot swarf ensure that a sufficient flow of oil is correctly directed to the cutting edge of the tool to flood it throughout cutting operations. As an additional precaution swarf should be regularly cleared from the immediate area to prevent the risk of fire. In a fire or if heated, a pressure increase will occur and the container may burst.

Combustion products may include the following: metal oxide/oxides carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide) sulfur oxides (SO, SO₂ etc.)

Section 5 Continued

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.

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6: Accidental Release Measures

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. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Contact emergency personnel.

Emergency Responders: Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit and chemical resistant boots.

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).

Containment and cleaning up

Small Spill: Stop leak if without risk. Move containers from spill area. Absorb with an inert 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. 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. Contaminated absorbent material may pose the same hazard as the spilled product. Dispose of via a licensed waste disposal contractor.

Section 7: Handling and Storage

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth. 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. Concentrations of mist, fumes and vapors in enclosed spaces may result in the formation of explosive atmospheres. Excessive splashing, agitation or heating must be avoided. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid, as can bacteria, and as a result may induce allergic and other skin reactions, especially if personal hygiene is inadequate.

General occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7 Continued

Storage: 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 and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8: Exposure Controls/Personal Protection

Occupational exposure limits

Ingredient Name	Exposure Limits
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	ACGIH TLV (United States). TWA: 5mg/m ³ 8 hours. Issued/ Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). TWA: 5mg/m ³ 8 hours. Issued/Revised: 6/1993
Distillates (petroleum), hydrotreated heavy naphthenic	ACGIH TLV (United States). TWA: 5mg/m ³ 8 hours. Issued/ Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). TWA: 5mg/m ³ 8 hours. Issued/Revised: 6/1993
Calcium bis(dinonylnaphthalenesulphonate)	None.
Distillates (petroleum), solvent-dewaxed light paraffinic	ACGIH TLV (United States). TWA: 5mg/m ³ 8 hours. Issued/ Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). TWA: 5mg/m ³ 8 hours. Issued/Revised: 6/1993
(Z)-N-methyl-N-(1-oxo-9-octadecenny)glycine	None.
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	None.
2-(2-butoxyethoxy)ethanol	ACGIH TLV (United States). TWA: 10 ppm 8 hours. Issued/ Revised: 3/2012 Form: Inhalable fraction and vapor

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organization for standards. Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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.

Section 8 Continued

Individual protection measures

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

Eye/face protection: Safety glasses with side shields.

Hand protection: Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves (Nitrile gloves). The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Body protection: Use of protective clothing is good industrial practice. 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. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

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: In case of insufficient ventilation, wear suitable respiratory equipment. For protection against metal working fluids, respiratory protection that is classified as “resistant to oil” (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m³), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m³). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9: Physical and Chemical Properties

Appearance

Physical State: Liquid

Color: Yellow. [Light]

Odor: Not available

Odor threshold: Not available

pH: Not available

Melting point: Not available

Boiling point: Not available

Flash point: Open cup: 168.3°C (334.9°F) [Cleveland]

Evaporation rate: Not available

Flammability: Not applicable. Based on – Physical state.

Section 9 Continued

Lower and upper explosive (flammable) limits: Not available

Vapor pressure:

Ingredient Name	Vapor Pressure at 20°C			Vapor Pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	<0.08	<0.011	ASTM D 5191			
Distillates (petroleum), hydrotreated heavy naphthenic	<0.08	<0.011	ASTM D 5191			
Distillates (petroleum), solvent-dewaxed light paraffinic	<0.08	<0.011	ASTM D 5191			
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	<0.01	<0.0013	OECD 104			
2-(2-butoxyethoxy)ethanol	0.02	0.0027				

Vapor density: Not available

Density: <1000 kg/m³ (<1 g/cm³) at 15°C

Solubility: Insoluble in water.

Partition coefficient: Not available.

n-octanol/water

Auto-ignition temperature:

Ingredient Name	°C	°F	Method
2-(2-butoxyethoxy)ethanol	210	410	DIN 51794

Decomposition Temperature: Not available.

Viscosity: Kinematic: 14mm²/s (14 cSt) at 40°C

VOC: 44.8 g/l

Particle characteristics

Median Particle Size: Not applicable.

Section 10: Stability and Reactivity

Reactivity: No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

Chemical Stability: The product is stable.

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

Conditions to avoid: Avoid all possible sources of ignition (spark or flame).

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials.

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

Section 11: Toxicological Information

Specific target organ toxicity (repeated exposure)

Name	Category	Route of Exposure	Target Organs
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	Category 2	Oral	Digestive system, thymus

Aspiration Hazard

Name	Result
Base oil – highly refined	Aspiration Hazard – Category 1

Section 11 Continued



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Routes of exposure: Routes of entry anticipated: Dermal, Inhalation.

Potential Acute Health Effects

Eye contact: No known significant effects or critical hazards.

Skin contact: No known significant effects or critical hazards.

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

Ingestion: Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact: No specific data.

Skin contact: Adverse symptoms may include irritation, dryness, and cracking.

Inhalation: No specific data.

Ingestion: Adverse symptoms may include nausea or vomiting.

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

Short Term Exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long Term Exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects

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: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute Toxicity Estimates

Route	ATE Value
Oral	50005 mg/kg
Inhalation	150.01 mg/l

Section 12: Ecological Information

Toxicity: No testing has been performed by manufacturer.

Persistence and degradability: Expected to be biodegradable.

Bioaccumulative potential: Not available

Mobility in soil

Soil/water partition coefficient (Koc): Not available

Mobility: Non-volatile. Liquid. Insoluble in water.

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

Section 13: Disposal Considerations

Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14: Transport Information

	DOT Classification	TDG Classification	IMDG	IATA
UN Number	Not Regulated	Not Regulated	Not Regulated	Not Regulated
UN Proper Shipping Name	-	-	-	-
Transport Hazard Class	-	-	-	-
Packing Group	-	-	-	-
Environmental Hazards	No	No	No	No
Additional Information	-	-	-	-

Special precautions for user: Not Available

Transport in bulk according to IMO instruments: Not available

Section 15: Regulatory Information

U.S. Federal regulations

United States Inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304

Composition/information on ingredients: No products were found.

SARA 311/312

Classification: ASPIRATION HAZARD – Category 1

SARA 313

	Product Name	CAS Number	Concentration
Form R – Reporting Requirements	2-(2-butoxyethoxy)ethanol	112-34-5	1
Supplier Notification	2-(2-butoxyethoxy)ethanol	112-34-5	1

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

State regulations

Massachusetts: The following components are listed: OIL MIST, MINERAL; OIL MIST, MINERAL; MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED LIGHT PARAFFINIC

New Jersey: The following components are listed: GLYCOL ETHERS

Pennsylvania: None of the components are listed.

Section 15 Continued

California Prop. 65: This product does not require a Safe Harbor warning under California Prop. 65.

Other regulations

Australia inventory (AICS): All components are listed or exempted.

Canada inventory: At least one component is not listed in DSL but all such components are listed in NDSL.

China inventory (IECSC): All components are listed or exempted.

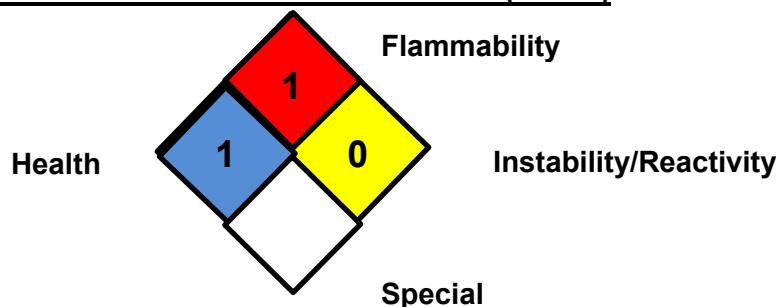
Japan inventory (ENCS): All components are listed or exempted.

Korea inventory (KECI): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): Not determined.

REACH Status: For the REACH status of this product, please consult your company contact, as identified in Section 1.

Section 16: Other Information**National Fire Protection Association (U.S.A.)****History**

Date of issue: 06/24/2022

Date of previous issue: 04/06/2022

Key to abbreviations: ACGIH = American Conference of Industrial Hygienists

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS Number = Chemical Abstracts Service Registry Number

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OEL = Occupational Exposure Limit

SDS = Safety Data Sheet

STEL = Short term exposure limit

TWA = Time weighted average

UN = United Nations

UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1



October 20, 2023

Section 16 Continued

Notice to reader

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