

SAFETY DATA SHEET

May be used to comply with Regulation (EU) No. 2015/830. Standards must be consulted for specific requirements.

Revision Date: 2018-11-12

SECTION 1 — IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product Name: Reztore® Antistatic Coating

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

Identified use: Topical Antistat

1.3 Details of the supplier of the safety data sheet

Supplier: DESCO EUROPE
2A Dunhams Lane
Letchworth Garden City
Hertfordshire, SG6 1BE
+44 (0) 1462 672005

Email Address: Service@DescoEurope.com

1.4 Emergency telephone number

United Kingdom: +44 (0) 1462 672005

Office hours: 8:00 AM - 5:00 PM

SECTION 2 — HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Classification according to Regulation (EC) No 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

No data available

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Components	CAS No.	Concentration	Classification
2 - butoxyethanol	111-76-2	5 - 10 %	Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Acute Tox. 4 - H332
2,2' - oxybisethanol	111-46-6	< 1.0 %	Acute Tox. 4 - H302 STOT RE 2 - H373

SECTION 4 — FIRST AID MEASURES

4.1 Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Skin Contact	In case of contact, immediately flush with plenty of water. If irritation occurs and persists, get medical attention.
Ingestion	Rinse mouth. If you feel unwell, get medical attention.
Inhalation	Remove person to fresh air. If you feel unwell, get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5 — FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Unsuitable Extinguishing Methods	Do not use direct water stream. May spread fire.

5.2 Special hazards arising from the substance or mixture

Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn.

5.3 Advice for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep people away from and upwind of spill/leak. Material can create slippery conditions.

6.2 Environmental precautions

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

6.3 Methods and materials for containment and cleaning up

Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

6.4 Reference to other sections

See SECTION 13, Disposal Considerations, for information regarding the disposal of contained spills.

SECTION 7 — HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapors, mist or gas.

7.2 Conditions for safe storage, including any incompatibilities

Keep from freezing - product stability may be affected. STIR WELL BEFORE USE.

Storage temperature: 1°C - 49°C (34°F - 120°F)

Other data: Monomer vapors can be evolved when material is heated during processing operations.

See SECTION 8, for types of ventilation required.

7.3 Specific end uses

See Technical Data Sheet for further information

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Exposure limits are listed below, if they exist.

Components	Regulation	Type of listing	Value/Notation
2 - butoxyethanol	GB EH40	TWA	123 mg/m ³ 25 ppm
2,2' - oxybisethanol	GB EH40	TWA	101 mg/m ³ 23 ppm

8.2 Exposure controls

Technical Control: Use local exhaust, or other technology solutions to keep air levels below given or recommended limit values. If limit values are not present, good general ventilation should be sufficient. Local exhaustion may be required in some operations.

Individual protection measures

Eye/Face Protection

Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin Protection

No precautions other than clean body covering clothing should be needed.

Hand Protection

Chemical protective gloves is not needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.
In case of using gloves, use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Polyvinyl alcohol ("PVA").
In case of using gloves, use chemical resistant gloves classified according to standard SS-EN 374: Protective gloves against chemical and microorganisms.
In case of prolonged contact or repeated contact, it is recommended gloves with protection index grade 4 or higher (breakthrough time longer than 120 minutes according to standard SS-EN 374).
When only short-term contact is expected, it is recommended gloves with protective index class 1 or higher (breakthrough time longer than 10 minutes according to standard SS-EN 374).

Respiratory Protection

Respiratory protection should be worn as there is a risk of exposure above given or recommended Occupational Exposure Limits. If such limit values are not present, respiratory protection will cause effects such as respiratory irritation or discomfort, or when risk assessment indicates that this is required. Under most conditions, no respiratory protection should be required; If discomfort is experienced, use an approved respiratory protective device.
Use the following CE-approved filters: Filters against organic gases with prefilter to particles, type AP2.

Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Color:	Clear
Odor:	N/A
Odor Threshold:	No data available
pH:	6.5-7.5
Melting Point:	No data available
Boiling Point:	>200°F (93.3°C)
Flash Point:	Not applicable
Evaporation rate:	No data available

Flammability:	Not applicable
Upper flammability or explosive limits:	No data available
Lower flammability or explosive limits:	No data available
Vapor Pressure (mm Hg):	18.0
Vapor Density (air=1):	<1
Relative Density:	8.17 lbs./gal at 20°C
Specific Gravity (H2O = 1) :	1.0 - 1.2
Solubility:	Completely
Partition coefficient:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

9.2 Other information

VOC per Method 24 of EPA: 6% VOC by wt.

SECTION 10 — STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable product at normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Temperatures above 100°F (38°C) and below 34°F (1°C)

10.5 Incompatible materials

Avoid contact with: Strong acids. Strong oxidizers.

10.6 Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

SECTION 11 — TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Acute oral toxicity	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Based on information for component(s): LD50, Rat, > 5,000 mg/kg Estimated.
Acute dermal toxicity	Prolonged skin contact is unlikely to result in absorption of harmful amounts. Based on information for component(s): LD50, Rabbit, > 5,000 mg/kg Estimated.
Acute inhalation toxicity	Brief (minutes) exposure to vapor, mist or dust is not likely to cause adverse effects. The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

May cause moderate corneal injury.

Sensitization

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

For the component(s) tested: Did not cause cancer in laboratory animals.

Teratogenicity

For the component(s) tested: Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

For the component(s) tested: Did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity studies in animals were negative for component(s) tested.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Ethylene glycol monobutyl ether CAS No.: 111-76-2	Oral Toxicity	(Guinea Pig) LD ₅₀ = 1,400 mg/kg (Male Rat) LD ₅₀ = 1,746 mg/kg
	Skin Toxicity	(Rat) LD ₅₀ = 2,270 mg/kg (Rabbit) LD ₅₀ = 99-610 mg/kg (Guinea Pig) LD ₅₀ > 2,000 mg/kg
	Inhalation Toxicity	(Rat) LC ₅₀ = 700 ppm, 7 hrs, Vapor

SECTION 12 — ECOLOGICAL INFORMATION

12.1 Toxicity

Ethylene glycol monobutyl ether

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, 1,474 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 1,550 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

EbC50, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Biomass, 911 mg/l, OECD Test Guideline 201

Toxicity to bacteria

IC50, Bacteria, Growth inhibition, > 1,000 mg/l

Chronic aquatic toxicity

Chronic toxicity to fish

NOEC, *Danio rerio* (zebra fish), semi-static test, 21 d, > 100 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, *Daphnia magna* (Water flea), semi-static test, 21 d, Other, 100 mg/l

12.2 Persistence and degradability

Ethylene glycol monobutyl ether

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Pass

Biodegradation: 90.4 %

Exposure time: 28 d

Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 2.30 mg/mg

Chemical Oxygen Demand: 2.21 mg/g Dichromate

Biological oxygen demand (BOD)

Incubation Time	BOD
5 d	5.2 %
10 d	57 %
20 d	72.2 %

12.3 Bioaccumulative potential

Ethylene glycol monobutyl ether

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 0.81 Measured

Bioconcentration factor (BCF): 3.2

12.4 Mobility in soil

Ethylene glycol monobutyl ether

Potential for mobility in soil is high (Koc between 50 and 150).

Partition coefficient(Koc): 67 Estimated.

12.5 Results of PBT and vPvB assessment

The mixture contains no components that are considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and highly bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No relevant data found.

SECTION 13 — DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Coagulate the emulsion by the stepwise of Ferric Chloride and Lime. Remove the clear supernatant liquid and flush to a chemical sewer. Incinerate the solids and the contaminated material according to local and federal regulations.
---------	--

13.2 Additional information

None

SECTION 14 — TRANSPORT INFORMATION

Classification for ROAD AND RAILWAY TRANSPORT (ADR / RID)

14.1 UN Number	Not applicable
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not considered to be environmentally hazardous, based on available data.
14.6 Special precautions for user	No data available

Classification for SEA transport (IMO-IMDG)

14.1 UN Number	Not applicable
14.2 UN proper shipping name	Not regulated for transport
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not considered to be marine pollutant, based on available data.
14.6 Special precautions for user	No data available

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Consult IMO regulations before transporting ocean bulk.

Classification for AIR transport (IATA/ICAO)

14.1 UN Number	Not applicable
14.2 UN proper shipping name	Not regulated for transport
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	No data available

SECTION 15 — REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH Regulation (EC) No 1907/2006.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals. As of 2012-09-27 Desco Industries Inc. has completed an assessment of all of our products and is not under any obligation to register.

Seveso II - Directive 96/82/EC and its amendments:

Listed in Regulation: Not applicable.

15.2 Chemical Safety Assessment N/A

SECTION 16 — OTHER INFORMATION

Full H- (Hazard-) statements mentioned in sections 2 and 3

H302 - Harmful if swallow

H312 - Harmful in contact with skin

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H373 - May cause damage to organs through prolonged or repeated exposure if swallowed.

Classification and procedure used to derive classification from mixtures according to Regulation (EC) No 1272/2008

This product is not classified as dangerous according to EC criteria.

SDS Updated

2018-11-12

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; EC-Number - European Community number; GHS - Globally Harmonized System; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SDS - Safety Data Sheet; vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

OTHER INFORMATION: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.