Reztore® Antistatic Coating Application Instructions

Made in the United States of America

Figure 1. Reztore® Antistatic Coating
1 Quart (1 liter) Spray Bottle
2.5 Gallons (10 liters) Bag-in-Box

Description

Reztore® Antistatic Coating is a topical antistatic solution for use on dissipative and non-ESD surfaces. After Reztore® Antistatic Coating has been applied and the surface dries, an antistatic and protective static dissipative coating is left behind. The static dissipative coating will allow charges to drain off when grounded. The antistatic properties will reduce triboelectric voltage to under 200 volts. Reztore® Antistatic Coating will enhance existing electrical properties of ESD surfaces and give non-ESD surfaces electrical properties until the hard coat is worn away. Reztore® Antistatic Coating does not leave behind any harmful insulative barriers.

General Guidelines

Reztore® Antistatic Coating can be used on a variety of surfaces, especially surfaces used in a static sensitive environment. Surfaces include but are not limited to: rubber, vinyl and polyethylene table and floor mats, field service kits, laminated table tops, tote boxes, epoxy, painted surfaces, plexiglass, glass, metal, 3-ring binders, computer screens, computer keyboards, shelving, push carts, conveyor belts, etc practices)

Directions

Surfaces

Apply Reztore® Antistatic Coating to the entire surface to be treated using either the pump or trigger spray bottle. Use a lint-free cloth to wipe the surface evenly. For rough or porous surfaces two coats may be needed to obtain proper protection.

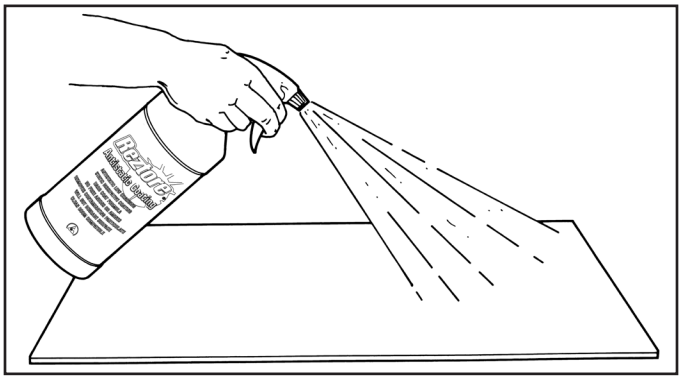

Figure 2. Apply Reztore® Antistatic Coating to the mat

Other Surfaces - Keyboards:
Dampen a lint-free cloth or a lint-free swab with Reztore® Antistatic Coating. Wipe surface to be protected using either the cloth or swab. The swab will work best for tight spots like between keyboard keys. Use the cloth to wipe the remaining surfaces of the keyboard or surface to be protected.

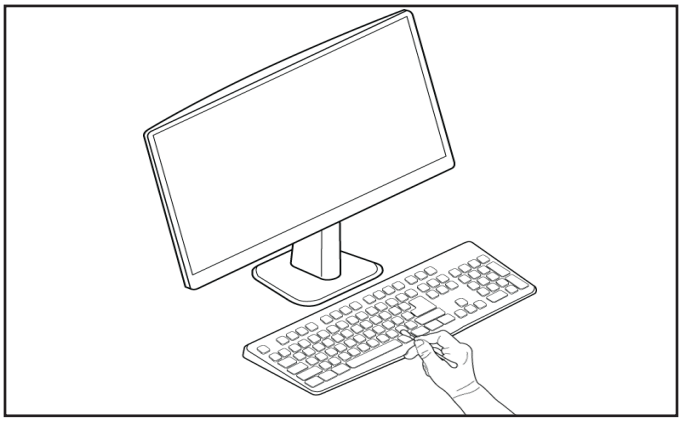

Figure 3. Clean a keyboard with Reztore® Antistatic Coating

When dry, Reztore® Antistatic Coating will leave a thin protective antistatic, as well as static dissipative coating on the surface. This enhances existing ESD surfaces and will give temporary electrical properties to insulative surfaces.

DESCO INDUSTRIES INC - 3651 Walnut Avenue, Chino, CA 91710 • (909) 627-8178 • Website: DescoIndustries.com

Specifications

Reztore® Antistatic Coating has zero ionic contamination, which will neither contaminate nor corrode sensitive components and assemblies.

Ion	Level (mg/L)	Limit of Detection (mg/L)
Bromide	<3	3
Chloride	<1	3
Fluoride	<0.5	0.5
Nitrate	0.5	0.5
Nitrite	<0.5	0.5
Ortho-phosphate	<5	5
Sulfate	<3	3

Meets conditions of clean room class 1 for above listed ion contaminants per FED-STD-209C.

Electrical Properties

Surface Resistance	1 x 10^6 to < 1 x 10^9 ohms per ANSI/ESD S4.1
Triboelectric Charge	<200 volts
Charge Decay	0.02 sec. FTMS 101C, Method 4046

Testing

It is recommended to test the surfaces after applying to ensure that all insulative areas have been coated. Desco Industries recommends Reztore® Surface & Mat Cleaner to thoroughly clean the surface before applying Reztore® Antistatic Coating. Reztore® Antistatic Coating is specifically designed to leave behind an antistatic as well as static dissipative coating of 10^9 ohms, to enhance and provide the static safe properties of the surface. Testing for either surface resistance point to point (RTT) or resistance to ground (RTG) will indicate if the surface is coated properly.

Field Test

For quick and easy verification of surface resistance we recommend the use of a megohmmeter. These are available from many Desco Industries companies. For testing of static fields, we recommend the use of a static field meter. These instruments are also available from many Desco Industries companies.

Storage

Reztore® Antistatic Coating does not have a set life span. The chemicals are not known to degrade over time when stored at the proper temperature conditions as stated in the Safety Data Sheet. We also recommend that the product be stored in its original container and be sealed when not in use.

RoHS, REACH, and Conflict Minerals Statement
See the Desco Industries RoHS, REACH, and Conflict Minerals Statement:
DescoIndustries.com/ROHS.aspx

Desco Industries Limited Warranty
See the Desco Industries Limited Warranty:
DescoIndustries.com/Warranty.aspx

Reztore® Antistatic Coating is available from these Desco Industries brands:

DESCO

for service and support in North America

1 Quart	10415
2.5 Gallons	10418

DESCO EUROPE

for service and support in United Kingdom and Europe

1 Litre	229014
10 Litres	229015

DESCO ASIA

for service and support in Asia

1 Liter	10415
10 Liters	10418

SAFETY DATA SHEET

May be used to comply with OSHA Hazcom 29 CFR 1910.1200, Reg. (EU) No.453/2010 and Japan JIS 7253-2012. Standards must be consulted for specific requirements.

Revision Date: 2018-07-09

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

1.1 Product identifiers

Product Name:	Reztore® Antistatic Coating
EC No.:	None
REACH Registration No.:	None
CAS No.:	None

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

Identified use: Antistatic coating

1.3 Details of the supplier of the safety data sheet

Manufacturer: DESCO INDUSTRIES INC

United States	**United Kingdom**	**Japan**
One Colgate Way	2A Dunhams Lane	661-1 Yachimata-ho
Canton, MA 02021	Letchworth Garden City	Yachimata-Shi
+1 781-821-8370	Hertfordshire, SG6 1BE	Chiba-Ken 289-1115
	+44 (0) 1462 672005	+81 43-309-4470

Email Address: Service@DescoIndustries.com

1.4 Emergency telephone number

United States:	+1 781-821-8370
United Kingdom:	+44 (0) 1462 672005
Japan:	+81 43-309-4470

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

SECTION 2 — HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Classification according to OSHA Hazcom 29 CFR 1910.1200, Regulation (EC) No 1272/2008, JIS 7252-2014

Acute Toxicity (Oral)	Category 4
Acute Toxicity (Dermal)	Category 4
Acute Toxicity (Inhalation: Vapors)	Category 4
Skin Corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

2.2 Label elements

Classification according to OSHA Hazcom 29 CFR 1910.1200, Regulation (EC) No 1272/2008, JIS 7252-2014

Hazard pictograms/Symbols:

Signal word: Warning

Hazard statements:

H302 Harmful if swallowed.
H312 Harmful in contact with skin
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

Precautionary statements:	**Prevention** P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. **Response** P305 + P351 + P338 + P337 + P313 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. P312 Call a POISON CENTER/doctor if you feel unwell.
2.3 Other hazards	N/A

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Components	CAS No.	%wt.	Classification
Ethylene glycol monobutyl ether	111-76-2	5 - 25%	**OSHA 29CFR 1910.1200:** Flammable liquids - Category 4 Acute tox. (Oral) - Category 4 Eye irritation - Category 2A STOT (Single) - Category 3 **Reg. (EC) No. 1272/2008:** Acute tox. (Oral) - Category 4 Acute tox. (Dermal) - Category 4 Acute tox. (Inhalation) - Category 4 Skin irritation - Category 2 Eye irritation - Category 2 **JIS 7252-2014:** Acute tox. (Oral) - Category 4 Acute tox. (Dermal) - Category 4 Acute tox. (Inhalation) - Category 4 Skin irritation - Category 2 Eye irritation - Category 2

SECTION 4 — FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact	Flush with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact	Wash with soap and water. If skin irritation occurs: Get medical advice/attention.
Ingestion	DO NOT induce vomiting, may cause damage to mouth, throat, or esophagus. Rinse mouth. Contact a physician.
Inhalation	Move subject to fresh air and keep at rest in a position comfortable for breathing

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5 — FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	The product is not flammable. Extinguish fire using media suitable for surrounding fire.
Unsuitable Extinguishing Methods	N/A

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

Move containers from fire area if it can be done without risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. In the event of fire wear self-contained breathing apparatus (SCBA).

SECTION 6 — ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wearing protective clothing, eye protection, and, inhalation protection.

6.2 Environmental precautions

Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

6.3 Methods and materials for containment and cleaning up

Soak up with sawdust, sand, or other absorbent material. Shovel or sweep up. Flush spill area with water.

6.4 Reference to other sections

See SECTION 13, Disposal Considerations, for information regarding the disposal of contained spills.
If Material is Released/Spilled: mop up immediately. Wet floor may present slip hazard.

SECTION 7 — HANDLING AND STORAGE

7.1 Precautions for safe handling

Use in well-ventilated areas; avoid breathing vapors. Keep containers closed when not in use. Avoid from freezing. For commercial and industrial use only.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature: Max. 49°C/120°F 1°C/34°F. Keep from freezing. Ensure the storage area is well ventilated.

7.3 Specific end uses N/A

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Ethylene glycol monobutyl ether CAS No.: 111-76-2	ACGIH NIOSH OSHA Z-1	TWA IDLH TWA	20 ppm 700 ppm 50 ppm (240 mg/m3)

8.2 Exposure controls

Ventilation	Provide general clean air dilution or local exhaust ventilation in volume and pattern to prevent air contaminant concentration build-up.

Individual protection measures

Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Protective Gloves	If there is potential for prolonged or repeated skin contact, wear gloves for the duration of anticipated exposure. **For EU:** 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).
Eye protection	Avoid contact with eyes. Use safety eye wear with splash guards or side shields that comply with ANSI Z87.1-1987. **For EU:** Safety glasses (with side shields) should be consistent with EN 166 or equivalent.
Other Protective Equipment	None normally required. If unable to avoid prolonged or repeated contact with skin, wear protective clothing.
Work/Hygienic Practices	Wash hands before eating, smoking, or using washroom facilities.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Color:	Clear
Odor:	N/A
Odor Threshold:	N/A
pH:	6.5-7.5
Melting Point:	N/A.
Boiling Point:	>200°F (93.3°C)
Flash Point:	Noncombustible
Evaporation rate:	N/A
Flammability:	N/A
Upper flammability or explosive limits:	N/A
Lower flammability or explosive limits:	N/A
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:	N/A
Auto-ignition temperature:	N/A
Decomposition temperature:	N/A
Viscosity:	N/A
Explosive properties:	N/A
Oxidizing properties:	N/A

9.2 Other information

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

SECTION 10 — STABILITY AND REACTIVITY

10.1 Reactivity

Stable product at normal conditions.

10.2 Chemical stability

Stable product at normal conditions.

10.3 Possibility of hazardous reactions

No further relevant information available.

10.4 Conditions to avoid

Temperatures above 120°F (49°C) and below 34°F (1°C)

10.5 Incompatible materials

Strong acids and oxidizing agents.

10.6 Hazardous decomposition products

Thermal decomposition may yield carbon monoxide.

SECTION 11 — TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Effects:

Eye Contact	May cause irritation of the connective tissue.
Skin Contact	Repeated or continuous contact may cause irritation of the skin.
Inhalation	Irritation of nose, throat, and lack of breath.

Acute Toxicity:

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	N/A
12.2 Persistence and degradability	N/A
12.3 Bioaccumulative potential	Not likely.
12.4 Mobility in soil	The product is aqueous and will be separated in aqueous conditions.
12.5 Results of PBT and vPvB assessment	N/A
12.6 Other adverse effects	N/A
12.7 Additional information	No environmental hazards have been reported or known.

SECTION 13 — DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	No special precautions. Dispose of according to all Federal, National and Local regulations.
13.2 Additional information	N/A

SECTION 14 — TRANSPORT INFORMATION

DOT (Department of Transportation)	Not regulated for transport
Classification for SEA transport (IMO-IMDG)	Not regulated for transport
Classification for AIR transport (IATA/ICAO)	Not regulated for transport
14.1 UN Number	None
14.2 UN proper shipping name	None
14.3 Transport hazard class(es)	None
14.4 Packing group	None
14.5 Environmental hazards	None
14.6 Special precautions for user	None

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

None

SECTION 15 — REGULATORY INFORMATION

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

Physical/Chemical Indication	Non-flammable

The below items are listed and subjected to the reporting requirements of the SARA Title III Section 313 Inventory of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR37.

CAS Number: 111-76-2 with maximum weight 25%

EINECS Status	All components are included in the EINECS Inventories.
California Proposition 65	This product is not subject to the reporting requirements under California's Proposition 65.
Pennsylvania (Worker and Community Right-To-Know Act)	Ethylene Glycol Monobutyl Ether (111-76-2)
WHIMIS	This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

15.2 Chemical Safety Assessment N/A

SECTION 16 — OTHER INFORMATION

HMIS RATING	Health 2, Reactivity 1, Flammability 1, Personal Protection B
NFPA RATING	Special Hazard: N/A, Health: 2, Flammability: 1, Instability: 1
SDS Updated	**2018-07-09**

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 suitableness and completeness of such information for his own particular use.