

Material Safety Data Sheet

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For updates please download from www.mgchemicals.com or fax requests to 1-800-708-9888

Section 1: Product Identification

MSDS Code: 8339A

Name: Conductive Coating

Related Part Numbers: 8339

Related Part Name: Rubber Keypad Repair Kit

Use: For repairing keypads on remote controls.

Section 2: Hazardous Ingredients

| CAS# | Chemical Name | Percentage by weight | ACGIH TWA | Osha Pel | Osha Stel |
|-----------|----------------------------------|----------------------|--------------------|--------------------|-----------|
| 7440-22-4 | Silver | 28-30% | 1mg/m ³ | 1mg/m ³ | N/E |
| 108-88-3 | Toluene | 6-7% | 50ppm | 100ppm | 150ppm |
| 123-86-4 | n-butyl acetate | 51-55% | 150ppm | 150ppm | 200ppm |
| 64-17-5 | Ethyl alcohol | 2-2.5% | 200ppm | 200ppm | 250ppm |
| 141-78-6 | Ethyl acetate | 1-1.5% | 400ppm | 400ppm | N/E |
| 110-43-0 | 2-heptanone | 2-2.5% | 50ppm | 100ppm | N/E |
| 110-19-0 | 2-methylpropyl ester acetic acid | 2-2.5% | 150ppm | 150ppm | N/E |

Section 3: Hazards Identification

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|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Eyes: | Liquid in contact with eyes may cause permanent eye damage. |
| Skin: | May cause skin irritation and possible pain and stinging if the skin is abraded. |
| Inhalation: | Solvents may cause respiratory tract irritation, headache, and possible dizziness. |
| Ingestion: | May cause respiratory and digestive tract irritation. |
| Chronic: | Prolonged and repeated exposure may cause dermatitis, defatting of the skin, liver and kidney damage, and adverse central nervous system effects. |

Section 4: First Aid Measure

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|--------------------|--------------------------------------------------------------------------------------|
| Eyes: | Remove contact lenses. Flush with water or saline. Get medical aid. |
| Skin: | Wash skin with large amounts of soap and water. Get medical aid if symptoms persist. |
| Inhalation: | Immediately remove from exposure to fresh air. Get medical aid. |
| Ingestion: | Do not induce vomiting. If conscious, give 1-2 glasses of water. Get medical aid. |

Section 5: Fire Fighting Measures

| | | | | | |
|----------------------------------|----------------------------------------------------------------------------|---------------------|-------|-------------------|--------|
| Autoignition Temperature: | 465°C | Flash Point: | -18°C | LEL / UEL: | 1 / 36 |
| Extinguishing Media: | Use water spray, dry chemical, carbon dioxide, or chemical foam. | | | | |
| General Information: | Will burn if involved in a fire. Flash back along vapor trail is possible. | | | | |

Section 6: Accidental Release Measures

Spill Procedure: Remove all sources of ignition. Provide adequate ventilation. Wear appropriate personal protection. Wipe up residue with paper towel and place in container. Wash spill area with soap and water.

Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Do not expose container to heat or flame.

Storage: Keep away from sources of ignition. Store in a cool, dry, well-ventilated area, away from incompatible substances. Keep from freezing.

Section 8: Exposure Controls

Routes of entry: Eyes, ingestion, inhalation, and skin.

Ventilation: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

Personal Protection: Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

Section 9: Physical and Chemical Properties

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|------------------------|--------|--------------------------|----------|-----------------------------|------------|--------------------------|----------------|
| Physical State: | Liquid | Odor: | Ethereal | Solubility in water: | Partial | Evaporation Rate: | Fast |
| Boiling Point: | 59°C | Specific Gravity: | 1.14 | Vapor Pressure: | 1PSI @21°C | Vapor Density: | 4.1 (Air=1) |
| | | | | | | | pH: N/A |

Section 10: Stability and Reactivity

Stability: Stable at normal temperatures and pressures.

Conditions to avoid: Temperatures over 40°C, ignition sources, and incompatible substances.

Incompatibilities: Alkali and alkaline earth metals, powdered aluminum, zinc, magnesium, and beryllium, lithium aluminum hydride, potassium tert-butoxide, nitrates, strong acids, strong oxidizers, chlorosulphonic acid, hydrogen peroxide.

Polymerization: Will not occur.

Decomposition: Carbon monoxide, carbon dioxide, nitrogen oxides

Section 11: Toxicological Information

Sensitization: (effects of repeated exposure) Prolonged or repeated skin contact may cause dermatitis.

Carcinogenicity: (risk of cancer) No

Teratogenicity: (risk of malformation in an unborn fetus) No

Reproductive Toxicity: (risk of sterility)

Mutagenicity: (risk of heritable genetic effects) No

| Lethal Exposure Concentrations: | Ingestion (LD50): | Inhalation (LC50): | Skin (LD50): | Inhalation (TCLo): |
|----------------------------------------|--------------------------|----------------------------|----------------------|------------------------------------|
| Silver | 100 mg/kg Mouse | N/A | N/A | N/A |
| Toluene | 636 mg/kg Rat | 49 gm/ m ³ /4H | 14100 UI/kg Rabbit | 1000 ppm/6H Rat |
| n-butyl acetate | 10.8 g/kg Rat | 2000ppm,4H Rat | 17,6000 mg/kg Rabbit | |
| Ethyl alcohol | 7060 mg/kg Rat | 20000 ppm/10H Rat | N/A | 50000 mg/ m ³ /2H Mouse |
| Ethyl acetate | 5620 mg/kg Rat | 200 gm/ m ³ Rat | >20 mL/kg Rabbit | 200 ppm/6H Mouse |

| | | | | |
|-------------------------------------|--------------------|-----|------------------------|-------------------------------------------|
| 2-heptanone | 1670 mg/kg Rat | N/A | 12600 uL/kg Rabbit | 7000 mg/ m ³ /4H Guinea pig |
| 2-methylpropyl ester acetic acid | 13400 mg/kg Rat | N/A | >17400 mg/kg Rabbit | N/A |

Section 12: Ecological Information

| | |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| General Information: | Avoid runoff into storms and sewers, which lead into waterways. Water runoff can cause environmental damage |
| Volatile Organic Compounds, % by weight: | 70% |
| Volatile Organic Compounds, grams per litre: | 798 g/L |

Section 13: Disposal Information

General Information: Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

Section 14: Transportation Information

This product is only to be shipped within the MG Chemicals Conductive Keypad Repair Kit, part number 8339

Ground Canada:

Classified as **Consumer Commodity**.

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations).

Ground USA:

Classified as **ORM-D**. **Refer to USA CFR 49 Regulations**.

Air:

Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations.

Ship as "Dangerous goods in excepted quantities", Class 3, PG II. Repackage with enough absorbant material to absorb all contents if spilled. Seal within leak-proof plastic bag. Package to prevent damage in a manner consistent with DG regulations. Decal accordingly.

Sea:

Shipper must be trained and certified. Refer to IMDG regulations.

Shipping Name: **PAINT RELATED MATERIAL**, UN number: **1263**, Class: **3**, Packing Group: **II**, Flash Point: **-18°C**. Storage category "A", segregation as for class 9 but away from sources of heat and separated from goods of class 1 except for those in division 1.4.

Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

CANADA

DSL

All ingredients in this product are listed on the Domestic Substances List

Health Canada

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling regulations.

Industry and Science Canada

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product is in compliance.

WHMIS

This product belongs to the following categories: **B2, D2A**

USA

CAA (Clean Air Act, USA)

This product does not contain any class 1-ozone depletors.

This product does not contain any class 2-ozone depletors.

This product does not contain any chemicals listed as hazardous air pollutants.

SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

Toluene CAS# 108-88-33 (20%) and Silver CAS# 7440-22-4 (30%) is listed under section 313 as toxic material.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains Toluene CAS# 108-88-33 (20%) and Silver CAS# 7440-22-4 (30%) a toxic chemical subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

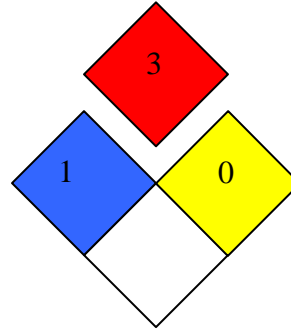
California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

This product contains a chemical known to the state of California to cause cancer.

HMIS RATING

| | |
|-----------------------------------|---|
| HEALTH: | 1 |
| FLAMMABILITY: | 3 |
| PHYSICAL HAZARD: | 0 |
| PERSONAL PROTECTION (PPE): | |

NFPA RATING



EUROPE

RoHS

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

WEEE

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

Definitions: N/A = not applicable, N/E = not established

Disclaimer: This material safety data sheet is provided as an information resource only. M.G. Chemicals believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.