

SAFETY DATA SHEET

Version: 1.0
Date of Issue: 10-May-2017
Date of First Issue: 10-May-2017


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ACCORDING TO OSHA HCS (29 CFR 1910.1200)

SECTION 1: IDENTIFICATION

| | | |
|--|---|---------------------|
| Product identifier used on the label | RTC-2 Epoxy Part A | |
| Other means of identification | | |
| Chemical Name | Bisphenol A Diglycidyl Ether | |
| CAS No. | 25085-99-8 | |
| EINECS No. | 607-537-5 | |
| Recommended use of the chemical and restrictions on use | | |
| Recommended use | PC14 Metal surface treatment products, including galvanic and electroplating products | |
| Restrictions on use | Anything other than the above. | |
| Details of the supplier of the safety data sheet | | |
| Supplier | VISHAY MEASUREMENTS GROUP, INC. | |
| Address of Supplier | Post Office Box 27777 Raleigh, NC 27611 USA | |
| Telephone | +1 919-365-3800 | |
| Fax | +1 919-365-3945 | |
| E-Mail (competent person) | mm.us@vishaypg.com | |
| Emergency telephone number | 1-800-424-9300 | CHEMTREC (24 hours) |

SECTION 2: HAZARD(S) IDENTIFICATION

| | | |
|--|---|--|
| Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200 | | |
| Physical hazards | Not classified | |
| Health hazards | Skin corrosion/irritation, Category 2 Skin Sensitisation, Category 1 Eye Irritation, Category 2 | |
| Environmental hazards | Hazardous to the aquatic environment, Chronic, Category 2 | |
| Hazard Symbol |  | |
| Signal Word(s) | Warning | |
| Hazard Statement(s) | Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. | |
| Precautionary Statement(s) | Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs, get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. | |

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If eye irritation persists, get medical advice/attention.

Other hazards

None known.

Percent of the mixture consists of ingredient(s) of unknown acute toxicity:

0%

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

| Chemical identity of the substance | %W/W | CAS No. | EC No. | Hazard classification |
|------------------------------------|------|------------|-----------|--|
| Bisphenol A Diglycidyl Ether | 100 | 25085-99-8 | 607-537-5 | Skin corrosion/irritation, Category 2 Skin Sensitisation, Category 1 Eye Irritation, Category 2 Hazardous to the aquatic environment, Chronic, Category 2 |

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms occur obtain medical attention.

Skin Contact

IF ON SKIN: Remove contaminated clothing immediately and wash affected skin with soap and water. Wash contaminated clothing before reuse. If irritation develops and persists, get medical attention.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Get medical attention if eye irritation develops or persists.

Ingestion

Unlikely route of exposure. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. If symptoms occur obtain medical attention.

Most important symptoms and effects, both acute and delayed

Causes irritation to eyes and skin. May cause sensitization by skin contact.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Notes to a physician:

Repeated or prolonged contact may cause defatting of the skin resulting in dryness, cracking and dermatitis.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Extinguish with carbon dioxide, dry chemical, foam or waterspray.

Unsuitable extinguishing Media

Do not use water jet.

Special hazards arising from the substance or mixture

Not flammable. May decompose in a fire giving off toxic fumes. Epoxy resins release phenolics, carbon monoxide, and water.

Special protective equipment and precautions for fire fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Do not breathe fumes/vapour from heated product. Stop leak if safe to do so. Use personal protective equipment as required. See Section: 8. Avoid breathing vapours. Avoid contact with skin and eyes.

Methods and material for containment and cleaning up

Contain spillages. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Dispose of this material and its container as hazardous waste. Residual resin may be removed using steam or hot soapy water.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Do not breathe fumes/vapour from heated product. Avoid breathing vapours. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Keep only in original container. Keep container tightly closed and in a well-ventilated place. Keep away from naked flames and hot surfaces.

Storage temperature
Incompatible materials

Ambient.
None known.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Not established

Biological Exposure Indices

Not established

Appropriate engineering controls

Ensure operatives are trained to minimise exposures. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid contact with skin and eyes. Do not breathe fumes/vapour from heated product. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place. IF exposed: Flush with fresh water if contact with skin or eyes.

Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection.

Skin protection



Wear suitable chemical resistant protective gloves for frequent or prolonged operations tested with an acceptable permeation test. Contaminated gloves should be carefully rinsed with water before reuse. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Respiratory protection



Normally no personal respiratory protection is necessary. In case of inadequate ventilation wear respiratory protection.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|--|---------------------------------|
| Appearance | Colourless to yellowish liquid. |
| Odor | Faint Epoxy Odour |
| Odor Threshold | Not available. |
| pH | Not established. |
| Melting Point/Freezing Point | Not established. |
| Initial boiling point and boiling range | Not applicable. |
| Flash Point | 252°C (Method: PMCC) |
| Evaporation rate (Butyl acetate = 1) | Not known. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | Not applicable. |
| Vapour pressure | Not applicable. |
| Vapour density | Not applicable. |
| Relative density | 1.16 (H ₂ O=1) |
| Solubility(ies) | Insoluble in water. |
| Partition coefficient: n-octanol/water | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition Temperature | Not available. |
| Viscosity | Not available. |

SECTION 10: STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity | Stable under normal conditions. |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | Phenolics, Carbon monoxide and Water. |
| Conditions to avoid | Temperature > 300°C. Decomposes at temperatures above (°C): 350. Generation of gas during decomposition can cause pressure in closed systems. Pressure buildup can be rapid. |
| Incompatible materials | Alkalis (strong bases). Acids. Amines and Oxidizing agents. |
| Hazardous decomposition product(s) | Will not occur by itself, but masses of more than 500 grams of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup. |

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects (Substances in preparations / mixtures)

| | |
|--|--|
| Acute toxicity - Ingestion | Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day. |
| Acute toxicity - Inhalation | Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 >20.0 mg/l. |
| Acute toxicity - Skin Contact | Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day. |
| Skin corrosion/irritation | Skin corrosion/irritation, Category 2: Causes skin irritation. Test Result: Irritating to skin. (Jolanki R et al, 1986) |
| Serious eye damage/irritation | Eye Irritation, Category 2: Causes serious eye irritation. Test Result: Causes serious eye irritation. (EPA/OTS; Doc #878212416) |
| Respiratory or skin sensitization | Skin Sensitisation, Category 1: May cause an allergic skin reaction. Test Result: Skin sensitisation has been reported in studies with guinea pigs. (EPA/OTS; Doc #878212421) |
| Germ cell mutagenicity | Based upon the available data, the classification criteria are not met. |
| Carcinogenicity | Based upon the available data, the classification criteria are not met. |
| Reproductive toxicity | Based upon the available data, the classification criteria are not met. |
| STOT - single exposure | Based upon the available data, the classification criteria are not met. |
| STOT - repeated exposure | Based upon the available data, the classification criteria are not met. |

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| | |
|---|---|
| Aspiration hazard | Based upon the available data, the classification criteria are not met. |
| Information on likely routes of exposure | |
| Inhalation | Possible – accidental exposure |
| Ingestion | Unlikely – accidental exposure |
| Skin Contact | Possible – accidental exposure |
| Eye Contact | Unlikely – accidental exposure |
| Early onset symptoms related to exposure | Causes irritation to eyes and skin. |
| Delayed health effects from exposure | Allergic contact dermatitis |
| Other information | |
| NTP Report on Carcinogens | Not listed |
| IARC Monographs | Not listed |
| OSHA Designated Carcinogen | Not listed |

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--------------------------------------|---|
| Ecotoxicity | Hazardous to the aquatic environment, Chronic, Category 2; Toxic to aquatic life with long lasting effects. |
| Persistence and degradability | Estimated Mixture LC50 > 1 to ≤ 10 mg/l (Fish) |
| Bioaccumulative potential | Readily biodegradable. |
| Mobility in soil | The product has low potential for bioaccumulation. |
| Other adverse effects | The product is predicted to have low mobility in soil. |
| | None known. |

SECTION 13: DISPOSAL CONSIDERATIONS

| | |
|--------------------------------|---|
| Waste treatment methods | Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation. |
| Additional Information | Dispose of contents in accordance with local, state or national legislation. |

SECTION 14: TRANSPORT INFORMATION

| | ADR/RID | IMDG | IATA/ICAO |
|---|--|--|--|
| UN number | UN 3077 | UN 3077 | UN 3077 |
| UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL A DIGLYCIDYL ETHER) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL A DIGLYCIDYL ETHER) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL A DIGLYCIDYL ETHER) |
| Transport hazard class(es) | 9 | 9 | 9 |
| Packing group | III | III | III |
| Environmental hazards | Environmentally hazardous substance | Classified as a Marine Pollutant. | Environmentally hazardous substance |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable | | |
| Special precautions for user | See Section: 2 | | |

SECTION 15: REGULATORY INFORMATION

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

US Federal Regulations

| | |
|--|------------|
| TSCA (Toxic Substance Control Act) | Not listed |
| EPCRA/SARA Section 302 Extremely Hazardous Substances | Not listed |
| EPCRA Section 313 Toxics Release Inventory (TRI) Program | Not listed |
| NIOSH Occupational Carcinogen List | Not listed |

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| | |
|---|------------|
| OSHA List of highly hazardous chemicals, toxics and reactives | Not listed |
| NTP Report on Carcinogens (RoC) List | Not listed |
| Poison Prevention Packaging Act | Not listed |
| US State Regulations | |
| California State, Proposition 65 List | Not listed |
| California State, Safer Consumer Products Regulations | Not listed |
| Maine State, Toxic Chemicals in Children's Products Act | Not listed |
| New Jersey State Worker and Community RTK Act | Not listed |
| Pennsylvania State, Worker and Community RTK Act | Not listed |
| Rhode Island State, Hazardous Substances RTK Act | Not listed |
| Non-Regional | |
| IARC Monographs, List of Classifications onal | Not listed |

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Not applicable – V1.0

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References:

Existing Safety Data Sheet (SDS) and the EU Classification and Labelling Inventory for Bisphenol A Diglycidyl Ether (CAS No. 25085-99-8)

Literature References:

"Bisphenol A Diglycidyl Ether". In TOXLINE®: Toxic Substances Control Act Test Submissions. ToxPlanet, a division of Timberlake Ventures, Inc. Cornelius, NC. 2017

| GHS Classification of the substance or mixture | Classification Procedure |
|---|--------------------------|
| Skin corrosion/irritation, Category 2 | Threshold Classification |
| Skin Sensitisation, Category 1 | Threshold Classification |
| Eye Irritation, Category 2 | Threshold Classification |
| Hazardous to the aquatic environment, Chronic, Category 2 | Threshold Classification |

LEGEND

ACGIH: American Conference of Governmental Industrial Hygienists
BEI: Biological Exposure Indices (ACGIH)
IARC: International Agency for Research on Cancer
Irr: Irritation
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: The Occupational Safety & Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PEL: Permissible exposure limit

REL: Recommended exposure limit
SCL: Specific Concentration Limit
Skin*: Risk of overexposure via dermal contact
STEL: Short Term Exposure Limit
TLV: Threshold Limit value
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
URT: Upper respiratory tract
vPvB: very Persistent and very Bioaccumulative

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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