

# SAFETY DATA SHEET

Version: 5.0  
Date of Issue: 04 May 2017  
Date of First Issue: 04 September 2012

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ACCORDING TO OSHA HCS (29 CFR 1910.1200)

## SECTION 1: IDENTIFICATION

|  |   |                     |
|--|---|---------------------|
| <b>Product identifier used on the label</b>                    | EpoxyLite 813 Part B  |                     |
| <b>Other means of identification</b>                           | Not applicable  |                     |
| <b>Recommended use of the chemical and restrictions on use</b> |   |                     |
| Recommended use  | Metal surface treatment products, including galvanic and electroplating products. |                     |
| Restrictions on use  | Anything other than the above.  |                     |
| <b>Details of the supplier of the safety data sheet</b>        |   |                     |
| Supplier   | VISHAY MEASUREMENTS GROUP, INC.   |                     |
| Address of Supplier  | Post Office Box 27777<br>Raleigh, NC 27611<br>USA                                 |                     |
| Telephone  | +1 919-365-3800   |                     |
| Fax  | +1 919-365-3945   |                     |
| E-Mail (competent person)                                      | <a href="mailto:mm.us@vishaypg.com">mm.us@vishaypg.com</a>                        |                     |
| <b>Emergency telephone number</b>                              | 1-800-424-9300  | CHEMTREC (24 hours) |

## SECTION 2: HAZARD(S) IDENTIFICATION

|  |   |  |
|--|---|--|
| <b>Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200</b> |   |  |
| Physical hazards   | Combustible Dust  |  |
| Health hazards   | Skin Sensitisation, Category 1<br>Eye Damage, Category 1<br>Respiratory sensitization, Category 1<br>Specific target organ toxicity — repeated exposure, Category 1<br>Specific target organ toxicity — single exposure, Category 3<br>Carcinogen, Category 1   |  |
| Environmental hazards  | Not classified  |  |
| <b>Hazard Symbol</b>   |   |  |
| <b>Signal Word(s)</b>  | DANGER  |  |
| <b>Hazard Statement(s)</b>   | May form combustible dust concentrations in air.<br>May cause an allergic skin reaction.<br>Causes serious eye damage.<br>May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>Causes damage to organs through prolonged or repeated exposure.<br>May cause respiratory irritation.<br>May cause cancer. |  |
| <b>Precautionary Statement(s)</b>  | Obtain special instructions before use.<br>Do not handle until all safety precautions have been read and understood.<br>Keep away from all ignition sources including heat, sparks and flame<br>Keep container closed and grounded  |  |

# SAFETY DATA SHEET

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ACCORDING TO OSHA HCS (29 CFR 1910.1200)

Prevent dust accumulations to minimize explosion hazard  
Wash hands and exposed skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
[In case of inadequate ventilation] wear respiratory protection.  
Do not breathe dust.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
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.  
Immediately call a POISON CENTER/doctor.  
IF exposed: Call a POISON CENTER or doctor/physician.  
Wash contaminated clothing before reuse.  
Dispose of contents in accordance with local, state or national legislation.

#### Other hazards

None known

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

0%

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Substances** Not applicable

**Mixtures** Substances in preparations / mixtures

| Chemical identity of the substance          | %W/W    | CAS No.    | EC No.    | Hazard classification   |
|---|---------|------------|-----------|---|
| Benzene-1,2:4,5-tetracarboxylic dianhydride | 30 - 60 | 89-32-7    | 201-898-9 | Skin Sensitisation, Category 1<br>Eye damage, Category 1<br>Respiratory sensitization, Category 1   |
| Crystalline silica                          | 10 - 30 | 14808-60-7 | 238-878-4 | Carcinogen, Category 1A<br>Specific target organ toxicity — repeated exposure, Category 1<br>Specific target organ toxicity — single exposure, Category 3 |
| Magnesium silicate talc                     | 10 - 30 | 14807-96-6 | 238-877-9 | Not classified  |

## SECTION 4: FIRST AID MEASURES



#### Description of first aid measures

Self-protection of the first aider

Do not breathe dust. Avoid all contact. Wear suitable protective clothing. Wear suitable respiratory protective equipment if exposure to high levels of material are likely.

Inhalation

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If breathing is laboured, oxygen should be administered by qualified personnel. If breathing has stopped, apply artificial respiration.

Skin Contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Contaminated clothing should be thoroughly cleaned. 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 and easy to do. Continue rinsing. Immediately call a POISON

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ACCORDING TO OSHA HCS (29 CFR 1910.1200)

|   |   |
|---|---|
| Ingestion   | CENTER/doctor. Obtain prompt consultation, preferably from an ophthalmologist. Continue irrigation until medical attention can be obtained. If swallowed, rinse mouth with water (only if the person is conscious). Drink two glasses of water. Do not give milk or alcoholic beverages. Do not induce vomiting. Obtain medical attention if ill effects occur. |
| <b>Most important symptoms and effects, both acute and delayed</b>                | May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Causes damage to organs through prolonged or repeated exposure. May cause respiratory irritation. May cause cancer.  |
| <b>Indication of any immediate medical attention and special treatment needed</b> | Treat symptomatically.  |
| Notes to a physician:   | IF IN EYES: Chemical eye burns may require extended irrigation.   |

## SECTION 5: FIRE-FIGHTING MEASURES

|   |  |
|---|--|
| <b>Extinguishing media</b>  | As appropriate for surrounding fire. Extinguish with carbon dioxide, dry chemical, foam or waterspray.   |
| Suitable Extinguishing Media  |  |
| Unsuitable extinguishing Media  | Do not use water jet. Direct water jet may spread the fire. Avoid dust generation. Finely dispersed particles form explosive mixtures with air.  |
| <b>Special hazards arising from the substance or mixture</b>          | Explosion: May form combustible dust concentrations in air. Avoid dust generation. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Decomposes in a fire giving off toxic fumes: Nitrogen oxides, Carbon dioxide and Carbon monoxide. Contact with water or moist air causes production of opaque and corrosive fumes. |
| <b>Special protective equipment and precautions for fire fighters</b> | Fight fire with normal precautions from a reasonable distance. Use low-pressure medium fog streams to avoid dust clouds. Apply agent gently to avoid dust clouds. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Avoid all contact. Do not allow run-off from fire fighting to enter drains or water courses.  |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Ensure adequate ventilation. Eliminate all ignition sources if safe to do so. Do not breathe dust. Avoid all contact. In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required. See Section: 8. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.   |
| <b>Environmental precautions</b>   | Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.   |
| <b>Methods and material for containment and cleaning up</b>                | Stop leak if safe to do so. Ensure suitable personal protection during removal of spillages. Sweep spilled substances into containers if appropriate moisten first to prevent dusting. Recommended: Vacuum spilled material. Avoid dispersal of dust in the air (i.e do not use compressed air for cleaning purposes). Collect mechanically and dispose of according to Section 13. Use only non-sparking tools. Ventilate the area and wash spill site after material pick-up is complete. Avoid release to the environment. |

## SECTION 7: HANDLING AND STORAGE

|                                      |   |
|--------------------------------------|---|
| <b>Precautions for safe handling</b> | Ensure adequate ventilation. Do not breathe dust. Avoid all contact. Use personal protective equipment as required. See Section: 8. Avoid dust generation. Keep away from fire, sparks and heated surfaces - no smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Do not allow dust to accumulate on surfaces and equipment. Use non-dispersive workplace cleaning (no compressed air / high pressure cleaners). Do |
|--------------------------------------|---|

# SAFETY DATA SHEET



Version: 5.0  
 Date of Issue: 04 May 2017  
 Date of First Issue: 04 September 2012

www.vishaypg.com

ACCORDING TO OSHA HCS (29 CFR 1910.1200)

**Conditions for safe storage, including any incompatibilities**

Storage temperature  
 Storage life  
 Incompatible materials

not use in confined spaces. Wash hands thoroughly after handling.  
 Contaminated clothing should be thoroughly cleaned. Protect from moisture.  
 Ground/bond container and receiving equipment. Keep in a cool, dry, well ventilated place. Keep away from fire, sparks and heated surfaces. Keep only in original container. Protect from moisture.  
 Ambient.  
 Stable under normal conditions.  
 Keep away from: Acids, strong bases, Flammable liquids, Reducing agents, Oxidizing agents, Corrosive Substances and Alkalis.  
 Contact with water or moist air causes production of opaque and corrosive fumes.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure Limits**

| SUBSTANCE   | CAS No.    | LTEL (8 hr TWA ppm) | LTEL (8 hr TWA mg/m <sup>3</sup> ) | STEL (ppm) | STEL (mg/m <sup>3</sup> ) | Note                  |
|---|------------|---------------------|------------------------------------|------------|---------------------------|-----------------------|
| Quartz (SiO <sub>2</sub> ) (crystalline silica)               | 14808-60-7 | -                   | 0.05                               | -          | -                         | NIOSH                 |
|   |            | -                   | 30                                 | -          | -                         | OSHA Total Dust       |
|   |            | -                   | 10                                 | -          | -                         | Respirable Dust       |
|   |            | -                   | 0.025                              | -          | -                         | ACGIH, A2             |
| Talc (containing no asbestos and less than 1% quartz)         | 14807-96-6 | -                   | 2                                  | -          | -                         | NIOSH Respirable Dust |
|   |            | 20 mppcf            | -                                  | -          | -                         | OSHA                  |
|   |            | -                   | 2                                  | -          | -                         | ACGIH, A4             |
| Particulates not otherwise regulated / Inert or nuisance dust | -          | -                   | 15                                 | -          | -                         | OSHA Total dust       |
|   |            | -                   | 5                                  | -          | -                         | Respirable dust       |

Note: OSHA PELs 1910.1000 TABLE Z-3/ NIOSH RELs / ACGIH TLVs

A4: Not Classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of the lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.

A2: Suspected Human Carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogen; OR, the agent is carcinogenic in experimental animals at dose(s), by route(s) of exposure, at site(s), of histological type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is primarily when there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans.

Mppcf<sup>2</sup>: Millions of particles per cubic foot of air

The other components listed in Section 3 do not have occupational exposure limits.

**Biological Exposure Indices**

Not established

**Appropriate engineering controls**

Ensure adequate ventilation or use appropriate containment. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

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

General hygiene measures for the handling of chemicals are applicable. Do not breathe dust. Avoid all contact. Wash hands before breaks and after work. Keep

# SAFETY DATA SHEET

Version: 5.0

Date of Issue: 04 May 2017

Date of First Issue: 04 September 2012

www.vishaypg.com

ACCORDING TO OSHA HCS (29 CFR 1910.1200)

Eye/face protection



work clothes separately. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place. Have available eyewash bottle with clean water. Do not use in confined spaces.

Use eye protection designed to protect against dusts. Wear eye protection with side protection.

Skin protection



Hand protection: Wear impervious gloves. Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Body protection: Wear dustproof working clothes. Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection



Wear suitable respiratory protective equipment if processing involves working in areas where dusts or vapours are likely to be evolved. (Recommended: Respiratory protection necessary at/for: > 10 mg/m<sup>3</sup> Dust).

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|  |                                    |
|--|------------------------------------|
| Appearance                                   | Powder                             |
| Odor   | Not available.                     |
| Odor Threshold                               | Not available.                     |
| pH   | Not established.                   |
| Melting Point/Freezing Point                 | Not established.                   |
| Initial boiling point and boiling range      | Not established.                   |
| Flash Point                                  | >94°C                              |
| Evaporation rate (Butyl acetate = 1)         | Not applicable.                    |
| Flammability (solid, gas)                    | Non-flammable                      |
| Upper/lower flammability or explosive limits | Not available.                     |
| Vapour pressure                              | Not available.                     |
| Vapour density                               | 2.0060 g/cm <sup>3</sup> @ 25°C    |
| Relative density                             | 2.01 (H <sub>2</sub> O = 1) @ 25°C |
| Solubility(ies)                              | Soluble 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

|   |   |
|---|---|
| <b>Reactivity</b>                         | Stable under normal conditions.   |
| <b>Chemical stability</b>                 | Stable under normal conditions.   |
| <b>Possibility of hazardous reactions</b> | May form combustible dust concentrations in air. Contact with water or moist air causes production of opaque and corrosive fumes.   |
| <b>Conditions to avoid</b>                | Keep away from fire, sparks and heated surfaces. Take precautionary measures against static discharge. Do not allow dust to accumulate on surfaces and equipment. Do not use in confined spaces. Protect from moisture. |
| <b>Incompatible materials</b>             | Keep away from: Acids, strong bases, Flammable liquids, Reducing agents, Oxidizing agents, Corrosive Substances and Alkalis.  |
| <b>Hazardous decomposition product(s)</b> | Decomposes in a fire giving off toxic fumes: Nitrogen oxides, Carbon dioxide and Carbon monoxide.   |

# SAFETY DATA SHEET

Version: 5.0

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www.vishaypg.com

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## 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 (Dusts) > 5 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

Based upon the available data, the classification criteria are not met.

#### Serious eye damage/irritation

Eye damage, Category 1: Causes serious eye damage.

#### Skin sensitization

Skin Sensitisation, Category 1: May cause an allergic skin reaction.

#### Respiratory sensitization

Respiratory sensitization, Category 1: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Germ cell mutagenicity

Based upon the available data, the classification criteria are not met.

#### Carcinogenicity

Carcinogen, Category 1: May cause cancer.

#### Reproductive toxicity

Based upon the available data, the classification criteria are not met.

#### STOT - single exposure

Specific target organ toxicity — single exposure, Category 3: May cause respiratory irritation.

#### STOT - repeated exposure

Specific target organ toxicity — repeated exposure, Category 1: Causes damage to organs through prolonged or repeated exposure.

#### 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

May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

### Delayed health effects from exposure

Causes damage to organs through prolonged or repeated exposure. May cause cancer.

### Other information

NTP Report on Carcinogens

Quartz (Silica, respirable Crystalline) - Group K: Known To Be Human Carcinogens

IARC Monographs

Talc - Group 3: Not classifiable as to its carcinogenicity to humans.

OSHA Designated Carcinogen

Quartz (Silica, respirable Crystalline) - Group 1: Carcinogenic to humans  
Not listed.

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity

Based upon the available data, the classification criteria are not met.

### Persistence and degradability

Estimated Mixture LC50 >100 mg/l (Fish)

### Bioaccumulative potential

No data for the mixture as a whole.

### Mobility in soil

No data for the mixture as a whole.

### Other adverse effects

The product is predicted to have high mobility in soil.

None known

# SAFETY DATA SHEET



Version: 5.0

Date of Issue: 04 May 2017

Date of First Issue: 04 September 2012

www.vishaypg.com

ACCORDING TO OSHA HCS (29 CFR 1910.1200)

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

Containers of this material may be hazardous when empty since they retain product residue. This material and its container must be disposed of as hazardous waste. Dispose of wastes in an approved waste disposal facility. Dispose of contents in accordance with local, state or national legislation.

## SECTION 14: TRANSPORT INFORMATION

(Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods')

|   | <b>ADR/RID</b> | <b>IMDG</b>                           | <b>IATA</b>    |
|---|----------------|---------------------------------------|----------------|
| <b>UN number</b>  | Not classified | Not classified                        | Not classified |
| <b>UN proper shipping name</b>  | Not classified | Not classified                        | Not classified |
| <b>Transport hazard class(es)</b>   | Not classified | Not classified                        | Not classified |
| <b>Packing group</b>  | Not classified | Not classified                        | Not classified |
| <b>Environmental hazards</b>  | Not classified | Not classified as a Marine Pollutant. | Not classified |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable |                                       |                |
| <b>Special precautions for user</b>   | 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)

Benzene-1,2:4,5-tetracarboxylic dianhydride - Subject to 25,000 lb reporting threshold

Quartz (Silica, respirable Crystalline) - Subject to 25,000 lb reporting threshold

Magnesium silicate talc - Subject to 25,000 lb reporting threshold

EPCRA/SARA Section 302 Extremely Hazardous Substances

All chemicals are not listed

EPCRA Section 313 Toxics Release Inventory (TRI) Program

All chemicals are not listed

NIOSH Occupational Carcinogen List

Quartz (Silica, respirable Crystalline) - Listed

OSHA List of highly hazardous chemicals, toxics and reactives

All chemicals are not listed

NTP Report on Carcinogens (RoC) List

Quartz (Silica, respirable Crystalline) - Group K: Known To Be Human Carcinogens

Poison Prevention Packaging Act

All chemicals are not listed

#### US State Regulations

California State, Proposition 65 List

Quartz (Silica, respirable Crystalline) - Listed

California State, Safer Consumer Products Regulations

Benzene-1,2:4,5-tetracarboxylic dianhydride - Candidate Chemicals List

Quartz (Silica, respirable Crystalline) - Candidate Chemicals List

Magnesium silicate talc - Candidate Chemicals List

Maine State, Toxic Chemicals in Children's Products Act

Quartz (Silica, respirable Crystalline) - COC list. CHC list

New Jersey State Worker and Community RTK Act

Magnesium silicate talc - RTKHSL. SHHSL

Quartz (Silica, respirable Crystalline) - RTKHSL. SHHSL

Pennsylvania State, Worker and Community RTK Act

Magnesium silicate talc - Hazardous Substance List

Quartz (Silica, respirable Crystalline) - Hazardous Substance List

Rhode Island State, Hazardous Substances RTK Act

Magnesium silicate talc - Hazardous Substance List

Quartz (Silica, respirable Crystalline) - Hazardous Substance List

#### Non-Regional

IARC Monographs, List of Classifications

Magnesium silicate talc - Group 3: Not classifiable as to its carcinogenicity to humans.

Quartz (Silica, respirable Crystalline) - Group 1: Carcinogenic to humans

# SAFETY DATA SHEET



Version: 5.0  
Date of Issue: 04 May 2017  
Date of First Issue: 04 September 2012

www.vishaypg.com

ACCORDING TO OSHA HCS (29 CFR 1910.1200)

## SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Updated substance / mixture classification. New SDS Regulation compliant with HazCom 2012 format, all sections have been updated to include new information. Please review SDS with care.

Version 5.0  
Revision Date 04 May 2017  
Date of First Issue 04 September 2012

### References:

Existing Safety Data Sheet (SDS), EU Data: Harmonised Classification(s) for 1,2,4,5-Benzenetetracarboxylic Dianhydride (CAS# 89-32-7), and the Classification and Labelling Inventory for Crystalline silica (CAS# 14808-60-7) and Magnesium silicate talc (CAS# 14807-96-6).

| GHS Classification of the substance or mixture                 | Classification Procedure |
|--|--------------------------|
| Skin Sensitisation, Category 1                                 | Threshold Calculation    |
| Eye Damage, Category 1   | Threshold Calculation    |
| Respiratory sensitization, Category 1                          | Threshold Calculation    |
| Specific target organ toxicity — repeated exposure, Category 1 | Threshold Calculation    |
| Specific target organ toxicity — single exposure, Category 3   | Threshold Calculation    |
| Carcinogen, Category 1A  | Threshold Calculation    |

### 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<sup>o</sup>: 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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