

A Meridian Adhesives Group Company

## **EPO-TEK® H74F PART A**

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 4/19/2023 Version: 1.0

# SECTION 1: Identification

### 1.1. Identification

Product form : Mixture

Product name : EPO-TEK® H74F PART A

#### 1.2. Recommended use and restrictions on use

Recommended use : Adhesives

Restrictions on use : Not to be used for any purpose other than the one the product was designed for

### 1.3. Supplier

Epoxy Technology, Inc.
14 Fortune Drive
Billerica, MA 01821
USA

T 978-667-3805 - F 978-663-9782

www.epotek.com

### 1.4. Emergency telephone number

Emergency number : VelocityEHS: +1 (800) 255-3924, +1 (813) 248-0585

### **SECTION 2: Hazard(s) identification**

### 2.1. Classification of the substance or mixture

### **GHS US classification**

Skin corrosion/irritation Category 2
H315
Causes skin irritation
Causes serious eye irritation
Causes serious eye irritation
Skin sensitization, Category 1
H317
May cause an allergic skin reaction
Hazardous to the aquatic environment – Chronic Hazard Category 2
H411
Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

### **GHS US labeling**

Hazard pictograms (GHS US)





Signal word (GHS US) : Warning

Hazard statements (GHS US) : H315 - Causes skin irritation

H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) : P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P272 - Contaminated work clothing must not be allowed out of the workplace.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 - If on skin: Wash with plenty of water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P321 - Specific treatment (see supplemental first aid instruction on this label).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P363 - Wash contaminated clothing before reuse.

P391 - Collect spillage.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Harmful dust may be released during cutting, milling or grinding process.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### **SECTION 3: Composition/Information on ingredients**

### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name                                | Product identifier       | %       | GHS US classification  |
|-------------------------------------|--------------------------|---------|--|
| Epoxy phenol novolac resin          | CAS-No.: 28064-14-4      | 30 – 60 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 2, H411 |
| Epoxy phenol novolac resin          | CAS-No.: 9003-36-5       | 1 – 5   | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411               |
| Titanium oxide (TiO2)               | CAS-No.: 13463-67-7      | < 5     | Carc. 2, H351  |
| Bisphenol A diglycidyl ether resin* | CAS-No.: Trade<br>Secret | < 5     | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411  |

<sup>\*</sup>Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Comments

: Components not listed are either non-hazardous or are below reportable limits.

This product contains Titanium Dioxide, which is suspected of causing cancer when inhaled in fine particulate form. Titanium Dioxide should not be respirable in this formulation.

However, if cured material will be ground, milled, etc, wear respiratory protection to avoid

inhaling any dust that may be produced.

Full text of hazard classes and H-statements : see section 16

### **SECTION 4: First-aid measures**

### 4.1. Description of first aid measures

First-aid measures after inhalation
First-aid measures after skin contact

- : Remove person to fresh air and keep comfortable for breathing.
- : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact

: 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.

4/19/2023 (Issue date) EU - en 2/13

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### **SECTION 5: Fire-fighting measures**

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing

dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer

to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal

protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray.

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Hygiene measures

: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

### **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

### Personal protective equipment symbol(s):







### **SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Gray
Odor : Mild odor

Odor threshold : No data available No data available pН Melting point : No data available Freezing point No data available Boiling point No data available Flash point No data available Relative evaporation rate (butyl acetate=1) No data available Flammability : Not applicable.

4/19/2023 (Issue date) EU - en 4/13

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Vapor pressure : No data available Relative vapor density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available Auto-ignition temperature : No data available : No data available Decomposition temperature Viscosity, kinematic : No data available Viscosity, dynamic No data available **Explosion limits** No data available Explosive properties : No data available Oxidizing properties : No data available

### 9.2. Other information

No additional information available

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| Titanium oxide (TiO2) (13463-67-7) |   |  |
|------------------------------------|---|--|
| LD50 oral rat                      | > 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))   |  |
| LC50 Inhalation - Rat              | > 5.09 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s)) |  |
| ATE US (oral)                      | 5000 mg/kg body weight  |  |

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| LD50 dermal rat                            | > 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal  |  |  |
|--|--|--|--|
|  | Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))  |  |  |
| ATE US (oral)                              | 11400 mg/kg body weight  |  |  |
| Skin corrosion/irritation                  | : Causes skin irritation.  |  |  |
| Serious eye damage/irritation              | : Causes serious eye irritation.   |  |  |
| Respiratory or skin sensitization          | : May cause an allergic skin reaction.   |  |  |
| Germ cell mutagenicity                     | : Not classified   |  |  |
| Carcinogenicity                            | : Not classified.  |  |  |
| Titanium oxide (TiO2) (13463-67-7)         |  |  |  |
| Additional data                            | *Not a respirable hazard as contained in this liquid mixture   |  |  |
| IARC group                                 | 2B - Possibly carcinogenic to humans   |  |  |
| Bisphenol A diglycidyl ether resin         |  |  |  |
| NOAEL (chronic,oral,animal/male,2 years)   | 15 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Guideline: EPA OPPTS 870.4300 (Combined Chronic Toxicity / Carcinogenicity), Guideline: other:MITI, Japanese ministry of international trade and industry, February 1998, Remarks on results: other:Effect type: toxicity (migrated information)    |  |  |
| NOAEL (chronic,oral,animal/female,2 years) | 100 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Guideline: EPA OPPTS 870.4300 (Combined Chronic Toxicity / Carcinogenicity), Guideline: other:MITI, Japanese ministry of international trade and industry, February 1998, Remarks on results: other:Effect type: toxicity (migrated information) |  |  |
| Reproductive toxicity                      | : Not classified   |  |  |
| STOT-single exposure                       | : Not classified   |  |  |
| STOT-repeated exposure                     | : Not classified   |  |  |
| Epoxy phenol novolac resin (9003-36-5      | )  |  |  |
| NOAEL (oral,rat,90 days)                   | ≈ 250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)   |  |  |
| Bisphenol A diglycidyl ether resin         |  |  |  |
| NOAEL (oral,rat,90 days)                   | 50 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: other:japanese MITI guidelines for toxicity testing of chemicals               |  |  |
| Aspiration hazard<br>Viscosity, kinematic  | : Not classified<br>: No data available  |  |  |
| Symptoms/effects after skin contact        | : Irritation. May cause an allergic skin reaction.   |  |  |
| Symptoms/effects after eye contact         | : Eye irritation.  |  |  |

## SECTION 12: Ecological information

| 12.1. Toxicity                         |  |
|--|--|
| Ecology - general                      | : Toxic to aquatic life with long lasting effects.   |
| Epoxy phenol novolac resin (9003-36-5) |  |
| LC50 - Fish [1]                        | 1.9 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Semi-static system, Fresh water, Weight of evidence) |

4/19/2023 (Issue date) EU - en 6/13

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| -                                   |  |
|-------------------------------------|--|
| Epoxy phenol novolac resin (9003-30 | 6-5)   |
| EC50 - Crustacea [1]                | 3.5 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Weight of evidence, GLP)                 |
| LC50 - Fish [2]                     | 1000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)   |
| LOEC (chronic)                      | 1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| NOEC (chronic)                      | 0.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| Titanium oxide (TiO2) (13463-67-7)  |  |
| LC50 - Fish [1]                     | > 1000 mg/l (Pisces, Fresh water)  |
| EC50 - Crustacea [1]                | > 1000 mg/l (Invertebrata, Fresh water)  |
| Bisphenol A diglycidyl ether resin  |  |
| LC50 - Fish [1]                     | 1.3 mg/l (96 h, Pisces, Literature study)  |
| EC50 - Crustacea [1]                | 2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration) |
| LOEC (chronic)                      | 1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| NOEC (chronic)                      | 0.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| 12.2. Persistence and degradability |  |
| Epoxy phenol novolac resin (9003-30 | 6-5)   |
| Persistence and degradability       | Not readily biodegradable in water.  |
| Titanium oxide (TiO2) (13463-67-7)  |  |
| Persistence and degradability       | Biodegradability: not applicable.  |
| Chemical oxygen demand (COD)        | Not applicable (inorganic)   |

| Persistence and degradability           | Not readily biodegradable in water.          |  |  |
|---|--|--|--|
| Titanium oxide (TiO2) (13463-67-7)      |  |  |  |
| Persistence and degradability           | Biodegradability: not applicable.            |  |  |
| Chemical oxygen demand (COD)            | Not applicable (inorganic)                   |  |  |
| ThOD                                    | Not applicable (inorganic)                   |  |  |
| Epoxy phenol novolac resin (28064-14-4) |  |  |  |
| Persistence and degradability           | Biodegradability in soil: no data available. |  |  |
| Bisphenol A diglycidyl ether resin      |  |  |  |
| Persistence and degradability           | Not readily biodegradable in water.          |  |  |

## 12.3. Bioaccumulative potential

| Epoxy phenol novolac resin (9003-36-5)          |  |  |  |
|---|--|--|--|
| Partition coefficient n-octanol/water (Log Pow) | 2.7 – 3.6 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method) |  |  |
| Bioaccumulative potential                       | Low potential for bioaccumulation (Log Kow < 4).   |  |  |
| Titanium oxide (TiO2) (13463-67-7)              |  |  |  |
| Bioaccumulative potential                       | Not bioaccumulative.   |  |  |
| Epoxy phenol novolac resin (28064-14-4)         |  |  |  |
| Bioaccumulative potential                       | No bioaccumulation data available.   |  |  |
| Bisphenol A diglycidyl ether resin              |  |  |  |
| Partition coefficient n-octanol/water (Log Pow) | 3 (Estimated value, 25 °C)   |  |  |

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Bisphenol A diglycidyl ether resin |  |
|------------------------------------|--|
| Bioaccumulative potential          | Low potential for bioaccumulation (Log Kow < 4). |

### 12.4. Mobility in soil

| Epoxy phenol novolac resin (9003-36-5)                     |  |  |  |
|--|--|--|--|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.65 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value |  |  |
| Ecology - soil   | Low potential for mobility in soil.  |  |  |
| Titanium oxide (TiO2) (13463-67-7)                         |  |  |  |
| Surface tension  | No data available in the literature  |  |  |
| Ecology - soil   | Low potential for mobility in soil.  |  |  |
| Bisphenol A diglycidyl ether resin                         |  |  |  |
| Surface tension  | 59 mN/m (20 °C, 0.09 g/l)  |  |  |
| Ecology - soil   | No (test)data on mobility of the substance available.  |  |  |

### 12.5. Other adverse effects

No additional information available

### **SECTION 13: Disposal considerations**

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

### **SECTION 14: Transport information**

In accordance with DOT / TDG / IMDG / IATA

#### 14.1. UN number

DOT NA NO : UN3082 UN-No. (TDG) : UN3082 UN-No. (IMDG) : 3082 UN-No. (IATA) : 3082

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (Epoxy Phenol Novolac)

Proper Shipping Name (TDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Phenol Novolac)
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Phenol Novolac)

Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s. (Epoxy Phenol Novolac)

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : 9
Hazard labels (DOT) : 9

4/19/2023 (Issue date) EU - en 8/13

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations



### **TDG**

Transport hazard class(es) (TDG) : 9
Hazard labels (TDG) : 9



### **IMDG**

Transport hazard class(es) (IMDG) : 9

Hazard labels (IMDG) : 9



#### IATA

Transport hazard class(es) (IATA) : 9

Hazard labels (IATA) : 9



### 14.4. Packing group

Packing group (DOT) : III
Packing group (TDG) : III
Packing group (IMDG) : III
Packing group (IATA) : III

### 14.5. Environmental hazards

Dangerous for the environment : Yes Marine pollutant : Yes



Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

UN-No.(DOT) : UN3082

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)

: 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.

146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

173 - An appropriate generic entry may be used for this material.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T4 - 2.65 178.274(d)(2) Normal...... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 155 203 DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) 241 DOT Quantity Limitations Passenger aircraft/rail (49 : No limit

CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49

CFR 175.75)

**DOT Vessel Stowage Location** 

: No limit

: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

: UN3082 UN-No. (TDG)

EU - en 4/19/2023 (Issue date) 10/13

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**TDG Special Provisions** 

- : 16 (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks).
  - (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name:
  - (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S;
  - (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S;
  - (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S;
  - (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or
  - (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S.
  - (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment:
  - (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or
  - (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS,99 (1) Mixtures of solids that are not dangerous goods and liquids or solids that are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, may be handled, offered for transport or transported as UN3077 if there is no visible liquid when the dangerous goods are loaded into a means containment and during transport.
  - (2) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.

Explosive Limit and Limited Quantity Index : 5 L
Excepted quantities (TDG) : E1
Emergency Response Guide (ERG) Number : 171

#### **IMDG**

Special provision (IMDG) : 274, 335, 969

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : LP01, P001

Packing provisions (IMDG) : PP1

 IBC packing instructions (IMDG)
 : IBC03

 Tank instructions (IMDG)
 : T4

 Tank special provisions (IMDG)
 : TP1, TP29

EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE

EmS-No. (Spillage) : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS

Stowage category (IMDG) : A

#### **IATA**

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Special provision (IATA) : A97, A158, A197, A215

ERG code (IATA) : 9L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### **SECTION 15: Regulatory information**

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

### 15.2. International regulations

#### **CANADA**

### **Epoxy phenol novolac resin (9003-36-5)**

Listed on the Canadian DSL (Domestic Substances List)

#### Titanium oxide (TiO2) (13463-67-7)

Listed on the Canadian DSL (Domestic Substances List)

### Epoxy phenol novolac resin (28064-14-4)

Listed on the Canadian DSL (Domestic Substances List)

### Bisphenol A diglycidyl ether resin

Listed on the Canadian DSL (Domestic Substances List)

### **EU-Regulations**

No additional information available

#### **National regulations**

### Epoxy phenol novolac resin (9003-36-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### Titanium oxide (TiO2) (13463-67-7)

Listed on IARC (International Agency for Research on Cancer)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations



This product can expose you to Polar activator, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

| Component                         | State or local regulations  |
|-----------------------------------|---|
| Titanium oxide (TiO2)(13463-67-7) | U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S New York City - Right to Know Hazardous Substances List; U.S Pennsylvania - RTK (Right to Know) List |

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Full text of H-phrases |   |  |
|------------------------|---|--|
| H315                   | Causes skin irritation                          |  |
| H317                   | May cause an allergic skin reaction             |  |
| H319                   | Causes serious eye irritation                   |  |
| H351                   | Suspected of causing cancer                     |  |
| H411                   | Toxic to aquatic life with long lasting effects |  |

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



A Meridian Adhesives Group Company

### **EPO-TEK® H74F PART B**

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 4/19/2023 Version: 1.0

### **SECTION 1: Identification**

### 1.1. Identification

Product form : Mixture

Product name : EPO-TEK® H74F PART B

#### 1.2. Recommended use and restrictions on use

Recommended use : Adhesives

Restrictions on use : Not to be used for any purpose other than the one the product was designed for

### 1.3. Supplier

www.epotek.com

Epoxy Technology, Inc. 14 Fortune Drive Billerica, MA 01821 USA T 978-667-3805 - F 978-663-9782

1.4. Emergency telephone number

Emergency number : VelocityEHS: +1 (800) 255-3924, +1 (813) 248-0585

### **SECTION 2: Hazard(s) identification**

### 2.1. Classification of the substance or mixture

### **GHS US classification**

Acute toxicity (oral) Category 4 H302 Harmful if swallowed Skin corrosion/irritation Category 1B H314 Causes severe skin burns and eye damage Serious eye damage/eye irritation Category 1 H318 Causes serious eye damage Skin sensitization, Category 1 H317 May cause an allergic skin reaction Carcinogenicity Category 2 H351 Suspected of causing cancer Reproductive toxicity Category 1B H360 May damage fertility or the unborn child Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

### **GHS US labeling**

Hazard pictograms (GHS US)







Signal word (GHS US) : Danger

Hazard statements (GHS US) : H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H351 - Suspected of causing cancer

H360 - May damage fertility or the unborn child

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray. P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P272 - Contaminated work clothing must not be allowed out of the workplace.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

P302+P352 - If on skin: Wash with plenty of water.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P310 - Immediately call a poison center or doctor.

P321 - Specific treatment (see supplemental first aid instruction on this label).

P330 - Rinse mouth.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P363 - Wash contaminated clothing before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Harmful dust may be released during cutting, milling or grinding process.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### **SECTION 3: Composition/Information on ingredients**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name                   | Product identifier       | %       | GHS US classification  |
|------------------------|--------------------------|---------|--|
| Substituted imidazole* | CAS-No.: Trade<br>Secret | 30 – 60 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1B, H317                          |
| Imidazole              | CAS-No.: 288-32-4        | ≥ 30    | Acute Tox. 4 (Oral), H302<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318<br>Repr. 1B, H360                               |
| Substituted imidazole* | CAS-No.: Trade<br>Secret | 5 – 10  | Acute Tox. 4 (Oral), H302<br>Acute Tox. 3 (Dermal), H311<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Carc. 2, H351 |
| Substituted imidazole* | CAS-No.: Trade<br>Secret | < 5     | Acute Tox. 3 (Oral), H301<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335                              |

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Name                   | Product identifier       | % | GHS US classification   |
|------------------------|--------------------------|---|---|
| Substituted anhydride* | CAS-No.: Trade<br>Secret |   | Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Dermal), H312<br>Skin Corr. 1B, H314 |

<sup>\*</sup>Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Comments : Components not listed are either non-hazardous or are below reportable limits.

Full text of hazard classes and H-statements: see section 16

### **SECTION 4: First-aid measures**

### 4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a

physician immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### **SECTION 5: Fire-fighting measures**

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not

breathe dust/fume/gas/mist/vapors/spray.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer

to section 8: "Exposure controls/personal protection".

4/19/2023 (Issue date) EU - en 3/13

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

#### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public

waters.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle

until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not

eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

### **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear

### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

4/19/2023 (Issue date) EU - en 4/13

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Personal protective equipment symbol(s):







### **SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : amber
Odor : slight

Odor threshold No data available No data available рΗ Melting point No data available Freezing point No data available Boiling point No data available Flash point No data available Relative evaporation rate (butyl acetate=1) : No data available Flammability : Not applicable. Vapor pressure : No data available Relative vapor density at 20°C No data available Relative density : No data available Solubility No data available Partition coefficient n-octanol/water (Log Pow) No data available Auto-ignition temperature No data available Decomposition temperature No data available Viscosity, kinematic No data available Viscosity, dynamic No data available Explosion limits No data available Explosive properties : No data available

### 9.2. Other information

Oxidizing properties

No additional information available

### **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

: No data available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

### Safety Data Sheet

Carcinogenicity

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| Acute toxicity (inhalation)       | : Not classified   |
|-----------------------------------|--|
| EPO-TEK® H74F PART B              |  |
| ATE US (oral)                     | 490.339 mg/kg body weight  |
| Substituted anhydride             |  |
| LD50 oral rat                     | ≈ 1144 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:                                  |
| LD50 dermal rabbit                | 400 – 640 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)  |
| ATE US (oral)                     | 500 mg/kg body weight  |
| ATE US (dermal)                   | 400 mg/kg body weight  |
| Substituted imidazole             |  |
| LD50 oral rat                     | 350 mg/kg Source: IUCLID   |
| LD50 dermal rabbit                | 440 mg/kg Source: IUCLID   |
| ATE US (oral)                     | 173 mg/kg body weight  |
| ATE US (dermal)                   | 440 mg/kg body weight  |
| Substituted imidazole             |  |
| LD50 oral rat                     | 731 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)  |
| LD50 dermal rabbit                | > 400 mg/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal)   |
| LC50 Inhalation - Rat             | > 0.03 mg/l (Equivalent or similar to OECD 403, 8 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (vapours)) |
| ATE US (oral)                     | 731 mg/kg body weight  |
| Substituted imidazole             |  |
| ATE US (oral)                     | 100 mg/kg body weight  |
| Imidazole (288-32-4)              |  |
| LD50 oral rat                     | 970 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 7 day(s))   |
| ATE US (oral)                     | 960 mg/kg body weight  |
| Skin corrosion/irritation         | : Causes severe skin burns.  |
| Serious eye damage/irritation     | : Causes serious eye damage.   |
| Respiratory or skin sensitization | : May cause an allergic skin reaction.   |
| Germ cell mutagenicity            | : Not classified   |

: Suspected of causing cancer.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Substituted imidazole               |   |
|-------------------------------------|---|
| IARC group                          | 2B - Possibly carcinogenic to humans  |
| Reproductive toxicity               | : May damage fertility or the unborn child.   |
| STOT-single exposure                | : Not classified  |
| Substituted imidazole               |   |
| STOT-single exposure                | May cause respiratory irritation.   |
| STOT-repeated exposure              | : Not classified  |
| Substituted anhydride               |   |
| NOAEL (oral,rat,90 days)            | 90 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)  |
| Substituted imidazole               |   |
| NOAEL (oral,rat,90 days)            | 150 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:EPA OPPTS 870.3650 (Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test) |
| Imidazole (288-32-4)                |   |
| NOAEL (oral,rat,90 days)            | 60 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)   |
| Aspiration hazard                   | : Not classified  |
| Viscosity, kinematic                | : No data available   |
| Symptoms/effects after skin contact | : Burns. May cause an allergic skin reaction.   |
| Symptoms/effects after eye contact  | : Serious damage to eyes.   |
| Symptoms/effects after ingestion    | : Burns.  |

## SECTION 12: Ecological information

| · ·                   |  |
|-----------------------|--|
| 12.1. Toxicity        |  |
| Ecology - general :   | Before neutralisation, the product may represent a danger to aquatic organisms.                          |
| Substituted anhydride |  |
| LC50 - Fish [1]       | 100 – 215 mg/l Test organisms (species): Leuciscus idus  |
| EC50 - Crustacea [1]  | 267.94 mg/l Test organisms (species): Daphnia magna  |
| Substituted imidazole |  |
| LC50 - Fish [1]       | 0.34 mg/l Source: IUCLID   |
| EC50 - Crustacea [1]  | 180 mg/l Source: IUCLID  |
| Substituted imidazole |  |
| LC50 - Fish [1]       | 68.1 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value)           |
| EC50 - Crustacea [1]  | 297.3 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)          |
| Imidazole (288-32-4)  |  |
| LC50 - Fish [1]       | 283.6 mg/l (48 h, Leuciscus idus, Static system, Fresh water, Experimental value, Nominal concentration) |

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Imidazole (288-32-4) |  |
|----------------------|--|
| EC50 - Crustacea [1] | 341.5 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)  |
| ErC50 algae          | 133 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration) |
| NOEC chronic algae   | 25 mg/l  |

### 12.2. Persistence and degradability

| Substituted anhydride           |  |  |
|---------------------------------|--|--|
| Persistence and degradability   | Not readily biodegradable in water.                                |  |
| Substituted imidazole           |  |  |
| Persistence and degradability   | Inherently biodegradable.  |  |
| Biochemical oxygen demand (BOD) | 0.000002 g O <sub>2</sub> /g substance                             |  |
| Chemical oxygen demand (COD)    | 0.0015 g O <sub>2</sub> /g substance                               |  |
| Substituted imidazole           |  |  |
| Persistence and degradability   | Readily biodegradable in water.                                    |  |
| Imidazole (288-32-4)            |  |  |
| Persistence and degradability   | Readily biodegradable in the soil. Readily biodegradable in water. |  |

### 12.3. Bioaccumulative potential

| Substituted anhydride                           |   |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | -0.06 Source: ChemIDplus  |
| Substituted imidazole                           |   |
| Partition coefficient n-octanol/water (Log Pow) | 0.35 (Experimental value)   |
| Bioaccumulative potential                       | Low potential for bioaccumulation (Log Kow < 4).  |
| Substituted imidazole                           |   |
| Partition coefficient n-octanol/water (Log Pow) | 1.13 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)                     |
| Bioaccumulative potential                       | Low potential for bioaccumulation (Log Kow < 4).  |
| Imidazole (288-32-4)                            |   |
| Partition coefficient n-octanol/water (Log Pow) | -0.02 (Weight of evidence approach, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 $^{\circ}$ C) |
| Bioaccumulative potential                       | Not bioaccumulative.  |

### 12.4. Mobility in soil

| Substituted anhydride |  |
|-----------------------|--|
| Mobility in soil      | 15.75 Source: Quantitative Structure Activity Relation |
| Substituted imidazole |  |
| Mobility in soil      | 28.23 Source: EPI SUITE                                |

4/19/2023 (Issue date) EU - en 8/13

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Substituted imidazole                                      |   |  |
|--|---|--|
| Ecology - soil   | No (test)data on mobility of the substance available. |  |
| Substituted imidazole                                      |   |  |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.71 (log Koc, Calculated value, pH = 7)              |  |
| Ecology - soil   | Low potential for mobility in soil.                   |  |
| Imidazole (288-32-4)                                       |   |  |
| Surface tension  | No data available in the literature                   |  |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 1.36 – 2.32 (log Koc, Calculated value)               |  |
| Ecology - soil   | Low potential for adsorption in soil.                 |  |

### 12.5. Other adverse effects

No additional information available

### **SECTION 13: Disposal considerations**

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

### **SECTION 14: Transport information**

In accordance with DOT / TDG / IMDG / IATA

### 14.1. UN number

DOT NA No : UN3267 UN-No. (TDG) : UN3267 UN-No. (IMDG) : 3267 UN-No. (IATA) : 3267

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Corrosive liquid, basic, organic, n.o.s. (Imidazole)

Proper Shipping Name (TDG) : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Imidazole)
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Imidazole)

Proper Shipping Name (IATA) : Corrosive liquid, basic, organic, n.o.s. (Imidazole)

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : 8
Hazard labels (DOT) : 8



**TDG** 

Transport hazard class(es) (TDG) : 8
Hazard labels (TDG) : 8

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations



#### **IMDG**

Transport hazard class(es) (IMDG) : 8 Hazard labels (IMDG) : 8



#### IATA

Transport hazard class(es) (IATA) : 8 Hazard labels (IATA) : 8



### 14.4. Packing group

: III Packing group (DOT) : III Packing group (TDG) Packing group (IMDG) : 111 Packing group (IATA) : III

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

: UN3267 UN-No.(DOT)

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite

(31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T7 - 4 178.274(d)(2) Normal...... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154 DOT Packaging Non Bulk (49 CFR 173.xxx) 203 DOT Packaging Bulk (49 CFR 173.xxx) 241 DOT Quantity Limitations Passenger aircraft/rail (49 : 5 L CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49

CFR 175.75)

**DOT Vessel Stowage Location** : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

: 60 L

EU - en 10/13 4/19/2023 (Issue date)

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters",52 - Stow "separated from" acids

**TDG** 

UN-No. (TDG) : UN3267

TDG Special Provisions : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly

contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks).

(2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name:

(a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S;

(b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S;

(c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S;

(d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or

(e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S.

(3) Despite subsection (1), the technical name for the following dangerous goods is not required

to be shown on a small means of containment:

(a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or

(b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS.

Explosive Limit and Limited Quantity Index : 5 L

Excepted quantities (TDG) : E1

Passenger Carrying Road Vehicle or Passenger : 5 L

Carrying Railway Vehicle Index

Emergency Response Guide (ERG) Number : 153

**IMDG** 

Special provision (IMDG) : 223, 274
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP28

EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE

EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES

Stowage category (IMDG) : A

Properties and observations (IMDG) : Reacts violently with acids. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA) : E1 PCA Limited quantities (IATA) : Y841 PCA limited quantity max net quantity (IATA) : 1L PCA packing instructions (IATA) : 852 PCA max net quantity (IATA) : 5L : 856 CAO packing instructions (IATA) CAO max net quantity (IATA) 60L Special provision (IATA) A3, A803 ERG code (IATA) 8L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### **SECTION 15: Regulatory information**

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

#### 15.2. International regulations

#### **CANADA**

### **Substituted anhydride**

Listed on the Canadian DSL (Domestic Substances List)

### Substituted imidazole

Listed on the Canadian NDSL (Non-Domestic Substances List)

### Substituted imidazole

Listed on the Canadian DSL (Domestic Substances List)

#### Substituted imidazole

Listed on the Canadian DSL (Domestic Substances List)

### Imidazole (288-32-4)

Listed on the Canadian DSL (Domestic Substances List)

### **EU-Regulations**

No additional information available

### **National regulations**

### Substituted anhydride

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### Substituted imidazole

Listed on IARC (International Agency for Research on Cancer)

### Imidazole (288-32-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations



This product can expose you to Substituted imidazole, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

### **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Full text of H-phrases

H301 Toxic if swallowed

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Full text of H-phrases |  |
|------------------------|--|
| H302                   | Harmful if swallowed                     |
| H311                   | Toxic in contact with skin               |
| H312                   | Harmful in contact with skin             |
| H314                   | Causes severe skin burns and eye damage  |
| H315                   | Causes skin irritation                   |
| H317                   | May cause an allergic skin reaction      |
| H318                   | Causes serious eye damage                |
| H335                   | May cause respiratory irritation         |
| H351                   | Suspected of causing cancer              |
| H360                   | May damage fertility or the unborn child |

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.