

EPILUX 219 HB Part – A (Base)

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name : Epilux 219 HB Part A
 Product Type : HB Epoxy Undercoat
 Supplier : Berger Paints Emirates Limited
 P O Box 27524, Dubai, UAE
 Telephone Number : 009714-391000
 Emergency Telephone Number : 009714-391078

2. COMPOSITION/INFORMATION ON INGREDIENTS :

	<u>Weight%</u>	<u>CAS Number</u>	<u>LEL Vol%</u>	<u>ACGIH TLV-TWA</u>
• Epoxy Resin	16 - 35			
• Titanium Dioxide	0 - 25	13463-67-7	NA	10 mg/m ³
• Iron Oxide	0 - 15	1309-37-1	NA	10 mg/m ³
• Carbon Black	0 - 1.5	1333-86-4	NA	3.5 mg/m ³
• Copper Phthalocyanine	0 - 3	147-14-8	NA	
• Copper Phthalocyanine Chlorinated	0 - 3	1328-53-6	NA	
• Crystalline Silica	10 - 35	14808-60-7	NA	0.1 mg/m ³
• Talc	0 - 10	14807-96-6	NA	2.0 mg/m ³
• Blanc Fixe	0 - 10	7727-43-7	NA	6.0 mg/m ³
• 2-Ethoxy Ethanol	0 - 4	110-80-5	1.7	5 ppm
• Xylene	15 - 22	1330-20-7	1.2	100 ppm
• n-Butanol	1 - 3	71-36-3	1.4	50 ppm

3. HAZARDS IDENTIFICATION :

- Hazards identification of the preparation :
 - R-10 : Flammable
 - R-20/21 Harmful by inhalation and in contact with skin
 - R-38 Irritating to skin

4. FIRST AID MEASURES :

- General : Remove contaminated clothing.
- First Aid - Inhalation : Remove to fresh air. If rapid recovery does not occur, obtain medical attention.
- First Aid - Skin : Remove contaminated clothing immediately. Wash skin thoroughly with soap and water.
- First Aid - Eye : Irrigate copiously with clean, fresh water for atleast 10 minutes, holding the eye lids apart and seek medical advice.
- First Aid - Ingestion : Do not induce vomiting. Obtain immediate medical attention.

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5. FIRE FIGHTING MEASURES :

- Specific hazards : Fire will produce dense, black smoke. Inhalation of decomposition products may cause serious health hazards.
- Extinguishing media : Water spray-mist, foam, dry chemical powder, carbon dioxide, sand.
- Unsuitable extinguishing media : Water in a jet.

6. ACCIDENTAL RELEASE MEASURES :

- Personal precautions : Avoid contact with skin and eyes. Do not breathe vapour. Extinguish naked flames. Remove ignition sources. Avoid sparks.
- Personal protection : Wear PVC gloves, safety boots. Wear full face-piece respirator with organic vapour canister NPF 400. In a confined space, wear self-contained breathing apparatus open circuit type NPF 2000.
- Environmental precautions : Prevent contamination of soil and water.
- Processing for Cleaning/
Collecting : Contain and collect spillage with non-combustible absorbent materials, e.g., sand, earth or spill control material and place in a container for disposal according to local regulation

7. HANDLING AND STORAGE:

Avoid prolonged or repeated contact with skin. Do not breathe vapour, spray/mists. Extinguish any naked flames. Remove ignition sources. Avoid spark. Do not smoke. Take precautionary measures against static discharges.

- Handling temperature : Ambient
- Storage : Keep container tightly closed and in a well ventilated place. Keep away from direct sunlight and other sources of heat or ignition. Do not smoke in storage areas.
- Storage temperature : Ambient.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION :

- Engineering Control measures : Use only in well ventilated areas.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hand protection : PVC gloves. Barrier creams may help to protect the exposed areas of the skin.
- Eye protection : Use safety eyewear designed to protect against splash of products.

9. PHYSICAL AND CHEMICAL PROPERTIES :

Physical state	: Liquid
Odour	: Like organic solvents
<u>Safety related information :</u>	<u>Value</u>
Flash Point	23 - 29°C (closed cup)
Ignition temperature	> 350°C
Initial Boiling Point	137°C (Based on Xylene)
Vapour Density (Vs. Air)	Heavier
Evaporation Rate (Vs. n-Bu. Acetate)	Slower
Density at 25°C	1.2 - 1.4 gm/cc
Solubility in water	Negligible

10. STABILITY/REACTIVITY :

Stability	: Stable under normal conditions.
Conditions to avoid	: Heat, flames and sparks. Caustic soda induce a vigorous polymerisation at a temperature around 200°C
Materials to avoid	: Strong Oxidising agents. Caustic Soda
Hazardous decomposition products	: Unknown

11. TOXICOLOGICAL INFORMATION :

Basis for assessment	: This product was not tested but the information given is based on the known toxicological data of the constituents
Acute toxicity - oral	: LD 50 expected to be > 2000 mg/kg based on Xylene
Acute toxicity - dermal	: LD 50 expected to be > 2000 mg/kg based on Xylene
Eye irritation	: The liquid splashed in the eyes may cause irritation.
Skin irritation	: Irritant

12. ECOLOGICAL INFORMATION

Water contamination class	: 2 (self classification)
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13. DISPOSAL CONSIDERATIONS :

Precautions	: Refer to Section 7
Waste disposal	: Recover or recycle if possible. Otherwise incineration.
Container disposal	: Allow the residue to dry and dispose of as scrap metal.

14. TRANSPORT INFORMATION :

UN Number	: 1263
IMCO Class	: 3.3
Page Number	: 3149
Marine Pollutant	: Yes
Proper shipping name	: Paint

15. **REGULATORY INFORMATION :**

- EC Classification : Flammable, Harmful
- Contains : Xylene
- EC Risk phrases
 - R-10 : Flammable.
 - R-20/21 : Harmful by inhalation and in contact with skin
 - R-38 : Irritating to skin
- EC Safety Phrases
 - S-24 : Avoid contact with skin
 - S-25 : Avoid contact with eyes
 - S-36/37 : Wear suitable protective clothing and gloves
 - S51 : Use only in well ventilated areas.

16. **DISCLAIMER :**

This information is based on our current knowledge and is obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding the correctness. This information is extended to describe the product for the purposes of health, safety and environmental requirements only. The conditions or methods of handling, storage, use or disposal of the product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage connected with the handling, storage, use or disposal of the product.

Material Safety Data Sheet**EPILUX 219 HB EPOXY****Part B****1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY :**

Product Name : Epilux 219 HB Epoxy Undercoat Part B
Product Type : For all shades
Supplier : Berger Paints Emirates Limited
P O Box 27524, Dubai, UAE.
Telephone Number : 009714-391000
Emergency Telephone Number : 009714-391078

2. COMPOSITION/INFORMATION ON INGREDIENTS :

	<u>Weight%</u>	<u>CAS Number</u>	<u>LEL Vol%</u>	<u>ACGIH TLV-TWA</u>
• Polyamine Resin	70 - 90			
• 2,4,6 Tris (Dimethyl aminomethyl) Phenol	5 - 15	90-72-2	N/A	Not established
• Mono amine	5 - 15	000112-24-3	1	Not established

3. HAZARDS IDENTIFICATION :

- Hazards identification of the preparation :
 - R-10 : Flammable
 - R-20/21 Harmful by inhalation and in contact with skin
 - R-36/38 Irritating to eyes and skin
 - R-43 May cause sensitization by skin contact

4. FIRST AID MEASURES :

General : Remove contaminated clothing.
First Aid - Inhalation : Remove to fresh air. If rapid recovery does not occur, obtain medical attention.
First Aid - Skin : Remove contaminated clothing immediately. Wash skin thoroughly with soap and water.
First Aid - Eye : Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eye lids apart and seek medical advice.
First Aid - Ingestion : Do not induce vomiting. Obtain immediate medical attention.

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5. FIRE FIGHTING MEASURES :

- Specific hazards : Fire will produce dense, black smoke. Inhalation of decomposition products may cause serious health hazards.
- Extinguishing media : Water spray-mist, foam, dry chemical powder, carbon dioxide, sand.
- Unsuitable extinguishing media : Water in a jet.

6. ACCIDENTAL RELEASE MEASURES :

- Personal precautions : Avoid contact with skin and eyes. Do not breathe vapour. Extinguish naked flames. Remove ignition sources. Avoid sparks.
- Personal protection : Wear PVC gloves, safety boots. Wear full face-piece respiratory with organic vapour canister NPF 400. In a confined space, wear self-contained breathing apparatus open circuit type NPF 2000.
- Environmental precautions : Prevent contamination of soil and water.
- Processing for Cleaning/Collecting : Contain and collect spillage with non-combustible absorbent materials, e.g., sand, earth or spill control material and place in a container for disposal according to local regulation.

7. HANDLING AND STORAGE :

- Avoid prolonged or repeated contact with skin. Do not breathe vapour, spray/mist. Extinguish any naked flames. Remove ignition sources. Avoid spark. Do not smoke. Take precautionary measures against static discharge.

- Handling temperature : Ambient
- Storage : Keep container tightly closed and in a well ventilated place. Keep away from direct sunlight and other sources of heat or ignition. Do not smoke in storage areas.
- Storage temperature : Ambient.

8. EXPOSURE CONTROL/PERSONAL PROTECTION :

- Engineering Control measures : Use only in well ventilated areas.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hand protection : PVC Gloves. Barrier creams may help to protect the exposed areas of the skin.
- Eye protection : Use safety eyewear designed to protect against splash of products.

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9. PHYSICAL AND CHEMICAL PROPERTIES :

- | | |
|--------------------------------------|-------------------------|
| Physical state | : Liquid |
| Odour | : Aromatic |
| <u>Safety related information</u> | <u>Value</u> |
| Flash Point | : 135 °C (closed cup) |
| Ignition temperature | : > 320°C |
| Initial Boiling Point | : 135°C (Based on TETA) |
| Vapour Density (Vs. Air) | : Heavier |
| Evaporation Rate (Vs. n-Bu. Acetate) | : Slower |
| Density at 25°C | : 0.85 - 0.95 |
| Solubility in water | : Partly miscible |
10. **STABILITY/REACTIVITY :**
- | | |
|----------------------------------|--|
| Stability | : Stable under normal conditions. |
| Conditions to avoid | : Heat, flames and sparks. |
| Materials to avoid | : Strong Oxidising agents, strong acids and strong bases |
| Hazardous decomposition products | : Burning produces obnoxious and toxic fumes, carbon oxides and nitrogen oxides. |
11. **TOXICOLOGICAL INFORMATION :**
- | | |
|-----------------------------|--|
| Basis for assessment | : This product was not tested but the information given is based on the known toxicological data of the constituents |
| Acute toxicity - Oral | : LD 50 > 2000 mg/kg based on Xylene |
| Acute dermal irritation | : LD 50 > 2000 mg/kg based on Xylene |
| Acute toxicity - inhalation | : LC 50 > 5 mg/l based on Xylene |
| Eye irritation | : Irritant |
| Skin irritation | : Irritant |
12. **ECOLOGICAL INFORMATION :**
- | | |
|---------------------------|-------------------------------------|
| Water contamination class | : Do not contaminates surface water |
|---------------------------|-------------------------------------|
13. **DISPOSAL CONSIDERATIONS :**
- | | |
|--------------------|---|
| Precautions | : Refer to Section 7 |
| Waste disposal | : Recover or recycle if possible. Otherwise incineration. |
| Container disposal | : Allow the residue to dry and dispose of as scrap metal. |
14. **TRANSPORT INFORMATION :**
- | | |
|----------------------|---------|
| UN Number | : 1263 |
| IMCO Class | : 3.3 |
| Page Number | : 3149 |
| Marine Pollutant | : Yes |
| Proper shipping name | : Paint |

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15. REGULATORY INFORMATION :

- | | |
|---------------------|--|
| EC Classification | : Flammable, Harmful. |
| Contains | : Xylene, 2,4,6 Tris (dimethyl amino methyl) phenol |
| • EC Risk phrases | |
| R-10 | : Flammable |
| R-20/21 | : Harmful by inhalation and in contact with skin |
| R-36/38 | : Irritating to eyes and skin |
| R-43 | : May cause sensitisation by skin contact |
| • EC Safety Phrases | |
| S-24/25 | : Avoid contact with skin and eyes. |
| S-36/37/39 | : Wear suitable protective clothing, gloves and eyes and face protector. |

16. DISCLAIMER :

This information is based on our current knowledge and is obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding the correctness. This information is extended to describe the product for the purposes of health, safety and environmental requirements only. The conditions or methods of handling, storage, use or disposal of the product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage connected with the handling, storage, use or disposal of the product.

MATERIAL SAFETY DATA SHEET

EPI LUX 219 REDDISH GREY RESIN



1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Identification of the substance or mixture

Product name : EPI LUX 219 REDDISH GREY RESIN
Product code : EG-IB314Z017
Chemical name : Not available.
Synonyms : Not available.
Chemical formula : Not applicable.
CAS number : Not applicable.

Company/undertaking identification

Manufacturer : 6th of October City,
4th Industrial Zone,
(1/3/B)/B, Egypt.
Supplier : 6th of October City,
4th Industrial Zone,
(1/3/B)/B, Egypt.
e-mail address of person responsible for this SDS : info@scibpaints.com
Emergency telephone number (with hours of operation) : Tel : (202) 38281090
Fax : (202) 38331271

2. HAZARDS IDENTIFICATION

Classification : Irritant
Risk phrases : R10- Flammable.
R38- Irritating to skin.
Physical/chemical hazards : Flammable.
Human health hazards : Irritating to skin.
Additional hazards : None known.

See Section 11 for more detailed information on health effects and symptoms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Mixture

Ingredient name	CAS number	%
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	5 - 15
Crystalline silica (Quartz)	14808-60-7	5 - 15
m-xylene	108-38-3	5 - 15
titanium dioxide	13463-67-7	5 - 15
2-methoxy-1-methylethyl acetate	108-65-6	1 - 5
xylene	1330-20-7	1 - 5
benzyl alcohol	100-51-6	1 - 5
N-methyl-2-pyrrolidone	872-50-4	0 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

See Section 11 for more detailed information on health effects and symptoms.

5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable** : Recommended: alcohol-resistant foam, CO₂, powders, water spray.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

6. ACCIDENTAL RELEASE MEASURES

Large spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. HANDLING AND STORAGE

Handling

: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

Ingredient name

Occupational exposure limits

Crystalline silica (Quartz)

ACGIH TLV (United States, 3/2012).

TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction

m-xylene

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 50 ppm 8 hours.

TWA: 221 mg/m³ 8 hours.

STEL: 100 ppm 15 minutes.

STEL: 442 mg/m³ 15 minutes.

titanium dioxide

ACGIH TLV (United States, 3/2012).

TWA: 10 mg/m³ 8 hours.

2-methoxy-1-methylethyl acetate

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 50 ppm 8 hours.

TWA: 275 mg/m³ 8 hours.

STEL: 100 ppm 15 minutes.

STEL: 550 mg/m³ 15 minutes.

xylene

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 50 ppm 8 hours.

TWA: 221 mg/m³ 8 hours.

STEL: 100 ppm 15 minutes.

STEL: 442 mg/m³ 15 minutes.

N-methyl-2-pyrrolidone

EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values

TWA: 40 mg/m³ 8 hours.

TWA: 10 ppm 8 hours.

STEL: 80 mg/m³ 15 minutes.

STEL: 20 ppm 15 minutes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

calcium carbonate

OSHA PEL 1989 (United States, 3/1989).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust

NIOSH REL (United States, 1/2013).

TWA: 5 mg/m³ 10 hours. Form: Respirable fraction

TWA: 10 mg/m³ 10 hours. Form: Total

OSHA PEL (United States, 6/2010).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust

Crystalline silica (Quartz)

OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO₂+5)

TWA: 250 MPPCF / (%SiO₂+5) 8 hours. Form: Respirable

OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO₂+2)

TWA: 10 MG/M3 / (%SiO₂+2) 8 hours. Form: Respirable

OSHA PEL 1989 (United States, 3/1989). Notes: as quartz

TWA: 0.1 mg/m³, (as quartz) 8 hours. Form: Respirable dust

ACGIH TLV (United States, 3/2012).

TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction

NIOSH REL (United States, 1/2013).

TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO₂+2)

TWA: 30 MG/M3 / (%SiO₂+2) 8 hours. Form: Total dust.

m-xylene

ACGIH TLV (United States, 3/2012).

TWA: 100 ppm 8 hours.

TWA: 434 mg/m³ 8 hours.

STEL: 150 ppm 15 minutes.

STEL: 651 mg/m³ 15 minutes.

OSHA PEL 1989 (United States, 3/1989).

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

STEL: 150 ppm 15 minutes.

STEL: 655 mg/m³ 15 minutes.

NIOSH REL (United States, 1/2013).

TWA: 100 ppm 10 hours.

TWA: 435 mg/m³ 10 hours.

STEL: 150 ppm 15 minutes.

STEL: 655 mg/m³ 15 minutes.

OSHA PEL (United States, 6/2010).

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

titanium dioxide

ACGIH TLV (United States, 3/2012).

TWA: 10 mg/m³ 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 10 mg/m³ 8 hours. Form: Total dust

OSHA PEL (United States, 6/2010).

TWA: 15 mg/m³ 8 hours. Form: Total dust

Propylene glycol monomethyl ether acetate

AIHA WEEL (United States, 10/2011).

TWA: 50 ppm 8 hours.

xylene

ACGIH TLV (United States, 3/2012).

TWA: 100 ppm 8 hours.

TWA: 434 mg/m³ 8 hours.

STEL: 150 ppm 15 minutes.

STEL: 651 mg/m³ 15 minutes.

OSHA PEL 1989 (United States, 3/1989).

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

STEL: 150 ppm 15 minutes.

STEL: 655 mg/m³ 15 minutes.

OSHA PEL (United States, 6/2010).

TWA: 100 ppm 8 hours.

TWA: 435 mg/m³ 8 hours.

benzyl alcohol

AIHA WEEL (United States, 10/2011).

TWA: 10 ppm 8 hours.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Recommended monitoring procedures	: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Exposure controls	
Occupational exposure controls	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory protection	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Eye protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Skin protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid.
Odor	: Not available.
Odor threshold	: Not available.
pH	: Not available.
Boiling point	: Not available.
Melting point	: Not available.
Flash point	: Closed cup: 26.85°C (80.3°F) [Abel's close cup]
Vapor pressure	: Not available.
Solubility	: Not available.
Vapor density	: Not available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Auto-ignition temperature : Not available.

Density : 1.6894 g/cm³

Flammability : Not available.

10. STABILITY AND REACTIVITY

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : No known incompatibility

11. TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : Irritating to mouth, throat and stomach.

Skin contact : Irritating to skin.

Eye contact : May cause eye irritation.

Potential chronic health effects

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
m-xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 10 Micrograms	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms	-
				Intermittent	
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Skin - Mild irritant	Man	-	48 hours 16 milligrams	-
benzyl alcohol	Skin - Moderate irritant	Pig	-	100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
N-methyl-2-pyrrolidone			Repr. Cat. 2; R61	

Chronic effects : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

11. TOXICOLOGICAL INFORMATION

- Fertility effects** : No known significant effects or critical hazards.
- Denmark Carcinogen list** : Contains a substance or substances listed under National Working Environment Authorities Executive Order 908/2005.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
- Eyes** : No specific data.

12. ECOLOGICAL INFORMATION

- Ecotoxicity** : No known significant effects or critical hazards.

Aquatic ecotoxicity

- Conclusion/Summary** : Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low
m-xylene	3.2	8.1 to 25.9	low
titanium dioxide	-	352	high
2-methoxy-1-methylethyl acetate	1.2	-	low
xylene	3.12	8.1 to 25.9	low
benzyl alcohol	1.1	-	low
N-methyl-2-pyrrolidone	-0.38	-	low

- Other adverse effects** : No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste product residues should not be disposed of via the sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	UN1993	FLAMMABLE LIQUID, N.O.S. (m-xylene, Propylene glycol monomethyl ether acetate)	3	III		Special provisions 640 (E) Tunnel code (D/E)
ADN/ADNR Class	UN1993	FLAMMABLE LIQUID, N.O.S. (m-xylene, Propylene glycol monomethyl ether acetate)	3	III		-

14. TRANSPORT INFORMATION

IMDG Class	UN1993	FLAMMABLE LIQUID, N.O.S. (m-xylene, Propylene glycol monomethyl ether acetate). Marine pollutant (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, m-xylene)	3	III		-
IATA Class	UN1993	FLAMMABLE LIQUID, N.O.S. (m-xylene, Propylene glycol monomethyl ether acetate)	3	III		-

PG* : Packing group

15. REGULATORY INFORMATION**Hazard symbol or symbols** :

Irritant

Risk phrases: R10- Flammable.
R38- Irritating to skin.**Safety phrases**: S2- Keep out of the reach of children.
S46- If swallowed, seek medical advice immediately and show this container or label.**Product use**

: Consumer applications.

16. OTHER INFORMATION**National Fire Protection Association (U.S.A.)** :**History****Date of printing** : 26-04-2016.**Date of issue/ Date of revision** : 26-04-2016.**Date of previous issue** : No previous validation.**Version** : 1

Indicates information that has changed from previously issued version.

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