

SAFETY DATA SHEET

F69 TUK RED TRAFFIC RAL 3000

Safety data sheet according to GOST 30333-2007

Section 1. Chemical product and company identification

GHS product identifier : F69 TUK RED TRAFFIC RAL 3000
SDS code : 21069400K

Relevant identified uses of the substance or mixture and uses advised against

| Identified uses |
|--|
| Paint. Professional use Industrial use |
| Uses advised against |
| All other uses |

Product use : Two component coating for interior use.

Supplier's details

MAPAERO SAS
 10, Avenue de la Rijole CS30098
 09103 PAMIERS Cedex
 France


**National advisory body/
 Poison Center (For use only
 by licensed medical
 professionals.)** : 8-10-1-202-625-3333 / 8-10-1-202-784-4660

**e-mail address of person
 responsible for this SDS** : PSRA_PAMIERS@akzonobel.com

**Emergency telephone
 number (with hours of
 operation)** : +33 (0)5 34 01 34 01
 +33 (0)5 61 60 23 30

Section 2. Hazards identification

Classification of the substance or mixture according to GOST 32419-2013 and GOST 32423/24/25-2013

**Classification of the
 substance or mixture** :  FLAMMABLE LIQUIDS - Category 3
 ACUTE TOXICITY (oral) - Category 5
 SKIN CORROSION/IRRITATION - Category 1C
 CHEMICALS THAT CAUSE SENSITIZATION - Chemical which cause skin sensitization
 GERM CELL MUTAGENICITY - Category 2
 TOXIC TO REPRODUCTION - Category 1B
 AQUATIC HAZARD (ACUTE) - Category 2
 AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

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Section 2. Hazards identification

Hazard pictograms



Signal word

: **Danger**

Hazard statements

: **H228** Flammable liquid and vapor.
H302 May be harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H332 Suspected of causing genetic defects.
H350 May damage fertility or the unborn child.
H410 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

: **P201** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. **P202** Wear protective gloves, protective clothing and eye or face protection. **P203** Keep away from flames and hot surfaces. No smoking. **P204** Use explosion-proof electrical, ventilating or lighting equipment. **P205** Use non-sparking tools. **P206** Take action to prevent static discharges. **P207** Avoid release to the environment. **P209** Do not breathe vapor.

Response

: **P301+P312** Collect spillage. Immediately call a POISON CENTER or physician. **P302+P352** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. **P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. **P304+P340** IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Call a POISON CENTER or physician. **P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

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

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

| Ingredient name | % | CAS number | Classification | Type |
|---|-----------|------------|--|---------|
| butan-2-ol | ≥10 - <20 | 78-92-2 | FLAMMABLE LIQUIDS - Category 3 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 | [1] [2] |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | ≥10 - ≤25 | 25068-38-6 | SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A CHEMICALS THAT CAUSE SENSITIZATION - Chemical which cause skin sensitization AQUATIC HAZARD (LONG-TERM) - Category 2 | [1] |
| nitroethane | ≤10 | 79-24-3 | FLAMMABLE LIQUIDS - Category 3 | [1] [2] |

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Section 3. Composition/information on ingredients

| | | | | |
|---|-----|------------|---|-----|
| 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane | ≤10 | 30499-70-8 | ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1C CHEMICALS THAT CAUSE SENSITIZATION - Chemical which cause skin sensitization GERM CELL MUTAGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2 | [1] |
| Terphenyl, hydrogenated | ≤3 | 61788-32-7 | AQUATIC HAZARD (LONG-TERM) - Category 2 | [1] |
| zinc oxide | ≤3 | 1314-13-2 | AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 | [1] |
| Amines, polyethylenepoly-, triethylenetetramine fraction | ≤3 | 90640-67-8 | ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION/IRRITATION - Category 1B CHEMICALS THAT CAUSE SENSITIZATION - Chemical which cause skin sensitization AQUATIC HAZARD (LONG-TERM) - Category 3 | [1] |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | ≤3 | 2530-83-8 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 | [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.

Type

- [1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit
 [3] Additional disclosure due to company policy

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

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Section 4. First aid measures

- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : May be harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : 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.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. 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 only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : 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. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : 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. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|-------------------------|---|
| butan-2-ol | ACGIH TLV (United States, 3/2020). TWA: 303 mg/m ³ 8 hours. |
| nitroethane | ACGIH TLV (United States, 3/2020). TWA: 100 ppm 8 hours. |
| Terphenyl, hydrogenated | ACGIH TLV (United States, 3/2020). TWA: 307 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. |
| | ACGIH TLV (United States, 3/2020). TWA: 0.5 ppm 8 hours. TWA: 4.9 mg/m ³ 8 hours. |

Section 8. Exposure controls/personal protection

- Appropriate engineering 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.
- 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.

Individual protection measures

- 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- 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.
- Body 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Red.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 25°C

Section 9. Physical and chemical properties

| | |
|---|--|
| Evaporation rate | : Not available. |
| Flammability (solid, gas) | : Not available. |
| Upper/lower flammability or explosive limits | : Greatest known range: Lower: 1.7% Upper: 9% (butan-2-ol) |
| Vapor pressure | : Not available. |
| Vapor density | : Highest known value: 7.95 (Air = 1) (Terphenyl, hydrogenated). Weighted average: 2.81 (Air = 1) |
| Relative density | : Not available. |
| Solubility(ies) | : Insoluble in the following materials: cold water. |
| Partition coefficient: n-octanol/ water | : Not available. |
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : Not available. |
| Viscosity | : Kinematic (room temperature): 4.07 cm ² /s Kinematic (40°C): 1.01 cm ² /s |

Section 10. Stability and reactivity

| | |
|---|---|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| 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. |
| Incompatible materials | : Reactive or incompatible with the following materials: oxidizing materials |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure | |
|-------------------------|-----------------------|----------------------|-------------------------|-----------|---|
| butan-2-ol | LC50 Inhalation Gas. | Rat | 8000 ppm | 4 hours | |
| | LC50 Inhalation Vapor | Rat | 48500 mg/m ³ | 4 hours | |
| | LD50 Intraperitoneal | Guinea pig | 1067 mg/kg | - | |
| | LD50 Intraperitoneal | Mouse | 771 mg/kg | - | |
| | LD50 Intraperitoneal | Rabbit | 277 mg/kg | - | |
| | LD50 Intraperitoneal | Rat | 1193 mg/kg | - | |
| | LD50 Intravenous | Mouse | 764 mg/kg | - | |
| | LD50 Intravenous | Rat | 138 mg/kg | - | |
| | LD50 Oral | Rabbit | 4893 mg/kg | - | |
| | LD50 Oral | Rabbit | 4890 mg/kg | - | |
| | LD50 Oral | Rat | 2193 mg/kg | - | |
| | LD50 Oral | Rat | 2054 mg/kg | - | |
| | nitroethane | LD50 Intraperitoneal | Mouse | 310 mg/kg | - |
| | | LD50 Oral | Mouse | 860 mg/kg | - |
| Terphenyl, hydrogenated | LD50 Oral | Rat | 1100 mg/kg | - | |
| | LD50 Oral | Mouse | 12500 mg/kg | - | |

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Section 11. Toxicological information

| | | | | |
|--|----------------------|--------|--------------|---|
| zinc oxide [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | LD50 Oral | Rat | 17500 mg/kg | - |
| | LD50 Oral | Rat | >24000 mg/kg | - |
| | LD50 Oral | Rat | >10000 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 240 mg/kg | - |
| | LD50 Oral | Mouse | 7950 mg/kg | - |
| | LD50 Dermal | Rabbit | 3970 uL/kg | - |
| | LD50 Oral | Rat | 7.01 g/kg | - |
| | LD50 Oral | Rat | 22600 uL/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|-----------------|-------------|
| butan-2-ol reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | Eyes - Severe irritant | Rabbit | - | 0.1 MI | - |
| | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| zinc oxide | Skin - Moderate irritant | Rabbit | - | 24 hours 500 UI | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|------------|------------|-------------------|------------------------------|
| butan-2-ol | Category 3 | - | Respiratory tract irritation |
| | Category 3 | - | Narcotic effects |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

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Section 11. Toxicological information

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : Suspected of causing genetic defects.
- Reproductive toxicity** : May damage fertility or the unborn child.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--------------------------|-------------------------------------|--------------------------------------|----------|
| Butan-2-ol zinc oxide | Acute EC50 4227 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 3670000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute EC50 1 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute EC50 0.622 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute EC50 0.481 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 1.25 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 98 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 2246000 µg/l Fresh water | Fish - Pimephales promelas - Neonate | 96 hours |
| | Acute LC50 1.1 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute LC50 3.969 mg/l Fresh water | Fish - Danio rerio - Adult | 96 hours |
| | Acute LC50 2.525 mg/l Fresh water | Fish - Danio rerio - Adult | 96 hours |

Persistence and degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-------|-----------|
| Butan-2-ol | 0.61 | - | low |
| reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | 2.64 to 3.78 | 31 | low |
| nitroethane | 0.18 | - | low |
| Terphenyl, hydrogenated | - | 5200 | high |
| zinc oxide | - | 28960 | high |
| Amines, polyethylenepoly-, triethylenetetramine fraction | -2.65 | - | low |

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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.

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Section 13. Disposal considerations

internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | ADR/RID | IMDG | IATA |
|----------------------------|--|--|--|
| UN number | UN3469 | UN3469 | UN3469 |
| UN proper shipping name | PAINT, FLAMMABLE, CORROSIVE | PAINT, FLAMMABLE, CORROSIVE | PAINT, FLAMMABLE, CORROSIVE |
| Transport hazard class(es) | 3 (8)  | 3 (8)  | 3 (8)  |
| Packing group | III | III | III |
| Environmental hazards | Yes. | Marine Pollutant(s): Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane | Yes. The environmentally hazardous substance mark is not required. |

Additional information

- ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Tunnel code (D/E)
- IMDG** : **Emergency schedules** F-E, S-C
The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

National inventory

- Australia** : Not determined.
- Canada** : At least one component is not listed.
- China** : Not determined.
- Europe** : Not determined.
- Japan** : **Japan inventory (ENCS):** Not determined.
Japan inventory (ISHL): Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : Not determined.
- Thailand** : Not determined.
- Turkey** : Not determined.

Section 15. Regulatory information

United States : All components are active or exempted.
Viet Nam : Not determined.

Section 16. Other information

History

Date of printing : 6 October 2022
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Key to abbreviations : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 GOST = Gosudarstvenny standart
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

| Classification | Justification |
|--|-----------------------|
| <input checked="" type="checkbox"/> FLAMMABLE LIQUIDS - Category 3 | On basis of test data |
| ACUTE TOXICITY (oral) - Category 5 | Calculation method |
| SKIN CORROSION/IRRITATION - Category 1C | Calculation method |
| CHEMICALS THAT CAUSE SENSITIZATION - Chemical which cause skin sensitization | Calculation method |
| GERM CELL MUTAGENICITY - Category 2 | Calculation method |
| TOXIC TO REPRODUCTION - Category 1B | Calculation method |
| AQUATIC HAZARD (ACUTE) - Category 2 | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 2 | Calculation method |

Indicates information that has changed from previously issued version.

Notice to reader

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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Section 16. Other information

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