## Section 1. Identification of the substance/preparation and of the company/undertaking

**Product name:** LOCTITE EA 3421 A

**Other means of identification:** LOCTITE EA 3421 A SFG EX
**Product code:** IDH1980782
**Recommended use of the chemical and restrictions on use**

**Intended use:** Epoxy resin
**Manufacturer/Importer/Distributor Representative Company**

Henkel Adhesive Tech. Vietnam Co., Ltd,
No. 7, Road 9A Bien Hoa II Industrial Zone,
Bien Hoa City,
810000 Dong Nai Province

Vietnam

Phone: +84 (28) 7100 6301
Fax-no.: +84 (28) 7100 6300

**E-mail address of person responsible for Safety Data Sheet:** ap-ua-psra.sea@henkel.com

**Emergency Telephone for Chemical Accidents:** FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call: +84 28 71006388

## Section 2. Hazards identification

**GHS Classification:**

| Hazard Class | Hazard Category |
|---|---|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Skin sensitizer | Category 1 |
| Chronic hazards to the aquatic environment | Category 2 |

**GHS label elements:**

**Hazard pictogram:**



**Signal word:** Warning

**Hazard statement:**
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.

**Precaution:**

**Prevention:**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**
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.
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.
P391 Collect spillage.

**Disposal:**
P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## Section 3. Composition / information on ingredients

**Substance or Mixture:**
Mixture

**Declaration of hazardous chemical:**

| Hazard component CAS-No. | Content | GHS Classification |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | 30- 60 % | Skin corrosion/irritation 2<br>H315<br>Serious eye damage/eye irritation 2A<br>H319<br>Skin Sensitization 1<br>H317<br>Acute hazards to the aquatic environment 2<br>H401<br>Chronic hazards to the aquatic environment 2<br>H411 |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | 30- 60 % | Skin corrosion/irritation 2<br>H315<br>Skin Sensitization 1A<br>H317<br>Acute hazards to the aquatic environment 2<br>H401<br>Chronic hazards to the aquatic environment 2<br>H411 |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | 1- 10 % | Acute toxicity 5; Oral<br>H303<br>Skin Sensitization 1A<br>H317<br>Acute hazards to the aquatic environment 2<br>H401<br>Chronic hazards to the aquatic environment 2<br>H411 |

## Section 4. First aid measures

**Inhalation:**
Move to fresh air. If symptoms persist, seek medical advice.

| | |
|---|---|
| **Skin contact:** | Rinse with running water and soap.<br>Obtain medical attention if irritation persists. |
| **Eye contact:** | Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist. |
| **Ingestion:** | Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor. |

## Section 5. Fire fighting measures

| | |
|---|---|
| **Suitable extinguishing media:** | Carbon dioxide, foam, powder |
| **Specific hazards arising from the chemical:** | In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released. |
| **Special protection equipment and precautions for firefighters:** | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. |
| **Additional fire fighting advice:** | In case of fire, keep containers cool with water spray. |

## Section 6. Accidental release measures

| | |
|---|---|
| **Personal precautions:** | Avoid skin and eye contact.<br>Wear protective equipment.<br>Ensure adequate ventilation.<br>See advice in section 8 |
| **Environmental precautions:** | Do not empty into drains / surface water / ground water. |
| **Clean-up methods:** | For small spills wipe up with paper towel and place in container for disposal.<br>For large spills absorb onto inert absorbent material and place in sealed container for disposal.<br>Wash spillage site thoroughly with soap and water or detergent solution.<br>Dispose of contaminated material as waste according to Section 13. |

## Section 7. Handling and storage

| | |
|---|---|
| **Handling:** | Use only in well-ventilated areas.<br>Avoid skin and eye contact.<br>Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.<br>See advice in section 8 |
| **Storage:** | Store in a cool, well-ventilated place.<br>Refer to Technical Data Sheet. |

## Section 8. Exposure controls / personal protection

**Components with specific control parameters for workplace:**

| | |
|---|---|
| **Respiratory protection:** | Ensure adequate ventilation.<br>An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area<br>Filter type: A (EN 14387) |
| **Hand protection:** | Chemical-resistant protective gloves (EN 374).<br>Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):<br>nitrile rubber (NBR; >= 0.4 mm thickness)<br>Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):<br>nitrile rubber (NBR; >= 0.4 mm thickness)<br>This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. |
| **Eye protection:** | Wear protective glasses.<br>Protective eye equipment should conform to EN166. |
| **Body protection:** | Wear suitable protective clothing.<br>Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts. |
| **Engineering controls:** | Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. |
| **General protection and hygiene measures:** | The workplace should be equipped with an emergency shower and eye-rinsing facility. |
| **Hygienic measures:** | Wash hands before work breaks and after finishing work.<br>Do not eat, drink or smoke while working.<br>Take off contaminated clothing and wash before reuse. |

## Section 9. Physical and chemical properties

| | |
|---|---|
| **Appearance:** | White<br>liquid |
| **Odor:** | Odourless / Odorless |
| **Odor threshold (CA):** | No data available. |
| **pH:** | Not applicable, Product is non-soluble (in water). |
| **Melting point / freezing point:** | Not applicable, Product is a liquid |
| **Specific gravity:** | No data available. |
| **Boiling point:** | > 190 °C (> 374 °F) |
| **Flash point:** | > 100 °C (> 212 °F) |
| **Evaporation rate:** | No data available. |
| **Flammability (solid, gas):** | No data available. |
| **Lower explosive limit:** | No data available. |
| **Upper explosive limit:** | No data available. |
| **Vapor pressure:**<br>(; 50 °C (122 °F); 21.1 °C (70 °F)) | 0.001 mbar<br>< 6.78 hPa |
| **Vapor density:** | > 1 |
| **Density:** | 1.13 - 1.17 g/cm3 |

| | |
|---|---|
| **Solubility:** | Insoluble (20 °C) |
| **Partition coefficient: n-octanol/water:** | No data available. |
| **Auto ignition:** | No data available. |
| **Decomposition temperature:** | No data available. |
| **Viscosity:** | 40,000 - 80,000 mPa.s (Brookfield; Instrument: RVT; 25 °C (77 °F); speed of rotation: 2.5 min-1; Spindle No: 6; Method: ;; LCT STM 10; Viscosity Brookfield) |
| **VOC content:** (2010/75/EC) | < 3.00 % |

## Section 10. Stability and reactivity

| | |
|---|---|
| **Reactivity/Incompatible materials:** | Reaction with oxidants.<br>Reaction with strong acids.<br>Reaction with strong bases |
| **Chemical stability:** | Stable under recommended storage conditions. |
| **Conditions to avoid:** | No decomposition if used according to specifications. |
| **Hazardous decomposition products:** | carbon oxides. |

## Section 11. Toxicological information

**Health Effects:**

Skin: Causes skin irritation.
May cause an allergic skin reaction.

Eyes: Causes serious eye irritation.

Symptoms of Overexposure**:** None known.

**Acute oral toxicity:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Value type | LD50 |
| | Value | > 2,000 mg/kg |
| | Species | rat |
| | Method | OECD Guideline 420 (Acute Oral Toxicity) |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Value type | LD50 |
| | Value | > 5,000 mg/kg |
| | Species | rat |
| | Method | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Value type | LD50 |
| | Value | > 2,000 mg/kg |
| | Species | rat |
| | Method | OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Value type | Acute toxicity estimate (ATE) |
| | Value | 2,500 mg/kg |
| | Species | |
| | Method | Expert judgement |

**Acute dermal toxicity:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Value type | LD50 |
| | Value | > 2,000 mg/kg |
| | Species | rat |
| | Method | OECD Guideline 402 (Acute Dermal Toxicity) |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Value type | LD50 |
| | Value | > 2,000 mg/kg |
| | Species | rat |
| | Method | equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Value type | LD50 |
| | Value | > 2,000 mg/kg |
| | Species | rat |
| | Method | OECD Guideline 402 (Acute Dermal Toxicity) |

**Skin corrosion/irritation:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Result | irritating |
| | Exposure time | |
| | Species | |
| | Method | Weight of evidence |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Result | irritating |
| | Exposure time | 4 h |
| | Species | rabbit |
| | Method | equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | not irritating |
| | Exposure time | 24 h |
| | Species | rat |
| | Method | other guideline: |

**Serious eye damage/irritation:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Result | irritating |
| | Exposure time | |
| | Species | |
| | Method | Weight of evidence |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Result | not irritating |
| | Exposure time | |
| | Species | rabbit |
| | Method | equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | not irritating |
| | Exposure time | 72 h |
| | Species | rabbit |
| | Method | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

**Respiratory or skin sensitization:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Result | sensitising |
| | Test type | Mouse local lymphnode assay (LLNA) |
| | Species | mouse |
| | Method | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Result | Sub-Category 1A (sensitising) |
| | Test type | Mouse local lymphnode assay (LLNA) |
| | Species | mouse |
| | Method | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | Sub-Category 1A (sensitising) |
| | Test type | Mouse local lymphnode assay (LLNA) |
| | Species | mouse |
| | Method | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |

**Germ cell mutagenicity:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Result | negative |
| | Type of study / Route of administration | bacterial reverse mutation assay (e.g Ames test) |
| | Metabolic activation / Exposure time | with and without |
| | Method | OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay) |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Result | negative |
| | Type of study / Route of administration | oral: gavage |
| | Metabolic activation / Exposure time | |
| | Species | mouse |
| | Method | not specified |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Result | positive |
| | Type of study / Route of administration | bacterial reverse mutation assay (e.g Ames test) |
| | Metabolic activation / Exposure time | with and without |
| | Method | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Result | negative |
| | Type of study / Route of administration | oral: gavage |
| | Metabolic activation / Exposure time | |
| | Species | mouse |
| | Method | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Result | negative |
| | Type of study / Route of administration | oral: gavage |
| | Metabolic activation / Exposure time | |
| | Species | rat |
| | Method | OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | positive without metabolic activation |
| | Type of study / Route of administration | in vitro mammalian chromosome aberration test |
| | Metabolic activation / Exposure time | with and without |
| | Method | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | positive without metabolic activation |
| | Type of study / Route of administration | bacterial reverse mutation assay (e.g Ames test) |
| | Metabolic activation / Exposure time | with and without |
| | Method | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | negative |
| | Type of study / Route of administration | bacterial reverse mutation assay (e.g Ames test) |
| | Metabolic activation / Exposure time | with and without |
| | Method | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | positive |
| | Type of study / Route of administration | sister chromatid exchange assay in mammalian cells |
| | Metabolic activation / Exposure time | without |
| | Method | OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | negative |
| | Type of study / Route of administration | oral: gavage |
| | Metabolic activation / Exposure time | |
| | Species | rat |
| | Method | OECD Guideline 489 (In Vivo Mammalian Alkaline Comet Assay) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | negative |
| | Type of study / Route of administration | oral: gavage |
| | Metabolic activation / Exposure time | |
| | Species | rat |
| | Method | OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) |

**Repeated dose toxicity:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Result | NOAEL=50 mg/kg |
| | Route of application | oral: gavage |
| | Exposure time / Frequency of treatment | 14 wdaily |
| | Species | rat |
| | Method | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | Result | NOAEL=250 mg/kg |
| | Route of application | oral: gavage |
| | Exposure time / Frequency of treatment | 13 wdaily |
| | Species | rat |
| | Method | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | Result | NOAEL=100 mg/kg |
| | Route of application | oral: gavage |
| | Exposure time / Frequency of treatment | 90 ddaily |
| | Species | rat |
| | Method | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |

## Section 12. Ecological information

**General ecological information:** Do not empty into drains / surface water / ground water.

**Ecotoxicity:** H411 Toxic to aquatic life with long lasting effects.

**Toxicity:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Value type | LC50 |
| | Value | 1.75 mg/l |
| | Acute Toxicity Study | Fish |
| | Exposure time | 96 h |
| | Species | Oncorhynchus mykiss |
| | Method | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Value type | EC50 |
| | Value | 1.7 mg/l |
| | Acute Toxicity Study | Daphnia |
| | Exposure time | 48 h |
| | Species | Daphnia magna |
| | Method | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Value type | EC50 |
| | Value | > 11 mg/l |
| | Acute Toxicity Study | Algae |
| | Exposure time | 72 h |
| | Species | Scenedesmus capricornutum |
| | Method | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| | Value type | NOEC |
| | Value | 4.2 mg/l |
| | Acute Toxicity Study | Algae |
| | Exposure time | 72 h |
| | Species | Scenedesmus capricornutum |
| | Method | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | Value type | IC50 |
| | Value | > 100 mg/l |
| | Acute Toxicity Study | Bacteria |
| | Exposure time | 3 h |
| | Species | activated sludge, industrial |
| | Method | other guideline: |

| | | |
|---|---|---|
| Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5 | Value type | LC50 |
| | Value | 5.7 mg/l |
| | Acute Toxicity Study | Fish |
| | Exposure time | 96 h |
| | Species | Leuciscus idus |
| | Method | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5 | Value type | EC50 |
| | Value | 2.55 mg/l |
| | Acute Toxicity Study | Daphnia |
| | Exposure time | 48 h |
| | Species | Daphnia magna |
| | Method | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5 | Value type | EC50 |
| | Value | 1.8 mg/l |
| | Acute Toxicity Study | Algae |
| | Exposure time | 72 h |
| | Species | Pseudokirchneriella subcapitata |
| | Method | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5 | Value type | IC50 |
| | Value | > 100 mg/l |
| | Acute Toxicity Study | Bacteria |
| | Exposure time | 3 h |
| | Species | activated sludge, industrial |
| | Method | other guideline: |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether 3101-60-8 | Value type | LC50 |
| | Value | 7.5 mg/l |
| | Acute Toxicity Study | Fish |
| | Exposure time | 96 h |
| | Species | Oncorhynchus mykiss |
| | Method | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether 3101-60-8 | Value type | EC50 |
| | Value | 67.9 mg/l |
| | Acute Toxicity Study | Daphnia |
| | Exposure time | 48 h |
| | Species | Daphnia magna |
| | Method | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether 3101-60-8 | Value type | EC50 |
| | Value | 9 mg/l |
| | Acute Toxicity Study | Algae |
| | Exposure time | 72 h |
| | Species | Pseudokirchneriella subcapitata |
| | Method | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether 3101-60-8 | Value type | EC50 |
| | Value | > 1,000 mg/l |
| | Acute Toxicity Study | Bacteria |
| | Exposure time | 3 h |
| | Species | activated sludge of a predominantly domestic sewage |
| | Method | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |

**Persistence and degradability:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 25068-38-6 | Result | not readily biodegradable. |
| | Route of application | aerobic |
| | Degradability | 5 % |
| | Method | OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test) |
| Reaction mass bisphenol-F-(epichlorhydrin) 9003-36-5 | Result | not readily biodegradable. |
| | Route of application | aerobic |
| | Degradability | 0 % |
| | Method | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether 3101-60-8 | Result | not readily biodegradable. |
| | Route of application | aerobic |
| | Degradability | 1.1 % |
| | Method | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |

**Bioaccumulative potential / Mobility in soil:**

| | | |
|---|---|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>25068-38-6 | LogPow | 3.242 |
| | Temperature | 25 °C |
| | Method | EU Method A.8 (Partition Coefficient) |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>9003-36-5 | LogPow | 2.7 - 3.6 |
| | Temperature | |
| | Method | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| P-tert-Butylphenyl 1-(2,3-epoxy)propyl ether<br>3101-60-8 | LogPow | 3.59 |
| | Temperature | 20 °C |
| | Method | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

## Section 13. Disposal considerations

**Product**

**Method of disposal:** Dispose of in accordance with local and national regulations.

**Packaging**

**Disposal of uncleaned packages:** Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

## Section 14. Transport information

**Road transport ADR:**

| | |
|---|---|
| Class: | 9 |
| Packing group: | III |
| Classification code: | M6 |
| Hazard ident. number: | 90 |
| UN no.: | 3082 |
| Label: | 9 |
| Technical name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-F Epichlorohydrin resin,Bisphenol-A Epichlorhydrin resin) |

**Railroad transport RID:**

| | |
|---|---|
| Class: | 9 |
| Packing group: | III |
| Classification code: | M6 |
| Hazard ident. number: | 90 |
| UN no.: | 3082 |
| Label: | 9 |
| Technical name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-F Epichlorohydrin resin,Bisphenol-A Epichlorhydrin resin) |

**Inland water transport ADN:**

| | |
|---|---|
| Class: | 9 |
| Packing group: | III |
| Classification code: | M6 |
| Hazard ident. number: | 90 |
| UN no.: | 3082 |
| Label: | 9 |
| Technical name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-F Epichlorohydrin resin,Bisphenol-A Epichlorhydrin resin) |

**Marine transport IMDG:**

| | |
|---|---|
| Class: | 9 |
| Packing group: | III |
| UN no.: | 3082 |
| Label: | 9 |
| EmS: | F-A ,S-F |
| Seawater pollutant: | Marine pollutant |
| Proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-F Epichlorohydrin resin,Bisphenol-A Epichlorhydrin resin) |

**Air transport IATA:**

| | |
|---|---|
| Class: | 9 |
| Packing group: | III |
| Packaging instructions (passenger): | 964 |
| Packaging instructions (cargo): | 964 |
| UN no.: | 3082 |
| Label: | 9 |
| Proper shipping name: | Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-F Epichlorohydrin resin,Bisphenol-A Epichlorhydrin resin) |

**Further information for transport:**

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG), NZ 4.3(10) may be applied, which can result in a deviation from the transport classification for packed goods.

## Section 15. Regulatory information

**Regulatory Information:** This Safety Data Sheet has been generated based on

LAW ON CHEMICALS No. 69/2025/QH15, issued on June 14, 2025;

Decree No. 24/2026/NĐ-CP, issued on January 17, 2026, ON THE LISTS OF CHEMICALS GOVERNED BY THE LAW ON CHEMICALS;

Decree No. 25/2026/NĐ-CP, issued on January 17, 2026, DETAILED REGULATIONS AND MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS CONCERNING THE DEVELOPMENT OF THE CHEMICAL INDUSTRY AND CHEMICAL SAFETY AND SECURITY;

Decree No. 26/2026/NĐ-CP, issued on January 17, 2026, DETAILED REGULATIONS AND GUIDELINES FOR IMPLEMENTING CERTAIN ARTICLES OF THE LAW ON CHEMICALS REGARDING THE MANAGEMENT OF CHEMICAL ACTIVITIES AND HAZARDOUS CHEMICALS IN PRODUCTS AND GOODS;

Circular No. 01/2026/TT-BCT, issued on January 17, 2026, DETAILED REGULATIONS AND GUIDELINES FOR IMPLEMENTING CERTAIN ARTICLES OF THE LAW ON CHEMICALS AND GOVERNMENT DECREE NO. 26/2026/ND-CP DETAILING AND GUIDING THE IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS REGARDING

THE MANAGEMENT OF CHEMICAL ACTIVITIES AND HAZARDOUS CHEMICALS IN PRODUCTS AND GOODS;

Circular No. 02/2026/TT-BCT, issued on January 17, 2026, REGULATIONS ON SOME IMPLEMENTATION MEASURES OF THE LAW ON CHEMICALS AND GOVERNMENT DECREE NO. 25/2026/ND-CP DETAILING AND PROVIDING MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF SOME ARTICLES OF THE LAW ON CHEMICALS CONCERNING THE DEVELOPMENT OF THE CHEMICAL INDUSTRY AND CHEMICAL SAFETY AND SECURITY;

Decree No. 161/2024/ND-CP, issued on December 18, 2024, ON LIST OF DANGEROUS GOODS, TRANSPORT OF DANGEROUS GOODS AND PROCEDURES FOR ISSUANCE OF LICENSES OR CERTIFICATES OF COMPLETION OF TRAINING PROGRAMS FOR DRIVERS OR ESCORTS TRANSPORTING DANGEROUS GOODS BY ROAD;

Decree No. 34/2024/NĐ-CP, issued on March 31, 2024, ON LIST OF DANGEROUS GOODS, TRANSPORT OF DANGEROUS GOODS BY INLAND WATERCRAFT;

Decree No. 33/2024/NĐ-CP, issued on March 27, 2024, IMPLEMENTING THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION, STOCKPILING AND USE OF CHEMICAL WEAPONS AND ON THEIR;

Decree No. 37/2026/NĐ-CP, issued on January 23, 2026, ELABORATING CERTAIN ARTICLES AND MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF THE LAW ON PRODUCT AND GOODS QUALITY.

If other regulatory information applies that is not already provided or updated elsewhere in this Safety Data Sheet, then it is described in this subsection.

**Global inventory status:**

| Regulatory list | Notification |
|---|---|
| TCSI | yes |
| TSCA | yes |
| AIIC | yes |
| ENCS (JP) | yes |
| KECI (KR) | yes |
| PICCS (PH) | yes |
| IECSC | yes |

## Section 16. Other information

**Disclaimer:**

This Safety Data Sheet has been generated based on Law On Chemicals No. 69/2025/QH15; Decree No. 24/2026/NĐ-CP; Decree No. 25/2026/NĐ-CP; Decree No. 26/2026/NĐ-CP; Circular No. 01/2026/TT-BCT; Circular No. 02/2026/TT-BCT; Decree No. 161/2024/ND-CP; Decree No. 34/2024/NĐ-CP; Decree No. 33/2024/NĐ-CP, and Decree No. 37/2026/NĐ-CP.
No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.
This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.
Dear Customer,
Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your_company.com).