



## Safety Data Sheet according to (EC) No 1907/2006 as amended

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LOCTITE ABLESTIK 968-2 known as Ablebond 968-2 (454g),

SDS No. : 330111  
V005.0

Revision: 20.03.2025

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Replaces version from: 27.11.2024

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

LOCTITE ABLESTIK 968-2 known as Ablebond 968-2 (454g),  
UFI: P7JV-JWF1-A20X-37SQ

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use:  
Epoxy adhesive

#### 1.3. Details of the supplier of the safety data sheet

Henkel Ireland  
Operations and Research Limited  
Tallaght Business Park, Whitestown  
24 Dublin

Ireland

Phone: +353 (0353) 1 404 6444

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website [www.mysds.henkel.com](http://www.mysds.henkel.com) or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

00353 14046280

National Poisons Information Centre: Members of Public: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)  
Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

|                                                       |             |
|-------------------------------------------------------|-------------|
| Skin irritation                                       | Category 2  |
| H315 Causes skin irritation.                          |             |
| Serious eye irritation                                | Category 2  |
| H319 Causes serious eye irritation.                   |             |
| Skin sensitizer                                       | Category 1  |
| H317 May cause an allergic skin reaction.             |             |
| Toxic to reproduction                                 | Category 1B |
| H360F May damage fertility.                           |             |
| Chronic hazards to the aquatic environment            | Category 2  |
| H411 Toxic to aquatic life with long lasting effects. |             |

#### 2.2. Label elements

##### Label elements (CLP):

**Hazard pictogram:**



**Contains**

Bisphenol-F epichlorhydrin resin; MW<700

1,4-bis(2,3 epoxypropoxy)butane

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane  
Dapsone

**Signal word:**

Danger

**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.  
H360F May damage fertility.

**Supplemental information**

Restricted to professional users.

**Precautionary statement:  
Prevention**

P201 Obtain special instructions before use.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing.

**Precautionary statement:  
Response**

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P308+P313 IF exposed or concerned: Get medical advice/attention.

**2.3. Other hazards**

None if used properly.

**Following substances are present in a concentration  $\geq$  the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

This mixture does not contain any substances in a concentration  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

| Hazardous components<br>CAS-No.<br>EC Number<br>REACH-Reg No.                                                    | Concentration | Classification                                                                                                                                                                 | Specific Conc. Limits, M-<br>factors and ATEs                 | Add.<br>Information |
|------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------|
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>-----<br>500-006-8<br>01-2119454392-40                            | 25- < 50 %    | Skin Irrit. 2, H315<br>Skin Sens. 1A, H317<br>Aquatic Chronic 2, H411                                                                                                          |                                                               |                     |
| 1,4-bis(2,3 epoxypropoxy)butane<br>2425-79-8<br>219-371-7<br>01-2119494060-45                                    | 10- < 20 %    | Acute Tox. 4, Oral, H302<br>Acute Tox. 4, Dermal, H312<br>Acute Tox. 4, Inhalation, H332<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Eye Irrit. 2, H319<br>Repr. 1B, H360F | inhalation:ATE = 11,01<br>mg/l;vapour                         |                     |
| Dapsone<br>80-08-0<br>201-248-4<br>01-2119949572-30                                                              | 1- < 5 %      | Repr. 1B, H360F<br>Acute Tox. 3, Oral, H301<br>STOT SE 2, Oral, H371<br>STOT RE 2, Oral, H373<br>Aquatic Chronic 2, H411                                                       | oral:ATE = 250 mg/kg                                          |                     |
| 2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3<br>216-823-5<br>01-2119456619-26 | 0,1- < 1 %    | Eye Irrit. 2, H319<br>Aquatic Chronic 2, H411<br>Skin Sens. 1, H317<br>Skin Irrit. 2, H315                                                                                     | Eye Irrit. 2; H319; C >= 5 %<br>Skin Irrit. 2; H315; C >= 5 % |                     |
| Quartz (SiO <sub>2</sub> ), <1% respirable<br>14808-60-7<br>238-878-4                                            | 50- < 100 %   |                                                                                                                                                                                |                                                               |                     |

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.  
For full text of the H - statements and other abbreviations see section 16 "Other information".

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation:**

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

**Skin contact:**

Rinse with running water and soap.

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.

**4.2. Most important symptoms and effects, both acute and delayed**

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

**4.3. Indication of any immediate medical attention and special treatment needed**

See section: Description of first aid measures

## **SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media:**

water, carbon dioxide, foam, powder

**Extinguishing media which must not be used for safety reasons:**

High pressure waterjet

**5.2. Special hazards arising from the substance or mixture**

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Additional information:**

In case of fire, keep containers cool with water spray.

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

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

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

**6.2. Environmental precautions**

Do not empty into drains / surface water / ground water.

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

Dispose of contaminated material as waste according to Section 13.

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

**6.4. Reference to other sections**

See advice in section 8

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

**7.1. Precautions for safe handling**

Avoid skin and eye contact.

See advice in section 8

**Hygiene measures:**

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

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

Ensure good ventilation/extraction.

Keep container tightly sealed.

Keep frozen.

Refer to Technical Data Sheet.

**7.3. Specific end use(s)**

Epoxy adhesive

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Ireland

| Ingredient [Regulated substance]                                                                                              | ppm | mg/m <sup>3</sup> | Value type                   | Short term exposure limit category / Remarks | Regulatory list |
|-------------------------------------------------------------------------------------------------------------------------------|-----|-------------------|------------------------------|----------------------------------------------|-----------------|
| Quartz (SiO <sub>2</sub> )<br>14808-60-7<br>[RESPIRABLE CRYSTALLINE SILICA DUST]                                              |     | 0,1               | Time Weighted Average (TWA): |                                              | EU OELIII       |
| Quartz (SiO <sub>2</sub> )<br>14808-60-7<br>[Silica, crystalline, respirable dust (Cristobalite, Quartz, Tridymite, Tripoli)] |     | 0,1               | Time Weighted Average (TWA): | Binding OELV                                 | IR_OEL          |

#### Occupational Exposure Limits

Valid for  
Great Britain

| Ingredient [Regulated substance]                                                             | ppm | mg/m <sup>3</sup> | Value type                   | Short term exposure limit category / Remarks | Regulatory list |
|----------------------------------------------------------------------------------------------|-----|-------------------|------------------------------|----------------------------------------------|-----------------|
| Quartz (SiO <sub>2</sub> ), <1% respirable<br>14808-60-7<br>[SILICA, RESPIRABLE CRYSTALLINE] |     | 0,1               | Time Weighted Average (TWA): |                                              | EH40 WEL        |

**Predicted No-Effect Concentration (PNEC):**

| Name on list                                                                                                                                           | Environmental<br>Compartment       | Exposure<br>period | Value          |     |                 |        | Remarks                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------|----------------|-----|-----------------|--------|-------------------------------------|
|                                                                                                                                                        |                                    |                    | mg/l           | ppm | mg/kg           | others |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | aqua<br>(freshwater)               |                    | 0,003 mg/l     |     |                 |        |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | aqua (marine<br>water)             |                    | 0,0003<br>mg/l |     |                 |        |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | sewage<br>treatment plant<br>(STP) |                    | 10 mg/l        |     |                 |        |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | sediment<br>(freshwater)           |                    |                |     | 0,294<br>mg/kg  |        |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | sediment<br>(marine water)         |                    |                |     | 0,0294<br>mg/kg |        |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | Soil                               |                    |                |     | 0,237<br>mg/kg  |        |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | aqua<br>(intermittent<br>releases) |                    | 0,0254<br>mg/l |     |                 |        |                                     |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | Air                                |                    |                |     |                 |        | no hazard identified                |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>-----                                                                                                    | Predator                           |                    |                |     |                 |        | no potential for<br>bioaccumulation |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | aqua<br>(freshwater)               |                    | 0,111 mg/l     |     |                 |        |                                     |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | aqua (marine<br>water)             |                    | 0,011 mg/l     |     |                 |        |                                     |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | sewage<br>treatment plant<br>(STP) |                    | 10 mg/l        |     |                 |        |                                     |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | sediment<br>(freshwater)           |                    |                |     | 0,484<br>mg/kg  |        |                                     |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | sediment<br>(marine water)         |                    |                |     | 0,048<br>mg/kg  |        |                                     |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | Soil                               |                    |                |     | 0,032<br>mg/kg  |        |                                     |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | oral                               |                    |                |     | 22,2 mg/kg      |        |                                     |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                           | Freshwater -<br>intermittent       |                    | 0,24 mg/l      |     |                 |        |                                     |
| dapsone<br>80-08-0                                                                                                                                     | aqua<br>(freshwater)               |                    | 0,004 mg/l     |     |                 |        |                                     |
| dapsone<br>80-08-0                                                                                                                                     | aqua (marine<br>water)             |                    | 0 mg/l         |     |                 |        |                                     |
| dapsone<br>80-08-0                                                                                                                                     | aqua<br>(intermittent<br>releases) |                    | 0,01 mg/l      |     |                 |        |                                     |
| dapsone<br>80-08-0                                                                                                                                     | sewage<br>treatment plant<br>(STP) |                    | 10 mg/l        |     |                 |        |                                     |
| dapsone<br>80-08-0                                                                                                                                     | sediment<br>(freshwater)           |                    |                |     | 0,041<br>mg/kg  |        |                                     |
| dapsone<br>80-08-0                                                                                                                                     | sediment<br>(marine water)         |                    |                |     | 0,004<br>mg/kg  |        |                                     |
| dapsone<br>80-08-0                                                                                                                                     | Air                                |                    |                |     |                 |        | no hazard identified                |
| dapsone<br>80-08-0                                                                                                                                     | Soil                               |                    |                |     | 0,006<br>mg/kg  |        |                                     |
| 4,4'-Isopropylidenediphenol, oligomeric<br>reaction products with 1-chloro-2,3-<br>epoxypropane, number average molecular<br>weight ≤ 700<br>1675-54-3 | aqua<br>(freshwater)               |                    | 0,006 mg/l     |     |                 |        |                                     |
| 4,4'-Isopropylidenediphenol, oligomeric<br>reaction products with 1-chloro-2,3-<br>epoxypropane, number average molecular<br>weight ≤ 700<br>1675-54-3 | Freshwater -<br>intermittent       |                    | 0,018 mg/l     |     |                 |        |                                     |
| 4,4'-Isopropylidenediphenol, oligomeric<br>reaction products with 1-chloro-2,3-                                                                        | aqua (marine<br>water)             |                    | 0,001 mg/l     |     |                 |        |                                     |

|                                                                                                                                                   |                              |  |            |  |             |  |                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--|------------|--|-------------|--|----------------------|
| epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3                                                                             |                              |  |            |  |             |  |                      |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | Marine water - intermittent  |  | 0,002 mg/l |  |             |  |                      |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | sewage treatment plant (STP) |  | 10 mg/l    |  |             |  |                      |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | sediment (freshwater)        |  |            |  | 0,341 mg/kg |  |                      |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | sediment (marine water)      |  |            |  | 0,034 mg/kg |  |                      |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | Soil                         |  |            |  | 0,065 mg/kg |  |                      |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | oral                         |  |            |  | 11 mg/kg    |  |                      |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | Air                          |  |            |  |             |  | no hazard identified |

**Derived No-Effect Level (DNEL):**

| Name on list                                        | Application Area   | Route of Exposure | Health Effect                                | Exposure Time | Value         | Remarks              |
|-----------------------------------------------------|--------------------|-------------------|----------------------------------------------|---------------|---------------|----------------------|
| Reaction mass bisphenol-F-(epichlorhydrin)<br>----- | Workers            | Inhalation        | Long term exposure - systemic effects        |               | 29,39 mg/m3   | no hazard identified |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>----- | Workers            | dermal            | Long term exposure - systemic effects        |               | 104,15 mg/kg  | no hazard identified |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>----- | Workers            | dermal            | Acute/short term exposure - local effects    |               | 0,0083 mg/cm2 | no hazard identified |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>----- | General population | Inhalation        | Long term exposure - systemic effects        |               | 8,7 mg/m3     | no hazard identified |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>----- | General population | dermal            | Long term exposure - systemic effects        |               | 62,5 mg/kg    | no hazard identified |
| Reaction mass bisphenol-F-(epichlorhydrin)<br>----- | General population | oral              | Long term exposure - systemic effects        |               | 6,25 mg/kg    | no hazard identified |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | inhalation        | Long term exposure - systemic effects        |               | 7,8 mg/m3     |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | dermal            | Long term exposure - systemic effects        |               | 5,5 mg/kg     |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | inhalation        | Long term exposure - systemic effects        |               | 1,91 mg/m3    |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | dermal            | Long term exposure - systemic effects        |               | 2,75 mg/kg    |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | oral              | Long term exposure - systemic effects        |               | 1,38 mg/kg    |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | inhalation        | Acute/short term exposure - systemic effects |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | inhalation        | Long term exposure - local effects           |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | inhalation        | Acute/short term exposure - local effects    |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | dermal            | Long term exposure - local effects           |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | dermal            | Acute/short term exposure - systemic effects |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | Workers            | dermal            | Acute/short term exposure - local effects    |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | inhalation        | Acute/short term exposure - systemic effects |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | inhalation        | Long term exposure - local effects           |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | inhalation        | Acute/short term exposure - local effects    |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | dermal            | Acute/short term exposure - systemic effects |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | dermal            | Long term exposure - local effects           |               |               |                      |
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8        | General population | dermal            | Acute/short term exposure - local            |               |               |                      |



|                                                                                                                                              |                    |            | effects                                      |  |              |                      |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|----------------------------------------------|--|--------------|----------------------|
| 1,4-Bis(2,3-epoxypropoxy)butane<br>2425-79-8                                                                                                 | General population | oral       | Acute/short term exposure - systemic effects |  |              |                      |
| dapsone<br>80-08-0                                                                                                                           | Workers            | inhalation | Long term exposure - systemic effects        |  | 2,5 mg/m3    | no hazard identified |
| dapsone<br>80-08-0                                                                                                                           | Workers            | inhalation | Acute/short term exposure - systemic effects |  | 2,5 mg/m3    | no hazard identified |
| dapsone<br>80-08-0                                                                                                                           | Workers            | inhalation | Long term exposure - local effects           |  | 0,35 mg/m3   | no hazard identified |
| dapsone<br>80-08-0                                                                                                                           | Workers            | inhalation | Acute/short term exposure - local effects    |  | 0,35 mg/m3   | no hazard identified |
| dapsone<br>80-08-0                                                                                                                           | Workers            | dermal     | Long term exposure - systemic effects        |  | 0,35 mg/kg   | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | Workers            | inhalation | Long term exposure - systemic effects        |  | 4,93 mg/m3   | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | Workers            | dermal     | Long term exposure - systemic effects        |  | 0,75 mg/kg   | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | General population | inhalation | Long term exposure - systemic effects        |  | 0,87 mg/m3   | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | General population | dermal     | Long term exposure - systemic effects        |  | 0,0893 mg/kg | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | General population | oral       | Long term exposure - systemic effects        |  | 0,5 mg/kg    | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | Workers            | inhalation | Long term exposure - local effects           |  |              | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | Workers            | inhalation | Acute/short term exposure - local effects    |  |              | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | Workers            | dermal     | Long term exposure - local effects           |  |              | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | Workers            | dermal     | Acute/short term exposure - local effects    |  |              | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | General population | inhalation | Long term exposure - local effects           |  |              | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700<br>1675-54-3 | General population | inhalation | Acute/short term exposure - local effects    |  |              | no hazard identified |

|                                                                                                                                                   |                    |        |                                           |  |  |                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------|-------------------------------------------|--|--|----------------------|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | General population | dermal | Long term exposure - local effects        |  |  | no hazard identified |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$<br>1675-54-3 | General population | dermal | Acute/short term exposure - local effects |  |  | no hazard identified |

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:  
Ensure good ventilation/extraction.

Respiratory protection:  
Ensure adequate ventilation.  
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area  
Filter type: A (EN 14387)

Hand protection:  
Chemical-resistant protective gloves (EN 374).  
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):  
nitrile rubber (NBR;  $\geq 0.4$  mm thickness)  
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):  
nitrile rubber (NBR;  $\geq 0.4$  mm thickness)  
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:  
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.  
Protective eye equipment should conform to EN166.

Skin protection:  
Wear suitable protective clothing.  
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:  
The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.  
Personal protective equipment should conform to the relevant EN standard.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|                            |                                               |
|----------------------------|-----------------------------------------------|
| Delivery form              | paste                                         |
| Colour                     | Blue                                          |
| Odor                       | Slight, Epoxy                                 |
| Physical state             | liquid                                        |
| Melting point              | Not applicable, Product is a liquid           |
| Solidification temperature | < 50 °C (< 122 °F)                            |
| Initial boiling point      | > 100 °C (> 212 °F)                           |
| Flammability               | The product is not flammable.                 |
| Explosive limits           | Not applicable, The product is not flammable. |

|                                                             |                                                                                                                                          |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Flash point                                                 | > 93 °C (> 199.4 °F)                                                                                                                     |
| Auto-ignition temperature                                   | Not applicable, The product is not flammable.                                                                                            |
| Decomposition temperature                                   | > 100 °C (> 212 °F); Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH                                                          | Not applicable, Product reacts with water.                                                                                               |
| Viscosity (kinematic)<br>(20 °C (68 °F); )                  | 18.000 mm <sup>2</sup> /s                                                                                                                |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water) | Not soluble. Polymerizes in presence of water.                                                                                           |
| Partition coefficient: n-octanol/water                      | Not applicable                                                                                                                           |
| Vapour pressure<br>(20 °C (68 °F))                          | Mixture<br>< 0,1 hPa                                                                                                                     |
| Density<br>(20 °C (68 °F))                                  | 2,24 g/cm <sup>3</sup>                                                                                                                   |
| Relative vapour density:<br>(20 °C)                         | > 1                                                                                                                                      |
| Particle characteristics                                    | Not applicable<br>Product is a liquid                                                                                                    |

## 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with strong oxidants.  
Reaction with strong acids.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

Stable under normal conditions of storage and use.

### 10.5. Incompatible materials

See section reactivity.

### 10.6. Hazardous decomposition products

carbon oxides.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Value<br>type                          | Value         | Species | Method                                                            |
|----------------------------------------------------------------------------------------------|----------------------------------------|---------------|---------|-------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                                      | LD50                                   | > 5.000 mg/kg | rat     | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | LD50                                   | 1.118 mg/kg   | rat     | OECD Guideline 401 (Acute Oral Toxicity)                          |
| Dapsone<br>80-08-0                                                                           | Acute<br>toxicity<br>estimate<br>(ATE) | 250 mg/kg     |         | Expert judgement                                                  |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]<br>bisoxirane<br>1675-54-3 | LD50                                   | > 2.000 mg/kg | rat     | OECD Guideline 420 (Acute Oral Toxicity)                          |
| Quartz (SiO <sub>2</sub> ), <1%<br>respirable<br>14808-60-7                                  | LD50                                   | > 5.050 mg/kg | rat     | not specified                                                     |

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Value<br>type | Value         | Species       | Method                                                              |
|----------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                                      | LD50          | > 2.000 mg/kg | rat           | equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | LD50          | 1.130 mg/kg   | rabbit        | not specified                                                       |
| Dapsone<br>80-08-0                                                                           | LD50          | > 2.000 mg/kg | rabbit        | EPA OPP 81-2 (Acute Dermal Toxicity)                                |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]<br>bisoxirane<br>1675-54-3 | LD50          | > 2.000 mg/kg | rat           | OECD Guideline 402 (Acute Dermal Toxicity)                          |
| Quartz (SiO <sub>2</sub> ), <1%<br>respirable<br>14808-60-7                                  | LD50          | > 2.000 mg/kg | not specified | not specified                                                       |

**Acute inhalative toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                 | Value<br>type                          | Value      | Test atmosphere | Exposure<br>time | Species | Method           |
|-------------------------------------------------|----------------------------------------|------------|-----------------|------------------|---------|------------------|
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8 | Acute<br>toxicity<br>estimate<br>(ATE) | 11,01 mg/l | vapour          | 4 h              |         | Expert judgement |

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Result         | Exposure<br>time | Species | Method                                                                               |
|----------------------------------------------------------------------------------------------|----------------|------------------|---------|--------------------------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                                      | irritating     | 4 h              | rabbit  | equivalent or similar to OECD Guideline 404 (Acute<br>Dermal Irritation / Corrosion) |
| Dapsone<br>80-08-0                                                                           | not irritating | 4 h              | rabbit  | OECD Guideline 404 (Acute Dermal Irritation / Corrosion)                             |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]<br>bisoxirane<br>1675-54-3 | irritating     |                  |         | Weight of evidence                                                                   |

**Serious eye damage/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Result                                                | Exposure<br>time | Species                          | Method                                                                            |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------|----------------------------------|-----------------------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                                      | not irritating                                        |                  | rabbit                           | equivalent or similar to OECD Guideline 405 (Acute Eye<br>Irritation / Corrosion) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | Category 1<br>(irreversible<br>effects on the<br>eye) |                  | rabbit                           | OECD Guideline 405 (Acute Eye Irritation / Corrosion)                             |
| Dapsone<br>80-08-0                                                                           | not irritating                                        |                  | Bovine, cornea,<br>in vitro test | OECD Guideline 437 (BCOP)                                                         |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]<br>bisoxirane<br>1675-54-3 | irritating                                            |                  |                                  | Weight of evidence                                                                |

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Result                           | Test type                             | Species    | Method                                                             |
|----------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------|------------|--------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                                      | Sub-Category 1A<br>(sensitising) | Mouse local lymphnode<br>assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | sensitising                      | Guinea pig maximisation<br>test       | guinea pig | OECD Guideline 406 (Skin Sensitisation)                            |
| Dapsone<br>80-08-0                                                                           | not sensitising                  | Mouse local lymphnode<br>assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]<br>bisoxirane<br>1675-54-3 | sensitising                      | Mouse local lymphnode<br>assay (LLNA) | mouse      | OECD Guideline 429 (Skin Sensitisation:<br>Local Lymph Node Assay) |

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method                                                                                  |
|----------------------------------------------------------------------------------------------|----------|--------------------------------------------------------|--------------------------------------------|---------|-----------------------------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                                      | positive | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                             |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | positive | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                             |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | positive | in vitro mammalian<br>chromosome<br>aberration test    | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | positive | mammalian cell<br>gene mutation assay                  | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                   |
| Dapsone<br>80-08-0                                                                           | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)                             |
| Dapsone<br>80-08-0                                                                           | negative | mammalian cell<br>gene mutation assay                  | with and without                           |         | OECD Guideline 476 (In vitro<br>Mammalian Cell Gene<br>Mutation Test)                   |
| Dapsone<br>80-08-0                                                                           | positive | in vitro mammalian<br>chromosome<br>aberration test    | without                                    |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test)                |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]<br>bisoxirane<br>1675-54-3 | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 472 (Genetic<br>Toxicology: Escherichia coli,<br>Reverse Mutation Assay) |

**Carcinogenicity**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous components<br>CAS-No.                                                  | Result           | Route of<br>application | Exposure<br>time /<br>Frequency<br>of treatment | Species | Sex         | Method                                                                               |
|----------------------------------------------------------------------------------|------------------|-------------------------|-------------------------------------------------|---------|-------------|--------------------------------------------------------------------------------------|
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | not carcinogenic | dermal                  | 2 y<br>daily                                    | mouse   | male        | OECD Guideline 453<br>(Combined Chronic<br>Toxicity /<br>Carcinogenicity<br>Studies) |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | not carcinogenic | oral: gavage            | 2 y<br>daily                                    | rat     | male/female | OECD Guideline 453<br>(Combined Chronic<br>Toxicity /<br>Carcinogenicity<br>Studies) |

**Reproductive toxicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                  | Result / Value                                                        | Test type                   | Route of<br>application | Species | Method                                                                            |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------|-------------------------|---------|-----------------------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                          | NOAEL P > 750 mg/kg<br>NOAEL F1 750 mg/kg<br>NOAEL F2 750 mg/kg       | two-<br>generation<br>study | oral: gavage            | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)            |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                  | NOAEL P 55 mg/kg<br>NOAEL F1 55 mg/kg                                 | one-<br>generation<br>study | oral: gavage            | rat     | OECD Guideline 443<br>(Extended One-Generation<br>Reproductive Toxicity<br>Study) |
| Dapsone<br>80-08-0                                                               | NOAEL P < 7,5 mg/kg<br>NOAEL F1 < 7,5 mg/kg                           | One<br>generation<br>study  | oral: gavage            | rat     | OECD Guideline 443<br>(Extended One-Generation<br>Reproductive Toxicity<br>Study) |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | NOAEL P >= 50 mg/kg<br>NOAEL F1 >= 750 mg/kg<br>NOAEL F2 >= 750 mg/kg | Two<br>generation<br>study  | oral: gavage            | rat     | OECD Guideline 416 (Two-<br>Generation Reproduction<br>Toxicity Study)            |

**STOT-single exposure:**

No data available.

**STOT-repeated exposure:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Result / Value  | Route of<br>application | Exposure time /<br>Frequency of<br>treatment | Species | Method                                                                                               |
|----------------------------------------------------------------------------------------------|-----------------|-------------------------|----------------------------------------------|---------|------------------------------------------------------------------------------------------------------|
| Bisphenol-F<br>epichlorhydrin resin;<br>MW<700<br>-----                                      | NOAEL 250 mg/kg | oral: gavage            | 13 w<br>daily                                | rat     | OECD Guideline 408<br>(Repeated Dose 90-Day<br>Oral Toxicity in Rodents)                             |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | NOAEL 200 mg/kg | oral: gavage            | 28 d<br>daily                                | rat     | OECD Guideline 407<br>(Repeated Dose 28-Day<br>Oral Toxicity in Rodents)                             |
| Dapsone<br>80-08-0                                                                           | NOAEL 3 mg/kg   | oral: gavage            | 90 d<br>daily                                | rat     | equivalent or similar to<br>OECD Guideline 408<br>(Repeated Dose 90-Day<br>Oral Toxicity in Rodents) |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]<br>bisoxirane<br>1675-54-3 | NOAEL 50 mg/kg  | oral: gavage            | 14 w<br>daily                                | rat     | OECD Guideline 408<br>(Repeated Dose 90-Day<br>Oral Toxicity in Rodents)                             |

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable



**SECTION 12: Ecological information****General ecological information:**

Do not empty into drains / surface water / ground water.

**12.1. Toxicity****Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                          | Value<br>type | Value        | Exposure time | Species             | Method                                                      |
|------------------------------------------------------------------------------------------|---------------|--------------|---------------|---------------------|-------------------------------------------------------------|
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>-----                                     | LC50          | 5,7 mg/l     | 96 h          | Leuciscus idus      | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)           |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                          | LC50          | 19,8 mg/l    | 96 h          | Danio rerio         | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)           |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                          | EC10          | 1,11 mg/l    | 35 d          | Danio rerio         | OECD Guideline 210 (fish<br>early lite stage toxicity test) |
| Dapsone<br>80-08-0                                                                       | LC50          | > 100 mg/l   | 96 h          | Cyprinus carpio     | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)           |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | LC50          | 1,75 mg/l    | 96 h          | Oncorhynchus mykiss | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)           |
| Quartz (SiO <sub>2</sub> ), <1% respirable<br>14808-60-7                                 | LC50          | > 1.000 mg/l | 96 h          | not specified       | OECD Guideline 203 (Fish,<br>Acute Toxicity Test)           |

**Toxicity (aquatic invertebrates):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                          | Value<br>type | Value        | Exposure time | Species       | Method                                                           |
|------------------------------------------------------------------------------------------|---------------|--------------|---------------|---------------|------------------------------------------------------------------|
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>-----                                     | EC50          | 2,55 mg/l    | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                          | EC50          | 75 mg/l      | 24 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | EC50          | 1,7 mg/l     | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |
| Quartz (SiO <sub>2</sub> ), <1% respirable<br>14808-60-7                                 | EC50          | > 1.000 mg/l | 48 h          | Daphnia magna | OECD Guideline 202<br>(Daphnia sp. Acute<br>Immobilisation Test) |

**Chronic toxicity (aquatic invertebrates):**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                      | Value<br>type | Value     | Exposure time | Species       | Method                                         |
|------------------------------------------------------|---------------|-----------|---------------|---------------|------------------------------------------------|
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>----- | NOEC          | 0,3 mg/l  | 21 d          | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test) |
| 1,4-bis(2,3                                          | EC10          | 8,93 mg/l | 21 d          | Daphnia magna | OECD 211 (Daphnia                              |

|                                                                                  |      |           |      |               |                                                |
|----------------------------------------------------------------------------------|------|-----------|------|---------------|------------------------------------------------|
| epoxypropoxy)butane<br>2425-79-8                                                 |      |           |      |               | magna, Reproduction Test)                      |
| Dapsone<br>80-08-0                                                               | NOEC | 0,22 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test) |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | NOEC | 0,3 mg/l  | 21 d | Daphnia magna | OECD 211 (Daphnia<br>magna, Reproduction Test) |

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                  | Value<br>type | Value        | Exposure time | Species                                                                     | Method                                               |
|----------------------------------------------------------------------------------|---------------|--------------|---------------|-----------------------------------------------------------------------------|------------------------------------------------------|
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>-----                             | EC50          | 1,8 mg/l     | 72 h          | Pseudokirchneriella subcapitata                                             | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                  | EC50          | > 160 mg/l   | 72 h          | Raphidocelis subcapitata (new<br>name: Pseudokirchneriella<br>subcapitata)  | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                  | NOELR         | 40 mg/l      | 72 h          | Raphidocelis subcapitata (new<br>name: Pseudokirchneriella<br>subcapitata)  | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Dapsone<br>80-08-0                                                               | EC50          | 2,7 mg/l     | 72 h          | Selenastrum capricornutum<br>(new name: Pseudokirchneriella<br>subcapitata) | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | EC50          | > 11 mg/l    | 72 h          | Scenedesmus capricornutum                                                   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | NOEC          | 4,2 mg/l     | 72 h          | Scenedesmus capricornutum                                                   | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |
| Quartz (SiO <sub>2</sub> ), <1% respirable<br>14808-60-7                         | EC50          | > 1.000 mg/l | 72 h          | not specified                                                               | OECD Guideline 201 (Alga,<br>Growth Inhibition Test) |

**Toxicity (microorganisms):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                  | Value<br>type | Value        | Exposure time | Species                                                | Method                                                                   |
|----------------------------------------------------------------------------------|---------------|--------------|---------------|--------------------------------------------------------|--------------------------------------------------------------------------|
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>-----                             | IC50          | > 100 mg/l   | 3 h           | activated sludge, industrial                           | other guideline:                                                         |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                  | IC50          | > 100 mg/l   | 3 h           | activated sludge                                       | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |
| Dapsone<br>80-08-0                                                               | EC50          | > 1.000 mg/l | 3 h           | activated sludge of a<br>predominantly domestic sewage | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | IC50          | > 100 mg/l   | 3 h           | activated sludge, industrial                           | other guideline:                                                         |
| Quartz (SiO <sub>2</sub> ), <1% respirable<br>14808-60-7                         | EC0           | > 1.000 mg/l | 3 h           | not specified                                          | OECD Guideline 209<br>(Activated Sludge,<br>Respiration Inhibition Test) |

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**12.2. Persistence and degradability**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                              | Result                     | Test type | Degradability | Exposure<br>time | Method                                                                            |
|----------------------------------------------------------------------------------------------|----------------------------|-----------|---------------|------------------|-----------------------------------------------------------------------------------|
| Bisphenol-F epichlorhydrin<br>resin; MW<700<br>-----                                         | not readily biodegradable. | aerobic   | 0 %           | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)           |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | not readily biodegradable. | aerobic   | 38 %          | 28 d             | OECD Guideline 301 E (Ready<br>biodegradability: Modified OECD<br>Screening Test) |
| 1,4-bis(2,3<br>epoxypropoxy)butane<br>2425-79-8                                              | inherently biodegradable   | aerobic   | 98 %          | 60 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |
| Dapsone<br>80-08-0                                                                           | not readily biodegradable. | aerobic   | > 0 - < 1 %   | 28 d             | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)           |
| 2,2'-[(1-<br>methylethylidene)bis(4,1-<br>phenyleneoxymethylene)]biso<br>xirane<br>1675-54-3 | not readily biodegradable. | aerobic   | 5 %           | 28 d             | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test) |

**12.3. Bioaccumulative potential**

No substance data available.  
No data available.

#### 12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                  | LogPow    | Temperature | Method                                                                      |
|----------------------------------------------------------------------------------|-----------|-------------|-----------------------------------------------------------------------------|
| Bisphenol-F epichlorhydrin resin; MW<700<br>-----                                | 2,7 - 3,6 |             | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| 1,4-bis(2,3 epoxypropoxy)butane<br>2425-79-8                                     | -0,269    | 25 °C       | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Dapsone<br>80-08-0                                                               | 0,97      | 25 °C       | QSAR (Quantitative Structure Activity Relationship)                         |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | 3,242     | 25 °C       | EU Method A.8 (Partition Coefficient)                                       |

#### 12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No.                                                  | PBT / vPvB                                                                                                                          |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Bisphenol-F epichlorhydrin resin; MW<700<br>-----                                | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.               |
| 1,4-bis(2,3 epoxypropoxy)butane<br>2425-79-8                                     | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.               |
| Dapsone<br>80-08-0                                                               | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.               |
| 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane<br>1675-54-3 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.               |
| Quartz (SiO <sub>2</sub> ), <1% respirable<br>14808-60-7                         | According to Annex XIII to Regulation (EC) No 1907/2006, a PBT and vPvB assessment shall not be conducted for inorganic substances. |

#### 12.6. Endocrine disrupting properties

not applicable

#### 12.7. Other adverse effects

No data available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product disposal:

Do not empty into drains / surface water / ground water.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09\* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

**SECTION 14: Transport information****14.1. UN number or ID number**

|      |      |
|------|------|
| ADR  | 3082 |
| RID  | 3082 |
| IMDG | 3082 |
| IATA | 3082 |

**14.2. UN proper shipping name**

|      |                                                                   |
|------|-------------------------------------------------------------------|
| ADR  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin) |
| RID  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin) |
| IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin) |
| IATA | Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin) |

**14.3. Transport hazard class(es)**

|      |   |
|------|---|
| ADR  | 9 |
| RID  | 9 |
| IMDG | 9 |
| IATA | 9 |

**14.4. Packing group**

|      |     |
|------|-----|
| ADR  | III |
| RID  | III |
| IMDG | III |
| IATA | III |

**14.5. Environmental hazards**

|      |                           |
|------|---------------------------|
| ADR  | Environmentally Hazardous |
| RID  | Environmentally Hazardous |
| ADN  | Environmentally Hazardous |
| IMDG | Marine Pollutant          |
| IATA | Environmentally Hazardous |

**14.6. Special precautions for user**

|      |                                                                                                                       |
|------|-----------------------------------------------------------------------------------------------------------------------|
| ADR  | UN 1845, carbon dioxide, solid, as a coolant (does not apply for Germany, Sweden, France, Belgium, UK)<br>Tunnelcode: |
| RID  | not applicable                                                                                                        |
| ADN  | not applicable                                                                                                        |
| IMDG | not applicable                                                                                                        |
| IATA | not applicable                                                                                                        |

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.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

|                                                                |                |
|----------------------------------------------------------------|----------------|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 2024/590): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):    | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021):     | Not applicable |
| VOC content<br>(2010/75/EC)                                    | < 3 %          |

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**SECTION 16: Other information**

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H360F May damage fertility.  
H371 May cause damage to organs.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

|             |                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------|
| ED:         | Substance identified as having endocrine disrupting properties                                                    |
| EU OEL:     | Substance with a Union workplace exposure limit                                                                   |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148                                                               |
| EU EXPLD 2: | Substance listed in Annex II, Reg (EC) No. 2019/1148                                                              |
| SVHC:       | Substance of very high concern (REACH Candidate List)                                                             |
| PBT:        | Substance fulfilling persistent, bioaccumulative and toxic criteria                                               |
| PBT/vPvB:   | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB:       | Substance fulfilling very persistent and very bioaccumulative criteria                                            |

**Further information:**

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