

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

NAE-1500 A

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

1.1. Product identifier

Product name : NAE-1500 A
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Epoxy resin

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
☎ +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
☎ +32 14 85 97 38
info@novatech.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

| Class | Category | Hazard statements |
|-----------------|------------|--|
| Skin Sens. | category 1 | H317: May cause an allergic skin reaction. |
| Skin Irrit. | category 2 | H315: Causes skin irritation. |
| Eye Irrit. | category 2 | H319: Causes serious eye irritation. |
| Aquatic Chronic | category 2 | H411: Toxic to aquatic life with long lasting effects. |

2.2. Label elements



Contains: bis-[4-(2,3-epoxipropoxy)phenyl]propane; formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol.

Signal word Warning

H-statements

H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

P-statements

P280 Wear protective gloves, protective clothing and eye protection/face protection.
P264 Wash hands thoroughly after handling.
P302 + P352 IF ON SKIN: Wash with plenty of water and soap.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)

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<http://www.big.be>

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P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name REACH Registration No | CAS No EC No | Conc. (C) | Classification according to CLP | Note | Remark | M-factors and ATE |
|--|------------------------|---------------|---|---------------|-------------|----------------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane 01-2119456619-26 | 1675-54-3 216-823-5 | 25% <C<50% | Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 2; H411 Eye Irrit. 2; H319: C≥5%, (CLP Annex VI (ATP 0)) Skin Irrit. 2; H315: C≥5%, (CLP Annex VI (ATP 0)) | (1)(2)(6)(10) | Constituent | |
| formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 9003-36-5 500-006-8 | 10% <C<25% | Skin Sens. 1; H317 Skin Irrit. 2; H315 Aquatic Chronic 2; H411 | (1)(10) | Constituent | |
| calcium carbonate | 471-34-1 207-439-9 | 25% <C<50% | | (2) | Constituent | |

(1) For H- and EUH-statements in full: see section 16

(2) Substance with a Community workplace exposure limit

(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

After inhalation:

Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

After ingestion:

Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

4.2.1 Acute symptoms

After inhalation:

No effects known.

After skin contact:

Tingling/irritation of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

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5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.
Major fire: Class B foam (alcohol-resistant), Water spray if puddle cannot expand.

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.
Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, sulphur oxides, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Safety glasses (EN 166). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See section 8.2

6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Safety glasses (EN 166). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

6.2. Environmental precautions

Contain released product. Dam up the solid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Solid spill: cover with absorbent material. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See section 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Meet the legal requirements.

7.2.2 Keep away from:

Heat sources.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

Belgium

| | | |
|------------------------|--|----------------------|
| Calcium (carbonate de) | Time-weighted average exposure limit 8 h | 10 mg/m ³ |
|------------------------|--|----------------------|

France

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| | | |
|------------------------|--|----------------------|
| Calcium (carbonate de) | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 10 mg/m ³ |
|------------------------|--|----------------------|

UK

| | | |
|-----------------------------------|---|----------------------|
| Calcium carbonate inhalable dust | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 10 mg/m ³ |
| Calcium carbonate respirable dust | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 4 mg/m ³ |

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

| Product name | Test | Number |
|---------------------------------|-------|--------|
| Calciumdicarbonate | NIOSH | 7020 |
| Diglycidyl Ether of Bisphenol A | OSHA | 1018 |

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

bis-[4-(2,3-epoxypropoxy)phenyl]propane

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|------------------------|--------|
| DNEL | Long-term systemic effects inhalation | 4.93 mg/m ³ | |
| | Long-term systemic effects dermal | 0.75 mg/kg bw/day | |

calcium carbonate

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|------------------------------------|------------------------|--------|
| DNEL | Long-term local effects inhalation | 6.36 mg/m ³ | |

DNEL/DMEL - General population

bis-[4-(2,3-epoxypropoxy)phenyl]propane

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|------------------------|--------|
| DNEL | Long-term systemic effects inhalation | 0.87 mg/m ³ | |
| | Long-term systemic effects dermal | 89.3 µg/kg bw/day | |
| | Long-term systemic effects oral | 0.5 mg/kg bw/day | |

calcium carbonate

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|------------------------------------|------------------------|--------|
| DNEL | Long-term local effects inhalation | 1.06 mg/m ³ | |
| | Long-term systemic effects oral | 6.1 mg/kg bw/day | |
| | Acute systemic effects oral | 6.1 mg/kg bw/day | |

PNEC

bis-[4-(2,3-epoxypropoxy)phenyl]propane

| Compartments | Value | Remark |
|--------------------------------------|-------------------------|--------|
| Fresh water | 0.006 mg/l | |
| Marine water | 0.001 mg/l | |
| Fresh water (intermittent releases) | 0.018 mg/l | |
| Marine water (intermittent releases) | 0.002 mg/l | |
| STP | 10 mg/l | |
| Fresh water sediment | 0.341 mg/kg sediment dw | |
| Marine water sediment | 0.034 mg/kg sediment dw | |
| Soil | 0.065 mg/kg soil dw | |
| Oral | 11 mg/kg food | |

calcium carbonate

| Compartments | Value | Remark |
|--------------|----------|--------|
| STP | 100 mg/l | |

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions.

b) Hand protection:

Protective gloves against chemicals (EN 374).

c) Eye protection:

Safety glasses (EN 166).

d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---------------------------|---------------------------------------|
| Physical form | Paste |
| Odour | Characteristic odour |
| Odour threshold | No data available in the literature |
| Colour | White |
| Particle size | Not applicable |
| Explosion limits | No data available in the literature |
| Flammability | Not classified as flammable |
| Log Kow | Not applicable (mixture) |
| Dynamic viscosity | No data available in the literature |
| Kinematic viscosity | No data available in the literature |
| Melting point | No data available in the literature |
| Boiling point | No data available in the literature |
| Relative vapour density | No data available in the literature |
| Vapour pressure | No data available in the literature |
| Solubility | Water ; insoluble |
| Relative density | 1.47 ; 20 °C |
| Absolute density | 1470 kg/m ³ ; 20 °C |
| Decomposition temperature | No data available in the literature |
| Auto-ignition temperature | No data available in the literature |
| Flash point | > 150 °C |
| pH | Not applicable (non-soluble in water) |

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire hazard.

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, sulphur oxides, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Test results

Acute toxicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

bis-[4-(2,3-epoxipropoxy)phenyl]propane

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|----------------------|-----------|----------|-----------------|---------------|---------------------|---------------------|--------|
| Oral | LD50 | OECD 420 | > 2000 mg/kg bw | | Rat (female) | Experimental value | |
| Dermal | LD50 | OECD 402 | > 2000 mg/kg bw | | Rat (male / female) | Experimental value | |
| Inhalation (vapours) | LC0 | | 0.000008 ppm | 5 h | Rat (male) | Experimental value | |

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| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|----------------------|-----------|----------|-----------------|---------------|---------------------|---------------------|--------|
| Oral | LD50 | OECD 420 | > 2000 mg/kg | | Rat (female) | Experimental value | |
| Dermal | LD50 | OECD 402 | > 2000 mg/kg bw | 24 h | Rat (male / female) | Experimental value | |
| Inhalation (aerosol) | LC50 | OECD 403 | > 3 mg/l air | 4 h | Rat (male / female) | Experimental value | |

Conclusion

Not classified for acute toxicity

Corrosion/irritation

NAE-1500 A

No (test) data on the mixture available

Classification is based on the relevant ingredients

bis-[4-(2,3-epoxypropoxy)phenyl]propane

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|-------------------|------------------------|----------|---------------|------------------------|---------|---------------------|-----------------|
| Eye | Not irritating | OECD 405 | | 24; 48; 72 hrs; 7 days | Rabbit | Experimental value | Single exposure |
| Eye | Irritating; category 2 | | | | | Annex VI | |
| Skin | Slightly irritating | OECD 404 | 4 h | 24; 48; 72 hours | Rabbit | Experimental value | |
| Skin | Irritating; category 2 | | | | | Annex VI | |

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|-------------------|------------------------|--------|---------------|------------|---------|---------------------|--------|
| Skin | Irritating; category 2 | | | | | Literature study | |

calcium carbonate

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|--------------------------------|----------------|----------|---------------|---------------------|-------------------------------|---------------------|------------------|
| Eye | Not irritating | OECD 405 | | 1; 24; 48; 72 hours | Rabbit | Experimental value | Single treatment |
| Skin | Not irritating | OECD 404 | 4 h | 24; 48; 72 hours | Rabbit | Experimental value | |
| Not applicable (in vitro test) | Not irritating | OECD 439 | 15 minutes | | Reconstructed human epidermis | Experimental value | |

Conclusion

Causes skin irritation.

Causes serious eye irritation.

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

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No (test) data on the mixture available

Classification is based on the relevant ingredients

bis-[4-(2,3-epoxypropoxy)phenyl]propane

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|----------------------|-------------|----------|---------------|------------------------|----------------|---------------------|--------|
| Dermal (on the ears) | Sensitizing | OECD 429 | | | Mouse (female) | Experimental value | |

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|-------------------|-------------------------|--------|---------------|------------------------|---------|---------------------|--------|
| Skin | Sensitizing; category 1 | | | | | Literature study | |

calcium carbonate

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|-------------------|-----------------|----------|---------------|------------------------|----------------|---------------------|--------|
| Skin | Not sensitizing | OECD 429 | | | Mouse (female) | Experimental value | |

Conclusion

May cause an allergic skin reaction.

Not classified as sensitizing for inhalation

Specific target organ toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients
bis-[4-(2,3-epoxipropoxy)phenyl]propane

| Route of exposure | Parameter | Method | Value | Organ | Effect | Exposure time | Species | Value determination |
|---------------------|------------------------|----------|------------------|-------|-----------------------------|---------------------------|---------------------|---------------------|
| Oral (stomach tube) | NOAEL | OECD 408 | 50 mg/kg bw/day | | No effect | 14 weeks (7 days / week) | Rat (male / female) | Experimental value |
| Dermal | NOAEL systemic effects | OECD 411 | 100 mg/kg bw/day | | No adverse systemic effects | 13 weeks (3 times / week) | Mouse (male) | Experimental value |

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| Route of exposure | Parameter | Method | Value | Organ | Effect | Exposure time | Species | Value determination |
|---------------------|---------------------|----------|-------------------------------|-------|-----------------------------|------------------------------------|---------------------|---------------------|
| Oral (stomach tube) | NOAEL | OECD 422 | 1000 mg/kg bw/day | | No effect | 48 day(s) | Rat (male / female) | Experimental value |
| Inhalation (dust) | NOAEC local effects | OECD 413 | ≥ 0.212 mg/m ³ air | | No effect | 13 weeks (6h / day, 5 days / week) | Rat (male / female) | Experimental value |
| Inhalation (dust) | NOEC | OECD 413 | 0.399 mg/l | | No adverse systemic effects | 13 weeks (6h / day, 5 days / week) | Rat (male / female) | Experimental value |

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

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No (test)data on the mixture available

Judgement is based on the relevant ingredients
bis-[4-(2,3-epoxipropoxy)phenyl]propane

| Result | Method | Test substrate | Effect | Value determination | Remark |
|---|----------|------------------|--------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | OECD 472 | Escherichia coli | | Experimental value | |

calcium carbonate

| Result | Method | Test substrate | Effect | Value determination | Remark |
|---|----------|--------------------------|-----------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | OECD 471 | Bacteria (S.typhimurium) | No effect | Experimental value | |
| Negative with metabolic activation, negative without metabolic activation | OECD 473 | Human lymphocytes | No effect | Experimental value | |

Mutagenicity (in vivo)

NAE-1500 A

No (test)data on the mixture available

Judgement is based on the relevant ingredients
bis-[4-(2,3-epoxipropoxy)phenyl]propane

| Result | Method | Exposure time | Test substrate | Organ | Value determination |
|--------------------------------|----------|-----------------|----------------|-------|---------------------|
| Negative (Oral (stomach tube)) | OECD 488 | 4 weeks (daily) | Rat (male) | | Experimental value |

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients
bis-[4-(2,3-epoxipropoxy)phenyl]propane

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Effect | Organ | Value determination |
|---------------------|-----------|----------|------------------------------------|---------------------------|---------------------|------------------------|-------|---------------------|
| Dermal | NOEL | OECD 453 | 100 mg/kg bw/day | 104 weeks (5 days / week) | Rat (female) | No carcinogenic effect | | Experimental value |
| Oral (stomach tube) | NOAEL | OECD 453 | 15 mg/kg bw/day - 100 mg/kg bw/day | 104 week(s) | Rat (male / female) | No carcinogenic effect | | Experimental value |

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| Route of exposure | Parameter | Method | Value | Exposure time | Species | Effect | Organ | Value determination |
|-------------------|-----------|--------|-------|---------------|---------|--------|-------|---------------------|
| Unknown | | | | | | | | Data waiving |

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

bis-[4-(2,3-epoxipropoxy)phenyl]propane

| | Parameter | Method | Value | Exposure time | Species | Effect | Organ | Value determination |
|--|-----------|----------|------------------|----------------------------|---------------------|-----------|-------|---------------------|
| Developmental toxicity (Oral (stomach tube)) | NOAEL | OECD 414 | 180 mg/kg bw/day | 13 days (gestation, daily) | Rabbit | No effect | | Experimental value |
| Maternal toxicity (Oral (stomach tube)) | NOAEL | OECD 414 | 60 mg/kg bw/day | 13 days (gestation, daily) | Rabbit | No effect | | Experimental value |
| Effects on fertility (Oral (stomach tube)) | NOEL | OECD 416 | 750 mg/kg bw/day | 238 day(s) | Rat (male / female) | No effect | | Experimental value |

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| | Parameter | Method | Value | Exposure time | Species | Effect | Organ | Value determination |
|--|-----------|------------------------|---------------------------------------|---------------|---------------------|-----------|--------|---------------------|
| Developmental toxicity (Oral (diet)) | NOAEC | Equivalent to OECD 414 | 1963 mg/kg bw/day - 2188 mg/kg bw/day | 62 day(s) | Rat | No effect | Foetus | Experimental value |
| Maternal toxicity (Oral (diet)) | NOAEC | Equivalent to OECD 414 | 1963 mg/kg bw/day - 2188 mg/kg bw/day | 62 day(s) | Rat | No effect | | Experimental value |
| Effects on fertility (Oral (stomach tube)) | NOEL | OECD 422 | 1000 mg/kg bw/day | 48 day(s) | Rat (male / female) | No effect | | Experimental value |

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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No (test) data on the mixture available

Chronic effects from short and long-term exposure

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Skin rash/inflammation.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

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No (test) data on the mixture available

Classification is based on the relevant ingredients

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bis-[4-(2,3-epoxypropoxy)phenyl]propane

| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|-----------|------------------------|------------|-----------|---------------------------|--------------------|------------------|---|
| Acute toxicity fishes | LC50 | OECD 203 | 1.75 mg/l | 96 h | Oncorhynchus mykiss | Static system | Fresh water | Experimental value; Nominal concentration |
| Acute toxicity crustacea | EC50 | Equivalent to OECD 202 | 1.7 mg/l | 48 h | Daphnia magna | Static system | Fresh water | Experimental value; Locomotor effect |
| Toxicity algae and other aquatic plants | EC50 | EPA 660/3 - 75/009 | > 11 mg/l | 72 h | Selenastrum capricornutum | Static system | Fresh water | Experimental value; Growth rate |
| | NOEC | EPA 660/3 - 75/009 | 4.2 mg/l | 72 h | Selenastrum capricornutum | Static system | Fresh water | Experimental value; Growth rate |
| Long-term toxicity fish | | | | | | | | Data waiving |
| Long-term toxicity aquatic crustacea | NOEC | Equivalent to OECD 211 | 0.3 mg/l | 21 day(s) | Daphnia magna | Semi-static system | Fresh water | Experimental value; GLP |
| Toxicity aquatic micro-organisms | IC50 | | > 100 mg/l | 3 h | Activated sludge | | | Experimental value; Respiration |

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|-----------|------------------------|------------|-----------|---------------------------|--------------------|------------------|-------------------------|
| Acute toxicity fishes | LC50 | OECD 203 | 1.9 mg/l | 96 h | Brachydanio rerio | Semi-static system | Fresh water | Weight of evidence |
| Acute toxicity crustacea | EC50 | OECD 202 | 3.5 mg/l | 48 h | Daphnia magna | Static system | Fresh water | Weight of evidence; GLP |
| Toxicity algae and other aquatic plants | EC50 | Equivalent to OECD 201 | > 1.8 mg/l | 72 h | Selenastrum capricornutum | Static system | Fresh water | Experimental value |
| Long-term toxicity aquatic crustacea | NOEC | Equivalent to OECD 211 | 0.3 mg/l | 21 day(s) | Daphnia magna | Semi-static system | Fresh water | Experimental value; GLP |

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| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|------------|----------|-------------|-----------|---------------------------------|---------------------|------------------|---|
| Acute toxicity fishes | LC50 | OECD 203 | > 100 % | 96 h | Oncorhynchus mykiss | Semi-static system | Fresh water | Experimental value; Nominal concentration |
| Acute toxicity crustacea | EC50 | OECD 202 | > 100 % | 48 h | Daphnia magna | Static system | Fresh water | Experimental value; Locomotor effect |
| Toxicity algae and other aquatic plants | ErC50 | OECD 201 | > 100 mg/l | 72 h | Pseudokirchneriella subcapitata | Static system | Fresh water | Experimental value; Nominal concentration |
| | NOEC | OECD 201 | 50 mg/l | 72 h | Pseudokirchneriella subcapitata | Static system | Fresh water | Experimental value; Growth rate |
| Long-term toxicity fish | Dose level | | 60 mg/l | 42 day(s) | Oncorhynchus mykiss | Flow-through system | Fresh water | Experimental value; Calcium ion |
| Long-term toxicity aquatic crustacea | | | | | | | | Data waiving |
| Toxicity aquatic micro-organisms | EC50 | OECD 209 | > 1000 mg/l | 3 h | Activated sludge | | | Literature study |

Conclusion

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

bis-[4-(2,3-epoxypropoxy)phenyl]propane

Biodegradation water

| Method | Value | Duration | Value determination |
|-----------|-------------------------|-----------|---------------------|
| OECD 301F | 5 %; Oxygen consumption | 28 day(s) | Experimental value |

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Biodegradation water

| Method | Value | Duration | Value determination |
|---------------|-------|-----------|---------------------|
| EU Method C.4 | 0 % | 28 day(s) | Experimental value |

Half-life water (t1/2 water)

| Method | Value | Primary degradation/mineralisation | Value determination |
|----------|--------------|------------------------------------|---------------------|
| OECD 111 | 86 h; pH = 7 | | Read-across |

Conclusion

Water

Contains non readily biodegradable component(s)

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12.3. Bioaccumulative potential

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Log Kow

| Method | Remark | Value | Temperature | Value determination |
|--------|--------------------------|-------|-------------|---------------------|
| | Not applicable (mixture) | | | |

bis-[4-(2,3-epoxipropoxy)phenyl]propane

BCF fishes

| Parameter | Method | Value | Duration | Species | Value determination |
|-----------|--------|------------------|----------|---------|---------------------|
| BCF | | 31; Fresh weight | | | QSAR |

Log Kow

| Method | Remark | Value | Temperature | Value determination |
|----------|--------|-------------|-------------|---------------------|
| OECD 117 | | 2.64 - 3.78 | 25 °C | Experimental value |

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

Log Kow

| Method | Remark | Value | Temperature | Value determination |
|----------|--------|-----------|-------------|---------------------|
| OECD 117 | | 2.7 - 3.6 | | Experimental value |

calcium carbonate

Log Kow

| Method | Remark | Value | Temperature | Value determination |
|--------|------------------|-------|-------------|---------------------|
| | Not quantifiable | | | |

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

bis-[4-(2,3-epoxipropoxy)phenyl]propane

(log) Koc

| Parameter | Method | Value | Value determination |
|-----------|-------------------|-------|---------------------|
| log Koc | SRC PCKOCWIN v2.0 | 2.65 | QSAR |

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

(log) Koc

| Parameter | Method | Value | Value determination |
|-----------|----------|-------|---------------------|
| log Koc | OECD 121 | 3.65 | Experimental value |

Conclusion

Contains component(s) with potential for mobility in the soil
Contains component(s) that adsorb(s) into the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

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Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

Groundwater

Groundwater pollutant

bis-[4-(2,3-epoxipropoxy)phenyl]propane

Groundwater

Groundwater pollutant

calcium carbonate

Water ecotoxicity pH

pH shift

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. The waste code must be assigned by the user, preferably in consultation with the (environmental) authorities concerned.

13.1.2 Disposal methods

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Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

| | |
|--|---|
| 14.1. UN number | |
| UN number | 3082 |
| 14.2. UN proper shipping name | |
| Proper shipping name | environmentally hazardous substance, liquid, n.o.s. (bis-[4-(2,3-epoxipropoxy)phenyl]propane) |
| 14.3. Transport hazard class(es) | |
| Hazard identification number | 90 |
| Class | 9 |
| Classification code | M6 |
| 14.4. Packing group | |
| Packing group | III |
| Labels | 9 |
| 14.5. Environmental hazards | |
| Environmentally hazardous substance mark | yes |
| 14.6. Special precautions for user | |
| Special provisions | 274 |
| Special provisions | 335 |
| Special provisions | 375 |
| Special provisions | 601 |
| Limited quantities | Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |

Rail (RID)

| | |
|--|---|
| 14.1. UN number | |
| UN number | 3082 |
| 14.2. UN proper shipping name | |
| Proper shipping name | environmentally hazardous substance, liquid, n.o.s. (bis-[4-(2,3-epoxipropoxy)phenyl]propane) |
| 14.3. Transport hazard class(es) | |
| Hazard identification number | 90 |
| Class | 9 |
| Classification code | M6 |
| 14.4. Packing group | |
| Packing group | III |
| Labels | 9 |
| 14.5. Environmental hazards | |
| Environmentally hazardous substance mark | yes |
| 14.6. Special precautions for user | |
| Special provisions | 274 |
| Special provisions | 335 |
| Special provisions | 375 |
| Special provisions | 601 |
| Limited quantities | Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |

Inland waterways (ADN)

| | |
|----------------------------------|---|
| 14.1. UN number | |
| UN number | 3082 |
| 14.2. UN proper shipping name | |
| Proper shipping name | environmentally hazardous substance, liquid, n.o.s. (bis-[4-(2,3-epoxipropoxy)phenyl]propane) |
| 14.3. Transport hazard class(es) | |
| Class | 9 |
| Classification code | M6 |
| 14.4. Packing group | |
| Packing group | III |
| Labels | 9 |
| 14.5. Environmental hazards | |

Reason for revision: 1

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| | |
|--|---|
| Environmentally hazardous substance mark | yes |
| 14.6. Special precautions for user | |
| Special provisions | 274 |
| Special provisions | 335 |
| Special provisions | 375 |
| Special provisions | 601 |
| Limited quantities | Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |

Sea (IMDG/IMSBC)

| | |
|---|---|
| 14.1. UN number | |
| UN number | 3082 |
| 14.2. UN proper shipping name | |
| Proper shipping name | environmentally hazardous substance, liquid, n.o.s. (bis-[4-(2,3-epoxipropoxi)phenyl]propane) |
| 14.3. Transport hazard class(es) | |
| Class | 9 |
| 14.4. Packing group | |
| Packing group | III |
| Labels | 9 |
| 14.5. Environmental hazards | |
| Marine pollutant | P |
| Environmentally hazardous substance mark | yes |
| 14.6. Special precautions for user | |
| Special provisions | 274 |
| Special provisions | 335 |
| Special provisions | 969 |
| Limited quantities | Combination packagings: not more than 5 liters per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |
| 14.7. Maritime transport in bulk according to IMO instruments | |
| Annex II of MARPOL 73/78 | Not applicable, based on available data |

Air (ICAO-TI/IATA-DGR)

| | |
|--|---|
| 14.1. UN number | |
| UN number | 3082 |
| 14.2. UN proper shipping name | |
| Proper shipping name | environmentally hazardous substance, liquid, n.o.s. (bis-[4-(2,3-epoxipropoxi)phenyl]propane) |
| 14.3. Transport hazard class(es) | |
| Class | 9 |
| 14.4. Packing group | |
| Packing group | III |
| Labels | 9 |
| 14.5. Environmental hazards | |
| Environmentally hazardous substance mark | yes |
| 14.6. Special precautions for user | |
| Special provisions | A158 |
| Special provisions | A197 |
| Special provisions | A215 |
| Special provisions | A97 |
| Passenger and cargo transport | |
| Limited quantities: maximum net quantity per packaging | 30 kg G |

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European legislation:

VOC content Directive 2010/75/EU

| VOC content | Remark |
|-----------------------|--------|
| 14.6 % - 20.4 % | |
| 223.4 g/l - 312.1 g/l | |

Directive 2012/18/EU (Seveso III)

Threshold values under normal circumstances

| Substance or category | Low tier (tonnes) | Top tier (tonnes) | Group | For this substance or mixture the summation rule has to be applied for: |
|---|-------------------|-------------------|-------|---|
| E2 Hazardous to the Aquatic Environment in Category Chronic 2 | 200 | 500 | None | Eco-toxicity |

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REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

| | Designation of the substance, of the group of substances or of the mixture | Conditions of restriction |
|---|---|---|
| · bis-[4-(2,3-epoxypropoxy)phenyl]propane · formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1. | 1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage"; b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. |
| · bis-[4-(2,3-epoxypropoxy)phenyl]propane | Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex. The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry. | Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081 |

National legislation Belgium

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No data available

National legislation The Netherlands

NAE-1500 A

| | |
|----------------------|---|
| Waterbezwaarlijkheid | A (2); Algemene Beoordelingsmethodiek (ABM) |
|----------------------|---|

National legislation France

NAE-1500 A

No data available

National legislation Germany

NAE-1500 A

| | |
|-----|--|
| WGK | 2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017 |
|-----|--|

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bis-[4-(2,3-epoxipropoxy)phenyl]propane

| | |
|---------|---------|
| TA-Luft | 5.2.5/1 |
|---------|---------|

formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

| | |
|---------|---------|
| TA-Luft | 5.2.5/1 |
|---------|---------|

calcium carbonate

| | |
|---------|-------|
| TA-Luft | 5.2.1 |
|---------|-------|

National legislation Austria

NAE-1500 A

No data available

National legislation United Kingdom

NAE-1500 A

No data available

Other relevant data

NAE-1500 A

No data available

bis-[4-(2,3-epoxipropoxy)phenyl]propane

| | |
|-----------------------|---------------------------------|
| IARC - classification | 3; Bisphenol a diglycidyl ether |
|-----------------------|---------------------------------|

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3:

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.

| | |
|--------------|--|
| (*) | INTERNAL CLASSIFICATION BY BIG |
| ADI | Acceptable daily intake |
| AOEL | Acceptable operator exposure level |
| ATE | Acute Toxicity Estimate |
| CLP (EU-GHS) | Classification, labelling and packaging (Globally Harmonised System in Europe) |
| DMEL | Derived Minimal Effect Level |
| DNEL | Derived No Effect Level |
| EC50 | Effect Concentration 50 % |
| ErC50 | EC50 in terms of reduction of growth rate |
| LC50 | Lethal Concentration 50 % |
| LD50 | Lethal Dose 50 % |
| NOAEL | No Observed Adverse Effect Level |
| NOEC | No Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent, Bioaccumulative & Toxic |
| PNEC | Predicted No Effect Concentration |
| STP | Sludge Treatment Process |
| vPvB | very Persistent & very Bioaccumulative |

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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