


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

- **1.1 Product identifier**
- **Trade name:** **CM 405-1 (A&B)**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.
- **Application of the substance / the mixture** Construction chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Hilti Ireland,
1850 287 387,
Unit C4, North City Business Park,
Finglas,
Dublin 11,
Ireland
Phone: 1850 287 387
Fax: 1800 654 600
Email: iesales@hilti.com
- **Informing department:**
chemicals.hse@hilti.com
see section 16
- **1.4 Emergency telephone number:**
Hilti Ireland,
Phone: 1850 287 387
Fax: 1800 654 600
Schweizerisches Toxikologisches Informationszentrum - 24 h Service
Tel.: 0041 / 44 251 51 51 (international)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
C; Corrosive
R34: Causes burns.
Xn; Harmful
R20/21/22-68-62: Harmful by inhalation, in contact with skin and if swallowed. Possible risk of irreversible effects. Possible risk of impaired fertility.
Xi; Irritant
R36/38: Irritating to eyes and skin.
Xi; Sensitising
R43: May cause sensitisation by skin contact.
N; Dangerous for the environment
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Classification system:**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.
- **2.2 Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
- **Code letter and hazard designation of product:**

C Corrosive
N Dangerous for the environment
- **Hazard-determining components of labelling:**
3,6,9,12-tetra-azatetradecamethylenediamine
Benzyl alcohol
reaction product: bisphenol-A-epichlorhydrin epoxy resin
(average MW = 700)
2,3-epoxypropyl o-tolyl ether
- **Risk phrases:**
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
34 Causes burns.
36/38 Irritating to eyes and skin.
43 May cause sensitisation by skin contact.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
68 Possible risk of irreversible effects.
62 Possible risk of impaired fertility.

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Safety phrases:

- 25 Avoid contact with eyes.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 29 Do not empty into drains.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Special labelling of certain preparations:

Contains epoxy constituents. See information supplied by the manufacturer.
 Restricted to professional users.

2.3 Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients
3.2 Chemical characterisation: Mixtures
Description:

Mixture consisting of the following components.

Dangerous components:

CAS: 25068-38-6 NLP: 500-033-5 Reg.nr.: 01-2119456619-26	reaction product: bisphenol-A-epichlorhydrin epoxy resin (average MW = 700) Xi R36/38; Xi R43; N R51/53 Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	10-25%
CAS: 100-51-6 EINECS: 202-859-9 Reg.nr.: 01-2119492630-38	Benzyl alcohol Xn R20/22 Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319	10-25%
CAS: 2855-13-2 EINECS: 220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine C R34; Xn R21/22; Xi R43 R52/53 Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-25%
CAS: 2210-79-9 EINECS: 218-645-3 Reg.nr.: 01-2119966907-18	2,3-epoxypropyl o-tolyl ether Xn R68; Xi R38; Xi R43; N R51/53 Muta. Cat. 3 Muta. 2, H341; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	2.5-10%
CAS: 25620-58-0 EINECS: 247-134-8	trimethylhexane-1,6-diamine C R34; Xn R22; Xi R43 Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317	2.5-10%
CAS: 80-05-7 EINECS: 201-245-8	bisphenol A Xn R62; Xi R37-41; Xi R43 R52 Repr. Cat. 3 Repr. 2, H361f; Eye Dam. 1, H318; Skin Sens. 1, H317; STOT SE 3, H335	2-5%

Dangerous components A:

CAS: 25068-38-6 NLP: 500-033-5 Reg.nr.: 01-2119456619-26	reaction product: bisphenol-A-epichlorhydrin epoxy resin (average MW = 700) Xi R36/38; Xi R43; N R51/53 Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	10-25%
CAS: 2210-79-9 EINECS: 218-645-3 Reg.nr.: 01-2119966907-18	2,3-epoxypropyl o-tolyl ether Xn R68; Xi R38; Xi R43; N R51/53 Muta. Cat. 3 Muta. 2, H341; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	2.5-10%

Dangerous components B:

CAS: 100-51-6 EINECS: 202-859-9 Reg.nr.: 01-2119492630-38	Benzyl alcohol Xn R20/22 Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319	10-25%
CAS: 2855-13-2 EINECS: 220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine C R34; Xn R21/22; Xi R43 R52/53 Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-25%
CAS: 25620-58-0 EINECS: 247-134-8	trimethylhexane-1,6-diamine C R34; Xn R22; Xi R43 Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317	2.5-10%

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CAS: 80-05-7 EINECS: 201-245-8	bisphenol A Xn R62; Xi R37-41; Xi R43 R52 Repr. Cat. 3 Repr. 2, H361f; Eye Dam. 1, H318; Skin Sens. 1, H317; STOT SE 3, H335	2-5%
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· **Additional information** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation**
Take affected persons into the open air and position comfortably
Seek medical treatment in case of complaints.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly. If skin irritation persist, call a physician.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing** Seek immediate medical advice.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Water spray, carbon dioxide (CO₂), carbon dioxide blanket, foam, or dry powder.
- **5.2 Special hazards arising from the substance or mixture** Formation of poisonous gases during heating or in fires.
- **5.3 Advice for firefighters**
- **Protective equipment:** In the event of fire, wear self contained breathing apparatus

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.
Keep away from ignition sources
- **6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Provide sufficient air exchange and/or exhaust in work rooms. When using, do not eat, drink or smoke. Ingestion, exposure to skin and eyes and inhalation of any general vapours should be avoided.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** Keep in a cool, dry and dark place; 10 °C to 40 °C.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Store in a locked cabinet and out of the reach of children.
- **Storage class 8 A**
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures should be adhered to general rules for handling chemicals.

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- Take off immediately all contaminated clothing
- Keep away from foodstuffs, beverages and food.
- Wash hands during breaks and at the end of the work.
- Avoid contact with the eyes and skin.
- **Breathing equipment:** Use breathing protection in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

EN 374

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves** Synthetic gloves
 - **Penetration time of glove material**
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed safety glasses.

EN 166 + EN 170

- **Body protection:**



Protective work clothing.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

- **Form:** Fluid
- **Colour:** Light yellow
- **Odour:** Amine-like

· **pH-value at 20 °C:** 11

· Change in condition

- **Melting point/Melting range:** Not determined
- **Boiling point/Boiling range:** >200 °C

· **Flash point:** >100 °C

· Ignition temperature:

· **Decomposition temperature:** Not determined.

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· **Vapour pressure:** Not determined.

· **Density** Not determined

· Solubility in / Miscibility with

· **Water:** Partly miscible

· Viscosity:

· **dynamic:** Not determined.

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

· 10.2 Chemical stability

· **Thermal decomposition / conditions to be avoided:** Stable until boiling point

· 10.3 Possibility of hazardous reactions

Reacts with strong acids and alkali

Reacts with strong oxidizing agents

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

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SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity:

· LD/LC50 values that are relevant for classification:

100-51-6 Benzyl alcohol

Oral	LD50	1230 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rbt)

2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

Oral	LD50	1030 mg/kg (rat)
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25620-58-0 trimethylhexane-1,6-diamine

Oral	LD50	900 mg/kg (rat)
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- Primary irritant effect:
- on the skin: Caustic effect on skin and mucous membranes.
- on the eye: Strong caustic effect.
- Sensitisation: Sensitization possible by skin contact.
- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Corrosive
Product is suspected to cause injury to foetus.

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Ecotoxicological effects:
- Remark: Toxic for fish
- Additional ecological information:
- General notes:
Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
- Recommendation:
Disposal must be made according to official regulations.
Dispose of packaging according to regulations on the disposal of packagings.
Empty packs: May be disposed via the local Green Dot collecting system (Repak) or EAK waste material code 150102 (plastic packaging materials)

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	2735
· 14.2 UN proper shipping name · ADR, IMDG, IATA	AMINES, LIQUID, CORROSIVE, NOS (trimetilhexanmetilendiamina; Isphorondiamine)
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA · Class · Label	8 Corrosive substances. 8
· 14.4 Packing group · ADR, IMDG, IATA	III

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· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Kemler Number:	80
· EMS Number:	F-A, S-B
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Tunnel restriction code	[E]

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Designation according to EC guidelines:
- Hazard-determining components of labelling: Contains epoxy constituents. See information supplied by the manufacturer.
- 15.2 Chemical safety assessment: not required.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H361f Suspected of damaging fertility.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- R20/22 Harmful by inhalation and if swallowed.
- R21/22 Harmful in contact with skin and if swallowed.
- R22 Harmful if swallowed.
- R34 Causes burns.
- R36/38 Irritating to eyes and skin.
- R37 Irritating to respiratory system.
- R38 Irritating to skin.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52 Harmful to aquatic organisms.
- R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R62 Possible risk of impaired fertility.
- R68 Possible risk of irreversible effects.

· Department issuing data specification sheet:

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- * Data compared to the previous version altered.