





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

- **1.1 Product identifier**
- **Trade name:** Normafloor 205 Comp. A
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** Coating
- **Application of the substance / the mixture**  
 2-comp. epoxy varnish, Comp. A  
 Uses in Coatings - Industrial use  
 Uses in Coatings - Professional use
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Nor-Maali Oy  
 Vanhatie 20, 15240 Lahti, FINLAND
- **Further information obtainable from:** MSDS (Nor-Maali Oy) tel.+358 3 874 650, sds@nor-maali.fi
- **1.4 Emergency telephone number:** Contact National Poison Center

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- Product definition: mixture
- **Classification according to Regulation (EC) No 1272/2008**
-  GHS09 environment  
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
-  GHS07
- Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2 H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
 The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
-    
 GHS07 GHS09
- **Signal word** Warning
- **Hazard-determining components of labelling:**  
 bis[4-(2,3-epoxypropoxy)phenyl]propane  
 Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2)  
 oxirane, mono[(C12-14-alkyloxy)methyl] derivs
- **Hazard statements**  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H317 May cause an allergic skin reaction.  
 H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
 P273 Avoid release to the environment.

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P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

- **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 of substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 1675-54-3 EINECS: 216-823-5 Reg.nr.: 01-2119456619-26-	bis[4-(2,3-epoxypropoxy)phenyl]propane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	50 - 90%
CAS: 933999-84-9 EC number: 618-939-5 Reg.nr.: 01-2119463471-41-	Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2) Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2.5 - 10%
CAS: 68609-97-2 EINECS: 271-846-8 Reg.nr.: 01-2119485289-22-	oxirane, mono[(C12-14-alkyloxy)methyl] derivs Skin Irrit. 2, H315; Skin Sens. 1, H317	2.5 - 10%
CAS: 100-51-6 EINECS: 202-859-9 Reg.nr.: 01-2119492630-38-	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332	2.5 - 10%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:**  
Never give anything by mouth or induce vomiting to an unconscious person or a person who has convulsions.
- **After inhalation:**  
Remove person to fresh air, keep patient warm and at rest. If breathing is irregular, call national emergency number, if needed start giving artificial respiration and seek medical advice.
- **After skin contact:**  
Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- **After eye contact:**  
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.
- **After swallowing:**  
If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do not induce vomiting.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor:** Treatment according to symptoms.
- **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:** Alcohol resistant foam, CO<sub>2</sub>, powders, water spray.

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- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**  
 Evacuate people from danger area and deny access to area. Remove containers from danger area and try to cool containers which cannot be removed safely. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- **Protective equipment:** Compressed air respirator and protective clothing.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
 No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- **6.2 Environmental precautions:**  
 Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- **6.3 Methods and material for containment and cleaning up:**  
 Absorb liquid components with liquid-binding material (sand, peat or other absorbent material). Ensure adequate ventilation.
- **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 disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
 Handling must be organised so that skin contact with the product and splashes to eyes can be avoided.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
 Store in accordance with local regulations. Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. Keep away from: oxidising agents, strong alkalis, strong acids. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not empty into drains.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

**100-51-6 Benzyl alcohol**

HTP | Long-term value: 45 mg/m<sup>3</sup>, 10 ppm

- **Additional information:**

The information is based on the valid lists at the time of manufacture (Finland 538/2018).

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the

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lavatory and at the end of the working period.

• **Respiratory protection:**

If ventilation is insufficient or if workers are exposed to concentrations above the exposure limit they must use half- or full mask with gas filter A (brown, organic substances), and when grinding P2 (Iib) -type dust filter. Mask with combined filter (gas & dust) A2-P2 must be used when spraying. In the continuous long-term work it is recommended to use motored air protector or separative protector (fresh air hood or compressed air hood or such).

• **Protection of hands:**



Protective gloves

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

• **Material of gloves**

Wear suitable gloves tested to EN374.

May be used, gloves(breakthrough time) 4 - 8 hours: butyl rubber, nitrile rubber

• **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 goggles

The eye flushing device should be located near the the paint work area.

• **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:	Colourless
• Odour:	Mild
• Odour threshold:	Not determined.

• **pH-value:** Not determined.

• **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	284 °C

• **Flash point:** > 93 °C

• **Flammability (solid, gas):** Not applicable.

• **Decomposition temperature:** Not determined.

• **Auto-ignition temperature:** Product is not selfigniting.

• **Explosive properties:** Product does not present an explosion hazard.

• **Vapour pressure:** Not determined.

• <b>Density at 20 °C:</b>	1.1 g/cm <sup>3</sup>
• <b>Relative density</b>	Not determined.
• <b>Vapour density</b>	Not determined.
• <b>Evaporation rate</b>	Not determined.

• **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

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- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** > 20,5 mm<sup>2</sup> / s (40 °C)
- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No specific test data related to reactivity available for this product or its ingredients.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
 Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
 Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

• **LD/LC50 values relevant for classification:**

**1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane**

Oral	LD50	> 2,000 mg/kg (rat) (OECD Guideline 420 (Acute Oral Toxicity - Fixed Do))
Dermal	LD50	> 2,000 mg/kg (rat) (OECD Guideline 402 (Acute Dermal Toxicity))

**933999-84-9 Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2)**

Oral	LD50	2,189 mg/kg (rat) (OECD 401)
Dermal	LD50	> 2,000 mg/kg (rat) (OECD 402)

**100-51-6 Benzyl alcohol**

Oral	LD50	1,230 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	> 4.178 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
 Causes skin irritation.
- **Serious eye damage/irritation**  
 Causes serious eye irritation.
- **Respiratory or skin sensitisation**  
 May cause an allergic skin reaction.
- **Other information (about experimental toxicology):**  
 Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Swallowing may cause nausea, diarrhea, vomiting, gastro-intestinal irritation and chemical pneumonia.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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· **Aspiration hazard** Based on available data, the classification criteria are not met.

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**SECTION 12: Ecological information**

· **12.1 Toxicity**

· **Aquatic toxicity:**

**1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane**

72-h EC50 11 mg/L (Algae)

96-h LC50 2 mg/L (Fish)

NOEC 4.2 mg/L (Algae)

**933999-84-9 Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2)**

48-h EC50 47 mg/L (Daphnia magna) (OECD TG 202)

96-h LC50 30 mg/L (Oncorhynchus mykiss) (OECD 203)

**68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs**

48-h EC50 < 10 mg/L (Daphnia magna)

**100-51-6 Benzyl alcohol**

72-h EC50 770 mg/L (Pseudokirchneriella subcapitata) (OECD TG 201)

48-h EC50 230 mg/L (Daphnia magna) (OECD TG 202)

96-h LC50 460 mg/L (Pimephales promelas) (EPA OPP 72-1)

· **12.2 Persistence and degradability**

Biodegradability:

bis[4-(2,3-epoxypropoxy)phenyl]propane: not readily

Benzyl alcohol: readily

· **12.3 Bioaccumulative potential**

bis[4-(2,3-epoxypropoxy)phenyl]propane: LogPow > 3 (low)

Benzyl alcohol: LogPow = 1,1 (low)

· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Toxic for fish

· **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**

Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

· **European waste catalogue**

08 01 11\* waste paint and varnish containing organic solvents or other hazardous substances

· **Uncleaned packaging:**

· **Recommendation:**

Empty, dry paint containers (hole made to the bottom) should be taken to collection centres for metallic paint packages. If this collecting/recycling centre doesn't exist, containers can be taken to a local dump pit. For more information contact your local waste disposal authorities or paint deliverer.

**SECTION 14: Transport information**

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN3082

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**Safety data sheet**

(EC) 1907/2006 (REACH), Annex II, as amended by Regulation (EU) 2018/1480

Date of revision: 20.05.2020  
Date of previous issue: 15.04.2020  
Version number 6

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<ul style="list-style-type: none"> <li>· 14.2 UN proper shipping name</li> <li>· ADR, IATA</li> <li>· IMDG</li> </ul>	<p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis[4-(2,3-epoxypropoxy)phenyl]propane) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis[4-(2,3-epoxypropoxy)phenyl]propane), MARINE POLLUTANT</p>
<ul style="list-style-type: none"> <li>· 14.3 Transport hazard class(es)</li> <li>· ADR, IMDG, IATA</li> </ul>	
<ul style="list-style-type: none"> <li>· Class</li> </ul>	9 Miscellaneous dangerous substances and articles.
<ul style="list-style-type: none"> <li>· 14.4 Packing group</li> <li>· ADR, IMDG, IATA</li> </ul>	III
<ul style="list-style-type: none"> <li>· 14.5 Environmental hazards:</li> <li>· Marine pollutant:</li> <li>· Special marking (ADR):</li> <li>· Special marking (IATA):</li> </ul>	<p>Yes Symbol (fish and tree) Symbol (fish and tree)</p>
<ul style="list-style-type: none"> <li>· 14.6 Special precautions for user</li> <li>· Hazard identification number (Kemler code):</li> <li>· EMS Number:</li> </ul>	<p>Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F</p>
<ul style="list-style-type: none"> <li>· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> </ul>	
<ul style="list-style-type: none"> <li>· ADR</li> <li>· Limited quantities (LQ)</li> <li>· Transport category</li> <li>· Tunnel restriction code</li> </ul>	<p>5L 3 -</p>
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> </ul>	5L
<ul style="list-style-type: none"> <li>· UN "Model Regulation":</li> </ul>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BIS[4-(2,3-EPOXYPROPOXY)PHENYL]PROPANE), 9, III

**SECTION 15: Regulatory information**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category E2 Hazardous to the Aquatic Environment
- Qualifying quantity (tonnes) for the application of lower-tier requirements  
200 t  
200 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements  
500 t  
500 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

This information is based on our present knowledge. However, this 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.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

• **Contact:** Nor-Maali Oy, tel. +358 3 874 650 or sds@nor-maali.fi

• **Abbreviations and acronyms:**

Acute Tox. 4: Acute toxicity - oral – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

• **\* Data compared to the previous version altered.**

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