Printing date 01.10.2010 Revision: 01.10.2010

1 Identification of substance:

· Product details:

· Trade name: EPOXY 2K EP-Coating 32-89 green (+L) Comp.B

· Article number: 205169

· Application of the substance / the preparation Epoxy coating

· Manufacturer/Supplier:

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2 Hazards identification

· Hazard designation:





C Corrosive

N Dangerous for the environment

· Information pertaining to particular dangers for man and environment

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 22 Harmful if swallowed.

R 34 Causes burns.

R 43 May cause sensitization by skin contact.

R 62 Possible risk of impaired fertility.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 63 Possible risk of harm to the unborn child.

· Classification system

The classification was made according to the EC-lists, latest edition, company and literature data have also been used.

· C니오Iahel elements



Danger

Causes severe skin burns and eye damage.



Warning

Suspected of damaging fertility. Suspected of damaging the unborn child.



Warning

H302 - Harmful if swallowed.

^{□21} May cause an allergic skin reaction.



H411 - Toxic to aquatic life with long lasting effects.

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· Prevention:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

· Response:

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

· Storage:

P405 Store locked up.

· Disposal:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

Two component synthetic resin: hardener component

- · Chemical characterization
- · Description: Mixture of the substances listed below and harmless substances.

· Dangerous compor	nents:	
CAS: 25154-52-3 EINECS: 246-672-0	nonylphenol Repr. Cat. 3; ☐ C, Xn, N; R 22-34-62-50/53-63 Danger: ◆ 3.2/1B Warning: ◆ 3.7/2; ◆ 4.1.A/1, 4.1.C/1; ◆ 3.1.O/4	20-30%
CAS: 1477-55-0 EINECS: 216-032-5	m-phenylenebis(methylamine) C, Xn; R 20/22-35-43-52/53 Danger: 3.2/1A Warning: 3.1.O/4, 3.1.I/4, 3.4.S/1 4.1.C/3	5-10%
CAS: 140-31-8 EINECS: 205-411-0	N-(2-aminoethyl)-piperazine C, Xn; R 21/22-34-43-52/53 Danger: 3.2/1B Warning: 3.1.0/4, 3.1.D/4, 3.4.S/1 4.1.C/3	5-10%
CAS: 80-05-7 EINECS: 201-245-8	bisphenol A Repr. Cat. 3; X Xn, X Xi; R 37-41-43-62-52 Danger: ♦ 3.3/1 Warning: ♦ 3.7/2; ↑ 3.4.S/1, 3.8/3	1- 5%
CAS: 98-54-4 EINECS: 202-679-0	4-tert-butylphenol Xi, Xi, N; R 36/37/38-51/53 Warning: 3.2/2, 3.3/2, 3.8/3 4.1.C/2	1- 5%
CAS: 25620-58-0 EINECS: 247-134-8	trimethylhexane-1,6-diamine C, Xn; R 22-34-43-52/53 Danger:	1- 5%
CAS: 100-51-6 EINECS: 202-859-9	Benzyl alcohol Xn; R 20/22 Warning: 3.1.0/4, 3.1.l/4	1- 5%

· Additional information For the wording of the listed risk phrases refer to section 16.

- GE

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4 First aid measures

· General information

Remove contaminated clothing.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation

Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position for transport.

- · After skin contact Immediately wash with water and soap and rinse thoroughly.
- · After eye contact Rinse opened eye for several minutes under running water. Then consult doctor.
- · After swallowing Instantly call for doctor.

5 Fire fighting measures

· Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.

- · For safety reasons unsuitable extinguishing agents Water with a full water jet.
- · Protective equipment: No special measures required.
- · Additional information Cool endangered containers with water spray jet.

6 Accidental release measures

- · Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.
- · Measures for environmental protection:

Inform respective authorities in case product reaches water or sewage system.

· Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

- Handling
- Information for safe handling: Store in cool, dry place in tightly closed containers.
- · Information about protection against explosions and fires: No special measures required.
- Storage
- · Requirements to be met by storerooms and containers: Store in cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep container tightly sealed.

8 Exposure controls and personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 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.
- · Personal protective equipment
- General protective and hygienic measures

Keep away from foodstuffs, beverages and food.

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Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

- · Breathing equipment: Not required.
- Protection of hands:

Protective gloves.

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

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- · Eye protection: Tightly sealed safety glasses.
- · Body protection: Protective work clothing.

9 Physical and chemical properties:

· General Information		
Form:	Fluid	
Colour:	Blue	
Odour:	Amine-like	
· Change in condition Melting point/Melting range: Not determined Boiling point/Boiling range: 220 ℃		
· Flash point:	144℃	
· Self-inflammability:	Product is not selfigniting.	
· Danger of explosion:	Product is not explosive.	
· Specific gravity at 20 ℃:	1.17 g/cm ³	
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix	
· pH-value:	8	
· Viscosity: dynamic at 20℃:	6000 mPas	

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- · Materials to be avoided:
- · Dangerous reactions

Reacts with strong acids

Reacts with strong oxidizing agents

· Dangerous products of decomposition:

At high temperatures dangerous decomposition products like carbon dioxide, carbon monoxide, fume, nitrogen oxides can be formed.

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Additional information:

Two component reaction-plastic: cured with component A the product leads to a high molecular compound and is nearly inert.

11 Toxicological information

· Acute toxicity:

· LD/LC50 values that are relevant for classification:			
25154-52-3 nonylphenol			
Oral	LD50	1900 mg/kg (Ratte)	
Dermal	LD50	2140 mg/kg (rbt)	
80-05-7 bisphenol A			
Oral	LD50	3250 mg/kg (Ratte)	
Dermal	LD50	3000 mg/kg (rbt)	
98-54-4 4-tert-butylphenol			
Oral	LD50	2951 mg/kg (Ratte)	
Dermal	LD50	2288 mg/kg (rbt)	

- · Primary irritant effect:
- on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitization: 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:

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Sensitisation May cause sensitization by skin contact.

12 Ecological information:

- · Ecotoxical effects:
- · Remark: Toxic for fish
- · Additional ecological information:
- · General notes:

Water danger class 3 (German Regulation) (Self-classification): extremely hazardous for water. Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Harmful to aquatic organisms

13 Disposal considerations

- · Product:
- · Recommendation Must be specially treated under adherence to official regulations.

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- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Land transport ADR/RID (cross-border)





· ADR/RID-GGVS/E Class: 8 (C9) Corrosive substances.

Kemler Number: 80
UN-Number: 1760
Packaging group: II
Label 8

· **Special marking:** Symbol (fish and tree)

· Designation of goods: 1760 CORROSIVE LIQUID, N.O.S. (nonylphenol, m-

phenylenebis(methylamine))

· Tunnel restriction code E

· Maritime transport IMDG:





IMDG Class: 8
UN Number: 1760
Label 8
Packaging group: II
EMS Number: F-A,S-B
Marine pollutant: No

Symbol (fish and tree)

· Proper shipping name: CORROSIVE LIQUID, N.O.S. (nonylphenol, m-

phenylenebis(methylamine))

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class: 8
· UN/ID Number: 1760
· Label 8
· Packaging group: II

· Proper shipping name: CORROSIVE LIQUID, N.O.S. (nonylphenol, m-

phenylenebis(methylamine))

· UN "Model Regulation": UN1760, CORROSIVE LIQUID, N.O.S., 8, II

15 Regulatory information

· Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials

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· Code letter and hazard designation of product:





C Corrosive N Dangerous for the environment

· Hazard-determining components of labelling:

N-(2-aminoethyl)-piperazine m-phenylenebis(methylamine) trimethylhexane-1,6-diamine bisphenol A

Risk phrases:

- Harmful if swallowed.
- 34 Causes burns.
- 43 May cause sensitization by skin contact.
- Possible risk of impaired fertility.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Possible risk of harm to the unborn child.

Safety phrases:

- 23 Do not breathe fumes/aerosol.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- In case of accident or if you feel unwell, seek medical advice immediately (show the label 45 where possible).
- 57 Use appropriate container to avoid environmental contamination.

· National regulations

· Decree to be applied in case of technical fault:

Critical quantity values according to the regulations on accidents should be adhered to.

Class	Share in %
Ш	1.2

· Water hazard class:

Water danger class 3 (German Regulation) (Self-classification): extremely hazardous for water.

16 Other information:

The information contained herein 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 R-phrases

20/22 Harmful by inhalation and if swallowed.

Harmful in contact with skin and if swallowed. 21/22

22 Harmful if swallowed.

34 Causes burns.

35 Causes severe burns.

36/37/38 Irritating to eyes, respiratory system and skin.

Irritating to respiratory system. 37

Risk of serious damage to eyes. 41

43 May cause sensitization by skin contact.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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Harmful to aquatic organisms.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

62 Possible risk of impaired fertility.

63 Possible risk of harm to the unborn child.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· * Data compared to the previous version altered.