Printing date 01.10.2010 Revision: 01.10.2010

1 Identification of substance:

· Product details:

· Trade name: EPOXY 2K EP-Coating 32-89 L green (A)

· Article number: 205291

· Application of the substance / the preparation Epoxy coating

· Manufacturer/Supplier:

Bertold Oberle OHG

Raiffeisenstr. 12

D-75236 Kämpfelbach-Ersingen Tel: +49(0)7231/455 769-0 Fax: +49(0)7231/455 769-20

· Informing department:

Produktservice

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2 Hazards identification

· Hazard designation:





Xn Harmful

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 36/38 Irritating to eyes and skin.

R 43 May cause sensitization by skin contact.

R 68 Possible risk of irreversible effects.

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

Contains epoxy constituents. See information supplied by the manufacturer.

· Classification system

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

elements



Warning

Lagar Cuspected of causing genetic defects.



Warning

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

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



H411 - Toxic to aquatic life with long lasting effects.

Contains epoxy constituents. May produce an allergic reaction.

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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Safety Data Sheet according to 1907/2006/EC, Article 31

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· Response:

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

· 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: epoxy resin component

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

· Dangerous components:			
NLP: 500-033-5	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) Xi, N; R 36/38-43-51/53 Warning: ♦ 3.2/2, 3.3/2, 3.4.S/1 4.1.C/2	20-30%	
	bisphenol F-(epichlorhydrin; epoxy(number average molecular weight<700) Xi, N; R 36/38-43-51/53 Warning: ♦ 3.2/2, 3.3/2, 3.4.S/1 4.1.C/2	10-20%	
EINECS: 247-711-4	1,2-epoxy-3-(tolyloxy)propane Muta. Cat. 3; X Xn, Xi, Xi, N; R 38-43-68-51/53 Warning: ♦ 3.5/2; ♦ 3.2/2, 3.4.S/1 ♦ 4.1.C/2	1- 5%	
EINECS: 201-283-5	methyl toluene-4-sulphonate Xn, Xi; R 22-36/38-43 Warning: ♦ 3.1.0/4, 3.2/2, 3.3/2, 3.4.S/1	< 1%	

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

4 First aid measures

- · After inhalation Supply fresh air and call for doctor for safety reasons.
- · After skin contact

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

· After swallowing In case of persistent symptoms consult doctor.

5 Fire fighting measures

- · Suitable extinguishing agents Use fire fighting measures that suit the environment.
- 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.

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Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· Person-related safety precautions:

Wear protective clothing.

Ensure adequate ventilation

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).

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: No special requirements.
- 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.

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: Breathing protection recommended.
- · 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.

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· Body protection: Protective work clothing.

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9 Physical and chemical properties:				
· General Information				
Form:	Fluid			
Colour:	Yellow			
Odour:	Characteristic			
 Change in condition Melting point/Melting range Boiling point/Boiling range 				
· Flash point:	158℃			
· Self-inflammability:	Product is not selfigniting.			
· Danger of explosion:	Product is not explosive.			
· Specific gravity at 23℃:	ca. 1.64 g/cm³ (DIN 53217)			
· Solubility in / Miscibility wit Water:	Not miscible or difficult to mix			
· Viscosity: dvnamic at 25°C:	25000 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 and oxidizing agents
- Dangerous products of decomposition:

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

11 Toxicological information

· Acute toxicity:

Acute	Oxidity	•		
· LD/LC5	· LD/LC50 values that are relevant for classification:			
25068-3	25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)			
Oral	LD50	11400 mg/kg (Ratte)		
Dermal	LD50	> 2000 mg/kg (Kaninchen)		
26447-	26447-14-3 1,2-epoxy-3-(tolyloxy)propane			
Oral	LD50	> 2000 mg/kg (Ratte)		

- · Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritant 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: Irritant

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· Sensitisation May cause sensitization by skin contact.

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12 Ecological information:

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

Water hazard class 2 (German Regulation) (Self-classification): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

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.
- · 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: 9 (M6) Miscellaneous dangerous substances and articles.

Kemler Number: 90
UN-Number: 3082
Packaging group: III
Label 9

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

Designation of goods: 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700), bisphenol F-(epichlorhydrin;

epoxy(number average molecular weight<700))

· Tunnel restriction code E

· Maritime transport IMDG:



· IMDG Class: 9
 · UN Number: 3082
 · Label 9
 · Packaging group: III
 · EMS Number: F-A,S-F

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Trade name: EPOXY 2K EP-Coating 32-89 L green (A)

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· Marine pollutant: Yes

Symbol (fish and tree)

· Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700), bisphenol F-(epichlorhydrin;

epoxy(number average molecular weight<700))

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class: 9
 · UN/ID Number: 3082
 · Label 9

· Special marking: Symbol (fish and tree)

· Packaging group:

· Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700), bisphenol F-(epichlorhydrin;

epoxy(number average molecular weight<700))

· UN "Model Regulation":

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

15 Regulatory information

· Designation according to EC guidelines:

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

· Code letter and hazard designation of product:





Xn Harmful

N Dangerous for the environment

· Hazard-determining components of labelling:

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

bisphenol F-(epichlorhydrin; epoxy(number average molecular weight<700)

1,2-epoxy-3-(tolyloxy)propane

· Risk phrases:

36/38 Irritating to eyes and skin.

43 May cause sensitization by skin contact.

68 Possible risk of irreversible effects.

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

Safety phrases:

23 Do not breathe fumes/aerosol.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After contact with skin, wash immediately with plenty of water.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

57 Use appropriate container to avoid environmental contamination.

Avoid release to the environment. Refer to special instructions/safety data sheets.

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· Special designation of certain preparations:

Contains epoxy constituents. See information supplied by the manufacturer.

- · National regulations
- · Water hazard class:

Water hazard class 2 (German Regulation) (Self-classification): 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

22 Harmful if swallowed.

36/38 Irritating to eyes and skin.

38 Irritating to skin.

43 May cause sensitization 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.

· 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.

- GE