

FluviPox® blue Resin

according to Regulation (EC)
No. 1907/2006

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name **FluviPox® blue Resin**
Article-No. 41.267.a

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

Use of the Substance/Mixture Epoxy resin for Hardener FluviPox®blue
15,30 and 60 (Comp.B)

1.3 Details of the supplier of the safety data sheet

Company	Fluvius GmbH Berta-Benz-Straße.22 D-40670 Meerbusch
Telephone	+49 (0) 2159 67500-0
Telefax	+49 (0) 2159 67500-19
E-mail address	info@fluvius.de

1.4 Emergency telephone number

+49 (0) 2159 - 675 00-0 (8-17 h)

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2

H315 Causes skin irritation.

Eye irritation, Category 2

H319 Causes serious eye irritation.

Skin sensitisation, Category 1

H317 May cause an allergic skin reaction.

Chronic aquatic toxicity, Category 2

H411 Toxic to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Sensitising

R43 May cause sensitisation by skin contact.

Irritant

R36/38 Irritating to eyes and skin.

Dangerous for the environment

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Warning

Hazard statements

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.

Precautionary statements (Prevention)

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273	Avoid release to the environment.
P280	Wear eye protection/ face protection.
P280	Wear protective gloves.

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Response

P333 + P313 If skin irritation or rash occurs:
Get medical advice/ attention.

P337 + P313 If eye irritation persists:
Get medical advice/ attention.

1,6-bis(2,3-epoxypropoxy)hexane

Epichlorohydrin-formaldehyde-phenol polymer number average
molecular weight # 700

Hazardous components which must be listed on the label

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

2.3 Other hazards

This substance/mixture contains no components considered to be
either persistent, bioaccumulative and toxic (PBT), or very persis-
tent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition/information on ingredients

3.1 Mixtures

Chemical nature Modified epoxy resin

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700)	25068-38-6 01-2119456619-26	Xi; R36/38, R43 N; R51-R53	Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 2; H411	≥ 50 - ≤ 100
1,6-bis(2,3-epoxypropoxy)hexane	16096-31-4 240-260-4 01-2119463471-41	Xi; R36/38 Xi; R43 N; R52/53	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 3; H412	≥ 12,5 - < 20
Epichlorohydrin- formaldehyde- phenol polymer number average molecular weight # 700	9003-36-5	Xi; R36/38, R43 N; R51/53	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411	≥ 12,5 - < 20

For explanation of abbreviations see section 16.

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4. First aid measures

4.1 Description of first aid measures

General advice	Keep warm and in a quiet place. Show this safety data sheet to the doctor in attendance. Take off all contaminated clothing immediately.	minutes. If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.
If inhaled	Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathing is irregular or stopped, administer artificial respiration.	If swallowed Keep at rest. Do not induce vomiting without medical advice. Keep respiratory tract clear. If symptoms persist, call a physician.
In case of skin contact	Wash off immediately with soap and plenty of water. Do NOT use solvents or thinners. If on clothes, remove clothes. If skin irritation persists, call a physician.	
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15	

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	irritant effects, Redness, sensitising effects
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4.3 Indication of any immediate medical attention and special treatment needed

Treatment	No information available.
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5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Foam, Sand, Carbon dioxide (CO ₂), Water mist
Unsuitable extinguishing media	Water spray jet

Further information	In the event of fire and/or explosion do not breathe fumes.
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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	The pressure in sealed containers can increase under the influence of heat. Cool closed containers exposed to fire with water spray.
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Immediately evacuate personnel to safe areas.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

5.3 Advice for firefighters

Special protective equipment for firefighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
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Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.



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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Refer to protective measures listed in sections 7 and 8.
	Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation.
	Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

6.2 Environmental precautions

Environmental precautions	Do not allow uncontrolled discharge of product into the environment.
	Try to prevent the material from entering drains or water courses.
	Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
	Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	Provide sufficient air exchange and/or exhaust in work rooms.
	Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment.
	Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures	Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.
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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers.
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<p>Advice on common storage</p>	<p>Keep away from oxidising agents, strongly acid or alkaline materials and amines.</p> <p>Keep product and empty container away from heat and sources of ignition.</p> <p>Keep away from food and drink.</p>	<p>Other data</p>	<p>Stable at normal ambient temperature and pressure.</p>
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7.3 Specific end use(s)

<p>Specific use(s)</p>	<p>Consult the technical guidelines for the use of this substance/mixture.</p>
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8. Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

reaction product: bisphenol-A- (epichlorhydrin) and epoxy resin (number average mo- lecular weight <= 700)

<p>End Use</p> <p>Exposure routes</p> <p>Potential health effects</p>	<p>Workers</p> <p>Skin contact</p> <p>Acute systemic effects, Long-term systemic effects Value: 8,33 mg/kg</p>
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<p>End Use</p> <p>Exposure routes</p> <p>Potential health effects</p>	<p>Workers</p> <p>Inhalation</p> <p>Acute systemic effects, Long-term local effects Value: 12,25 mg/m³</p>
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<p>End Use</p> <p>Exposure routes</p> <p>Potential health effects</p>	<p>Consumers</p> <p>Skin contact</p> <p>Acute systemic effects, Long-term systemic effects Value: 3,571 mg/kg</p>
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<p>End Use</p> <p>Exposure routes</p> <p>Potential health effects</p>	<p>Consumers</p> <p>Ingestion</p> <p>Acute systemic effects, Long-term systemic effects Value: 0,75 mg/kg</p>
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1,6-bis(2,3-epoxypropoxy)hexane

<p>End Use</p> <p>Exposure routes</p> <p>Potential health effects</p>	<p>Workers</p> <p>Skin contact</p> <p>Long-term systemic effects Value: 2,8 mg/kg</p>
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<p>End Use</p> <p>Exposure routes</p> <p>Potential health effects</p>	<p>Workers</p> <p>Inhalation</p> <p>Long-term systemic effects Value: 4,9 mg/m³</p>
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Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

reaction product: bisphenol-A- (epichlorhydrin) and epoxy resin (number average mo- lecular weight <= 700)

<p>Fresh water Value</p> <p>Marine water Value</p> <p>Intermittent releases</p> <p>Sewage treatment plant</p> <p>Fresh water sediment</p> <p>Marine sediment</p> <p>Soil</p>	<p>Value: 0,006 mg/l</p> <p>Value: 0,0006 mg/l</p> <p>Value: 0,018 mg/l</p> <p>Value: 10 mg/l</p> <p>Value: 0,996 mg/kg</p> <p>Value: 0,0996 mg/kg</p> <p>Value: 0,196 mg/kg</p>
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1,6-bis(2,3-epoxypropoxy)hexane

<p>Sewage treatment plant</p> <p>Fresh water</p> <p>Fresh water sediment</p> <p>Marine water</p> <p>Marine sediment</p> <p>Soil</p>	<p>Value: 1 mg/l</p> <p>Value: 0,0115 mg/l</p> <p>Value: 0,283 mg/kg</p> <p>Value: 0,00115 mg/l</p> <p>Value: 0,0283 mg/kg</p> <p>Value: 0,223 mg/kg</p>
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8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system.
Effective ventilation in all processing areas.

Personal protective equipment

Eye protection	Do not wear contact lenses. Safety glasses with side-shields conforming to EN166 Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection	Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
Skin and body protection	Protective suit

Respiratory protection Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

In the case of vapour formation use a respirator with an approved filter.

Respirator with a vapour filter (EN 141).

Apply technical measures to comply with the occupational exposure limits.

This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.

Protective measures Avoid contact with skin.
Wear suitable protective equipment.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	liquid	Relative vapour density	not determined
Colour	coloured	Density	1,15 g/cm ³ (25 °C)
Odour	slight	Bulk density	not determined
Odour Threshold	not determined	Solubility in other solvents	not determined
pH	not determined	Partition coefficient n- octanol/water	No data available
Melting point/ freezing point	Not applicable	Auto-ignition temperature	Not applicable
Boiling point/ boiling range	> 200 °C	Thermal decomposition	Method: No data available
Flash point	150 °C	Viscosity, dynamic	2.000 - 3.500 mPa.s (25 °C)
Evaporation rate	not determined	Viscosity, kinematic	not determined
Upper explosion limit	Not applicable	Explosive properties	Not applicable
Lower explosion limit	Not applicable	Oxidizing properties	Not applicable
Vapour pressure	Not applicable		

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9.2 Other information

Surface tension	not determined
Sublimation point	Not applicable

10. Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	Reacts with the following substances: Bases Strong oxidizing agents Avoid amines.
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10.4 Conditions to avoid

Conditions to avoid	No decomposition if used as directed.
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10.5 Incompatible materials

Materials to avoid	Incompatible with oxidizing agents.
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10.6 Hazardous decomposition products

Hazardous decomposition products	This product may release the following: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
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11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product

Remarks No data available

Components

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

Acute oral toxicity LD50 (Rat, female): > 2.000 mg/kg
Method: OECD Test Guideline 420
GLP: yes

Acute dermal toxicity LD50 (Rat, male and female):
> 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Product

Remarks No data available

Components

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

Species Rabbit Exposure time: 4 h
Method OECD Test Guideline 404
Result Skin irritation
GLP yes

Serious eye damage/eye irritation

Product

Remarks No data available



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Respiratory or skin sensitisation

Product
Remarks: No data available

Components

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

Test Type: Mouse Local Lymph Node assay (LLNA)
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
GLP: yes

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT - single exposure

Product
Remarks: Not applicable

STOT - repeated exposure

Repeated dose toxicity

Product
Remarks: No data available

Aspiration toxicity

Components

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

No aspiration toxicity classification

Further information

Product
Remarks: No data available

12. Ecological information

12.1 Toxicity

Product

Toxicity to fish: Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates: Remarks: No data available

Components

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

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia (water flea)): 1,7 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to daphnia and other aquatic invertebrates: NOEC: 0,3 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

12.2 Persistence and degradability

Product

Biodegradability: Remarks: No data available

Components

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

Biodegradability: Result: Not readily biodegradable.
Method: OECD Test Guideline 301F
GLP: yes



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12.3 Bioaccumulative potential

Product

Bioaccumulation Remarks: No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product

Assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product

Additional ecological information Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. Disposal considerations

13.1 Waste treatment methods

<p>Product</p> <p>In accordance with local and national regulations. Container hazardous when empty. Do not dispose of with domestic refuse. Do not mix waste streams during collection.</p>	<p>Contaminated packaging</p> <p>Empty containers should be taken to an approved waste handling site for recycling or disposal.</p>
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14. Transport information

14.1. UN number

ADR/RID	UN 3082
IMDG	UN 3082
IATA	UN 3082

14.3. Transport hazard class(es)

ADR/RID	9
IMDG	9
IATA	9

14.2. UN proper shipping name

ADR/RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

14.4. Packing group

ADR/RID	
Packing group	III
Classification Code	M6
Hazard	
Identification Number	90
Labels	9
Tunnel restriction code	E



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IMDG

Packing group	III
Labels	9
EmS Code	F-A, S-F

IATA

Packing instruction (cargo aircraft)	964
Packing instruction (passenger aircraft)	964
Packing group	III
Labels	9

14.5. Environmental hazards

ADR/RID

Environmentally hazardous	yes
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IMDG

Marine pollutant	yes
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14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) Not applicable

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

9b	Dangerous for the environment
	Quantity 1 (200 t)
	Quantity 2 (500 t)

15.2. Chemical Safety Assessment

Not applicable

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16. Other information

Full text of R-Phrases

R36/38	Irritating to eyes and skin.
R43	May cause sensitisation by skin contact.
R51	Toxic to aquatic organisms.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements

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.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic	Chronic aquatic toxicity
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and

release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.