

Vivido EP-Hardener 8447

Version number: 3.0

Revision: 27.04.2026
Date of issue: 27.04.2026:

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

1.1 Product identifier

Trade name **Vivido EP-Hardener 8447** **8447a:**
Product number 8447000210

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

Relevant identified uses Coating material for commercial or consumer end-uses.
Uses advised against Any use not listed above.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

ADLER-Werk Lackfabrik Johann Berghofer GmbH & Co KG
Bergwerkstraße 22
A-6130 Schwaz
Austria

Telephone: +4352426922713
e-mail: sdb-info@adler-lacke.com

Further information obtainable from: sdb-info@adler-lacke.com

Telephone
+43 5242 6922-713
Mon - Thu 07:00 - 16:25
Fri 07:00 - 12:15

1.4 Emergency telephone number

Country	Name	Telephone
Austria	Vergiftungsinformationszentrale (Poison Informations Center)	+43 1 406 43 43

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Hazard class	Category	Hazard class and category	Hazard statement
skin corrosion/irritation	2	Skin Irrit. 2	H315
serious eye damage/eye irritation	2	Eye Irrit. 2	H319
skin sensitisation	1	Skin Sens. 1	H317
hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word warning

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- Pictograms

GHS07, GHS09



- 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

P102	Keep out of reach of children.
P280	Wear protective gloves/eye protection/face protection.
P501	Dispose of contents, container in accordance with national regulations.

- Supplemental hazard information

EUH205	Contains epoxy constituents. May produce an allergic reaction.
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- Hazardous ingredients for labelling

bis[4-(2,3-epoxypropoxy)phenyl]propane, Bisphenol A/F epoxy resins, MW <700, oxirane, mono[(C10-16-alkyloxy)methyl] derivs., Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1), 1,2-benzisothiazol-3(2H)-one

2.3 Other hazards

Keep out of reach of children and do not empty into the drains. Dispose remainders properly (collection of hazardous waste, disposal companies). Empty containers must be entered into the recycling system. The usual safety precautions must be observed during processing of the product.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Endocrine disrupting properties

Contains an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Water-based epoxy resin, extender and additives.

Name of substance	Identifier	Wt%	Classification acc. to GHS
bis[4-(2,3-epoxypropoxy)phenyl]propane	CAS No 1675-54-3 EC No 216-823-5 Index No 603-073-00-2 REACH Reg. No 01-2119456619-26-xxxx	25 – < 50	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Aquatic Chronic 2 / H411
Bisphenol A/F epoxy resins,	CAS No	5 – < 10	Skin Irrit. 2 / H315

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Name of substance	Identifier	Wt%	Classification acc. to GHS
MW <700	40216-08-8		Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Aquatic Chronic 2 / H411
oxirane, mono[(C10-16-alkoxy)methyl] derivs.	CAS No 68081-84-5 EC No 268-358-2 REACH Reg. No 01-2120093508-47-xxxx	3 – < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Aquatic Chronic 2 / H411
1,2-benzisothiazol-3(2H)-one	CAS No 2634-33-5 EC No 220-120-9 Index No 613-088-00-6 REACH Reg. No 01-2120761540-60-xxxx	0,0015 – < 0,036	Acute Tox. 4 / H302 Acute Tox. 2 / H330 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1A / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS No 55965-84-9 EC No 911-418-6 Index No 613-167-00-5 REACH Reg. No 01-2120764691-48-xxxx	0,00015 – < 0,0015	Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 2 / H330 Skin Corr. 1C / H314 Eye Dam. 1 / H318 Skin Sens. 1A / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
bis[4-(2,3-epoxypropoxy)phenyl]propane	Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 %	-	-	
1,2-benzisothiazol-3(2H)-one	Skin Sens. 1A; H317: C ≥ 0,036 %	M-factor (acute) = 1 M-factor (chronic) = 1	450 mg/kg 0,21 mg/l/4h	oral inhalation: dust/mist
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Skin Corr. 1C; H314: C ≥ 0,6 % Skin Irrit. 2; H315: 0,06 % ≤ C < 0,6 % Eye Dam. 1; H318: C ≥ 0,6 % Eye Irrit. 2; H319: 0,06 % ≤ C < 0,6 % Skin Sens. 1A; H317: C ≥ 0,0015 %	M-factor (acute) = 100 M-factor (chronic) = 100	100 mg/kg 50 mg/kg 0,5 mg/l/4h 0,05 mg/l/4h	oral dermal inhalation: vapour inhalation: dust/mist

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Following inhalation

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Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

Following skin contact

Take off contaminated clothing. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Do not use any solvents or thinners!.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Keep at rest. IF SWALLOWED: Immediately call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media

Carbon dioxide (CO₂), BC-powder, Water spray, Alcohol resistant foam, Sand

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Thick smoke may occur in case of a fire. Inhaling the decomposed products may cause serious damage to health. The formation of explosive dust-air-mixtures is possible. Upon contact with air, the vapours may form an explosive mixture. .

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel

Remove persons to safety. Provision of sufficient ventilation. Control of dust.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority. Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains, Fill contaminated material in the original container or any other suitable one and dispose it in accordance with point 13.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, uni-

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versal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feed-stuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Flammability hazards

Keep away from sources of ignition - No smoking.

Control of effects

Do not pierce or burn, even after use. Protect from sunlight. Store in a well-ventilated place. Protect from sunlight. . Close the open container carefully and keep it straight to prevent leakage.

Store in the original container. Storage temperature of 0 °C/32 °F and up to 50 °C/122 °F.

Protect against external exposure, such as

frost

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Cou ntry	Name of agent	CAS No	Ide ntifi- er	TWA [ppm]	TWA [mg/ m ³]	STEL [ppm]	STEL [mg/ m ³]	Ceil- ing-C [ppm]	Ceil- ing-C [mg/ m ³]	Not atio n	Sour ce
AT	reaction mass of: 5-chloro-2- methyl-2H-iso- thiazol-3-one and 2-methyl- 2H -isothiazol- 3-one (3:1)	55965- 84-9	MAK		0,05						GKV

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Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	DNEL	4,93 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	DNEL	0,75 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
1,2-benzisothiazol-3(2H)-one	2634-33-5	DNEL	6,81 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
1,2-benzisothiazol-3(2H)-one	2634-33-5	DNEL	0,966 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	DNEL	0,02 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	DNEL	0,04 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

Relevant PNECs of components						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	PNEC	0,006 mg/l	aquatic organisms	freshwater	short-term (single instance)
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	PNEC	0,001 mg/l	aquatic organisms	marine water	short-term (single instance)
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	PNEC	0,341 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	PNEC	0,034 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	PNEC	0,065 mg/kg	terrestrial organisms	soil	short-term (single instance)

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Relevant PNECs of components						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
nyl]propane						
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	4,03 µg/l	aquatic organisms	freshwater	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	0,403 µg/l	aquatic organisms	marine water	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	1,03 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	49,9 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	4,99 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
1,2-benzisothiazol-3(2H)-one	2634-33-5	PNEC	3 mg/kg	terrestrial organisms	soil	short-term (single instance)
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	3,39 µg/l	aquatic organisms	freshwater	short-term (single instance)
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	3,39 µg/l	aquatic organisms	marine water	short-term (single instance)
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	0,23 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	0,027 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	0,027 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	PNEC	0,01 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

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Eye/face protection

Use safety goggle with side protection (EN 166).

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Use protective gloves made of latex or PVC as spray protection for short-term work. Latex: penetration time ≥ 480 min, material strength: 0.5mm / PVC: penetration time > 60 min, material strength: 0.2mm.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

During spraying wear suitable respiratory equipment. Combination filtering device (EN 141). Particulate filter device (EN 143). Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	white
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	100 °C
Flammability	not relevant
Flash point	not determined
Auto-ignition temperature	not applicable
pH (value)	5 – 8
Kinematic viscosity	1.100 – 1.590 mm ² /s at 20 °C
Dynamic viscosity	1.400 – 2.000 mPa s

Solubility(ies)

Water solubility	miscible in any proportion
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Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	23 hPa at 20 °C
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Density and/or relative density

Density	1,262 – 1,263 g/cm ³ at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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Other safety parameters

Explosive properties	Does not apply (see note in chapter 16)
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9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
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Other safety characteristics

Miscibility	Completely miscible with water.
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SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

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Acute toxicity estimate (ATE) of components			
Name of substance	CAS No	Exposure route	ATE
1,2-benzisothiazol-3(2H)-one	2634-33-5	oral	450 mg/kg
1,2-benzisothiazol-3(2H)-one	2634-33-5	inhalation: dust/mist	0,21 mg/l/4h
Reaction mass of 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	oral	100 mg/kg
Reaction mass of 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	dermal	50 mg/kg
Reaction mass of 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	inhalation: vapour	0,5 mg/l/4h
Reaction mass of 5-chloro-2-methyl-4-iso-thiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	inhalation: dust/mist	0,05 mg/l/4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (chronic) of components					
Name of sub-stance	CAS No	Endpoint	Value	Species	Exposure time
1,2-benzisothiazol-3(2H)-one	2634-33-5	EC50	13 mg/l	microorganisms	3 h

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Aquatic toxicity (chronic) of components					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	LC50	0,07 mg/l	fish	14 d
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	EC50	>0,18 mg/l	aquatic invertebrates	21 d
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	ErC50	45,6 µg/l	algae	120 h

12.2 Persistence and degradability

Degradability of components						
Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
bis[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	oxygen depletion	5 %	28 d		ECHA
1,2-benzisothiazol-3(2H)-one	2634-33-5	carbon dioxide generation	62 %	4 d		ECHA
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	carbon dioxide generation	38,8 %	29 d		ECHA

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Not listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

List of wastes, Decision 2000/532/EC on the list of waste

- Product
08 01 15* aqueous sludges containing paint or varnish containing organic solvents or other hazardous substances
- Product residues
15 01 10* packaging containing residues of or contaminated by hazardous substances
- Packagings
15 01 02 plastic packaging
15 01 04 metallic packaging

List of wastes (ÖNORM S 2100)

55503: Lack- und Farbschlamm.

- Restentleerte Verpackungen (ja nach angeführtem Recyclingcode gemäß der Richtlinie 94/62/EG auf der Verpackung)

35105: Eisenmetallemballagen (Recyclingcode FE40).

57118: Kunststoffemballagen und -behälter (Recyclingcodes: PET01, PE-HD02, PE-LD04 oder PP05).

Disposal methods:

Product

Waste production should be avoided or minimised if possible.

Do not empty into the drains. Avoid releasing the product into the environment. Waste, containers must be removed, disposed in a safe way.

Packagings

Waste production should be avoided or minimised if possible.

Packaging waste should be recycled. Burning or landfilling should only be considered if recycling is not feasible.

Notes on disposal:

Product

Disposal of this product and its dissolutions and by-products must be carried out in accordance with the environmental protection requirements and waste disposal laws as well as the requirements of the local authorities at all times. Excess must be handed over, disposed to a recognised waste disposal company (disposal company/recycling company).

Packagings

With the aid of the information provided in this safety data sheet, the responsible authorities must be consulted regarding classification of empty containers, packaging. Empty containers should be disposed, recycled according to type. Licenced containers, packaging can be disposed free of charge via system partners, where applicable. Containers with residual contents must be disposed in accordance with local and national legal provisions.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN

UN 3082

IMDG-Code

UN 3082

Vivido EP-Hardener 8447

Version number: 3.0

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ICAO-TI	UN 3082
14.2 UN proper shipping name	
ADR/RID/ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ICAO-TI	Environmentally hazardous substance, liquid, n.o.s.
Technical name (hazardous ingredients)	bis[4-(2,3-epoxypropoxy)phenyl]propane, Bisphenol A/F epoxy resins, MW <700
14.3 Transport hazard class(es)	
ADR/RID/ADN	9
IMDG-Code	9
ICAO-TI	9
14.4 Packing group	
ADR/RID/ADN	III
IMDG-Code	III
ICAO-TI	III
14.5 Environmental hazards	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	bis[4-(2,3-epoxypropoxy)phenyl]propane, Bisphenol A/F epoxy resins, MW <700
14.6 Special precautions for user	
Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7 Maritime transport in bulk according to IMO instruments	
The cargo is not intended to be carried in bulk.	

Information for each of the UN Model Regulations**Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information**

Classification code	M6
Danger label(s)	9, fish and tree
	
	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601, 650
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	-
Hazard identification No	90

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant yes (hazardous to the aquatic environment) (bis[4-(2,3-epoxypropoxy)phenyl]propane)

Danger label(s) 9, fish and tree



Special provisions (SP) 274, 335, 375, 969

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

EmS F-A, S-F

Stowage category A

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards yes (hazardous to the aquatic environment)

Danger label(s) 9, fish and tree



Special provisions (SP) A97, A158, A197, A215

Excepted quantities (EQ) E1

Limited quantities (LQ) 30 kg

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Relevant provisions of the European Union (EU)****List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list**

none of the ingredients are listed

Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
E2	environmental hazards (hazardous to the aquatic environment, cat. 2)	200 500	57)

Notation

57) hazardous to the Aquatic Environment in category Chronic 2

Deco-Paint Directive (2004/42/EC)

VOC content	0 % 0 g/l
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Industrial Emissions Directive (IED) (2010/75/EU)

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VOC content	0 % 0 g/l
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Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Water Framework Directive (WFD)

List of pollutants (WFD)			
Name of substance	CAS No	Listed in	Remarks
bis[4-(2,3-epoxypropoxy)phenyl]propane		a)	
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)		a)	
Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)		a)	

Legend

a) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation on drug precursors

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

Restrictions of occupation

Directive 94/33/EC on the protection of young people at work / Observe national regulations on protection of young people at work.

National regulations (Austria)

Ordinance on combustible liquids (VbF) not applicable

- VbF (group and hazard class) not applicable

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK 2 obviously hazardous to water
(water hazard class)

Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)

Storage class (LGK) 10 (combustible liquids)

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

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SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	Product identifier: Trade name Betonbeschichtung Hardener8447 8447a:	Product identifier: Trade name Vivido EP-Hardener 8447 8447a:	yes
2.2		- Precautionary statements: change in the listing (table)	yes
2.2	- Hazardous ingredients for labelling: bis[4-(2,3-epoxypropoxy)phenyl]propane, Bisphenol A/F epoxy resins, MW <700, oxirane, mono[(C10-16-alkyloxy)methyl] derivs., Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	- Hazardous ingredients for labelling: bis[4-(2,3-epoxypropoxy)phenyl]propane, Bisphenol A/F epoxy resins, MW <700, oxirane, mono[(C10-16-alkyloxy)methyl] derivs., Reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one (3:1), 1,2-benzisothiazol-3(2H)-one	yes
3.2		Description of the mixture: change in the listing (table)	yes
3.2		Description of the mixture: change in the listing (table)	yes
8.1		Relevant DNELs of components: change in the listing (table)	yes
8.1		Relevant PNECs of components: change in the listing (table)	yes
9.1	Kinematic viscosity: 1.584 mm ² /s at 20 °C	Kinematic viscosity: 1.100 – 1.590 mm ² /s at 20 °C	yes
9.1	Density: 1,262 g/cm ³ at 20 °C	Density: 1,262 – 1,263 g/cm ³ at 20 °C	yes
11.1		Acute toxicity estimate (ATE) of components: change in the listing (table)	yes
12.1		Aquatic toxicity (chronic) of components: change in the listing (table)	yes
12.2		Degradability of components: change in the listing (table)	yes
15.1		Restrictions of occupation: Directive 94/33/EC on the protection of young people at work / Observe national regulations on protection of young people at work.	yes
16		List of relevant phrases (code and full text as stated in section 2 and 3): change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous

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Abbr.	Descriptions of used abbreviations
	Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
GKV	Grenzwerteverordnung
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LGK	Lagerklasse (storage class according to TRGS 510, Germany)
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the

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Abbr.	Descriptions of used abbreviations
	summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
TWA	Time-weighted average
VbF	Ordinance on combustible liquids (Austria)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal 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.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

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Code	Text
H411	Toxic to aquatic life with long lasting effects.

Note concerning the lower explosion limit of water-thinnable varnishes:

See PTB research report PEx5 200500185, Physical-Technical Federal Agency Braunschweig, September 2005 and report PTB-W-57, February 1994.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.