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

1.1. Product identifier

Name of product

RIEGLER Repair stick titanium / 57 g
Code-Nr. R115.01 / ID-Nr. 114581

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

Recommended intended purpose(s)
2-Component Epoxy Resins

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor

RIEGLER & Co. KG
Schützenstr. 27, D-72574 Bad Urach
Phone : +49 (0) 7125/9497-0, Fax : +49 (0) 7125/9497-97
E-Mail : zedok@riegler.de
Internet : www.riegler.de

Advice

Abteilung eDocumentation
Phone : +49 (0) 7125/9497-0
Fax : +49 (0) 7125/9497-97
E-mail (competent person):
zedok@riegler.de

1.4. Emergency telephone number

Emergency advice

Giftnotrufzentrale Bonn
Phone : +49(0)228-19 240

! SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

! Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Aquatic Chronic 3	**H412**	

Hazard Statements

H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard Statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P262 Do not get in eyes, on skin, or on clothing.
P273 Avoid release to the environment.
P501 Dispose of contents/container to hazardous or special waste collection point.

Special rules for supplemental label elements for certain mixtures

Contains Bisphenol-A-Epoxy resin (Number average MW <= 700), Trientine, 2-Piperazin-1-ylethylamine. May produce an allergic reaction.

2.3. Other hazards
Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

! SECTION 3: Composition/ information on ingredients

3.1. Substances
not applicable

3.2. Mixtures
Description
2-component epoxy sticks

! Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
25068-38-6	500-033-5	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	< 1	Eye Irrit. 2, H319 / Skin Irrit. 2, H315 / Skin Sens. 1, H317 / Aquatic Chronic 2, H411
108-95-2	203-632-7	phenol	< 1	Muta. 2, H341 / Acute Tox. 3, H331 / Acute Tox. 3, H311 / Acute Tox. 3, H301 / STOT RE 2, H373 / Skin Corr. 1B, H314
140-31-8	205-411-0	2-piperazin-1-ylethylamine	< 0,5	Acute Tox. 4, H312 / Acute Tox. 4, H302 / Skin Corr. 1B, H314 / Skin Sens. 1, H317 / Aquatic Chronic 3, H412
65997-17-3	266-046-0	glass, oxide, chemicals	10 - 20	
112-24-3	203-950-6	trientine	< 1	Acute Tox. 4, H302; H312 / Skin Corr. 1B, H314 / Eye Dam. 1, H318 / Skin Sens. 1, H317 / Aquatic Chronic 3, H412

REACH

CAS No	Name	REACH registration number
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	01-2119456619-26
108-95-2	phenol	01-2119471329-32
140-31-8	2-piperazin-1-ylethylamine	01-2119471486-30
112-24-3	trientine	not subject to registration

SECTION 4: First aid measures

4.1. Description of first aid measures
General information
Remove contaminated soaked clothing immediately.

In case of inhalation
Remove the casualty into fresh air and keep him immobile.
In the event of symptoms refer for medical treatment.

In case of skin contact
In case of contact with skin wash off with soap and water.
Consult a doctor if skin irritation persists.

In case of eye contact
In case of contact with eyes rinse with plenty of water carefully. In the event of persistent symptoms seek medical treatment.

In case of ingestion
Do not induce vomiting.
Call for a doctor immediately.

4.2. Most important symptoms and effects, both acute and delayed
Physician's information / possible symptoms
skin irritation

4.3. Indication of any immediate medical attention and special treatment needed
No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Alcohol-resistant foam
Dry fire-extinguishing substance
Carbon dioxide
Water spray jet

Unsuitable extinguishing media
Full water jet

5.2. Special hazards arising from the substance or mixture
In case of fire formation of dangerous gases possible.
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Carbon dioxide (CO2)

5.3. Advice for firefighters
Special protective equipment for fire-fighters
Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus.
Do not inhale explosion and/or combustion gases.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Ensure adequate ventilation.
Use personal protective clothing.
Use breathing apparatus if exposed to vapours/dust/aerosol.

6.2. Environmental precautions
Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up
Take up mechanically and send for disposal.

6.4. Reference to other sections
Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

General protective measures
Avoid contact with eyes and skin
Do not inhale gases/vapours/aerosols.

Hygiene measures
At work do not eat, drink, smoke or take drugs.
At work do not eat, drink and smoke.
Wash hands before breaks and after work.

Advice on protection against fire and explosion
Pay attention to general rules of internal fire prevention.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep in closed original container.

Advice on storage compatibility
Do not store together with animal feedstuffs.
Do not store together with food.
Do not store together with acids.
Do not store together with oxidizing agents.

Further information on storage conditions
Protect from direct solar radiation.
Store container at cool and aired place.
Store in a dry place.

7.3. Specific end use(s)

Recommendation(s) for intended use
See section 1.2

! SECTION 8: Exposure controls/personal protection

8.1. Control parameters

! Ingredients with occupational exposure limits to be monitored

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
108-95-02	phenol	8 hours		2	EH40/2005
14807-96-6	Talc respirable dust	8 hours	1		EH40/2005
14807-96-6	Talk astbestfaserfrei (CH)	MAK, 8 hours	2		Lungenfib, Lunge, Methode: OSHA

Indicative occupational exposure limit values (91/322/EEC, 2000/39/EC, 2006/15/EC or 2009/161/EU)

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
108-95-2	phenol	8 hours	8	2	skin
		Short-term	16	4	

DNEL-/PNEC-values
DNEL worker

CAS No	Substance name	Value	Code	Remark
108-95-2	phenol	8 mg/m3	DNEL long-term inhalative (systemic)	

DNEL-/PNEC-values (continued)

CAS No	Substance name	Value	Code	Remark
		16 mg/m3	DNEL acute inhalative (local)	
		1,23 mg/m3	DNEL long-term dermal (systemic)	
112-24-3	trientine	0,57 mg/kg bw/day	DNEL long-term dermal (systemic)	
		8 mg/kg bw/day	DNEL acute dermal, short-term (systemic)	
		0,41 mg/kg bw/day	DNEL long-term oral (repeated)	
		20 mg/kg	DNEL short-term oral (acute)	
		0,028 mg/kg bw/day	DNEL long-term dermal (local)	
		5380 mg/m3	DNEL acute inhalative (systemic)	
		1 mg/kg	DNEL acute dermal, short-term (local)	
		1 mg/m3	DNEL long-term inhalative (systemic)	
140-31-8	2-piperazin-1-ylethylamine	20 mg/kg bw/day	DNEL acute dermal, short-term (systemic)	
		0,04 mg/cm2	DNEL acute dermal, short-term (local)	
		21,4 mg/m3	DNEL acute inhalative (systemic)	
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	8,33 mg/kg bw/day	DNEL long-term dermal (local)	
		12,25 mg/m3	DNEL long-term inhalative (systemic)	
		8,33 mg/kg bw/day	DNEL long-term dermal (systemic)	

PNEC

CAS No	Substance name	Value	Code	Remark
108-95-2	phenol	0,00915 mg/kg	PNEC sediment, marine water	
		0,00077 mg/l	PNEC aquatic, marine water	
		2,1 mg/l	PNEC sewage treatment plant (STP)	
		0,031 mg/l	PNEC aquatic, intermittent release	
		0,0077 mg/l	PNEC aquatic, freshwater	
		0,0915 mg/kg	PNEC sediment, freshwater	
112-24-3	trientine	95,9 mg/kg	PNEC sediment, freshwater	
		0,19 mg/l	PNEC aquatic, freshwater	
		19,2 mg/kg	PNEC sediment, marine water	
		0,038 mg/l	PNEC aquatic, marine water	
		4,25 mg/l	PNEC sewage treatment plant (STP)	
140-31-8	2-piperazin-1-ylethylamine	21,5 mg/kg	PNEC sediment, marine water	
		0,0058 mg/l	PNEC aquatic, marine water	

DNEL-/PNEC-values (continued)

CAS No	Substance name	Value	Code	Remark
		0,058 mg/l	PNEC aquatic, freshwater	
		250 mg/l	PNEC sewage treatment plant (STP)	
		215 mg/kg	PNEC sediment, freshwater	
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	0,018 mg/l	PNEC aquatic, intermittent release	
		11 mg/kg	PNEC Secondary Poisoning	
		0,006 mg/l	PNEC aquatic, freshwater	
		0,0006 mg/l	PNEC aquatic, marine water	
		10 mg/l	PNEC sewage treatment plant (STP)	
		0,996 mg/kg	PNEC sediment, freshwater	
		0,0996 mg/kg	PNEC sediment, marine water	

! **Additional advice**
The statutory local and national regulations have to be observed.

8.2. Exposure controls
Respiratory protection
Not required

Hand protection
In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.
Glove material specification [make/type, thickness, permeation time/life, wetting resistance]:: Nitrile rubber; 0,4mm; 480min;60min.
Chemical protective gloves must be chosen carefully in view of their design and depending on the dependence on the concentration and amounts of dangerous goods used in the specific working tasks.

Eye protection
tightly fitting goggles

Other protection measures
protective clothing

Appropriate engineering controls
Sufficient ventilation and exhaustion.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Colour	Odour
pasty	brown	hardly noticeable

Odour threshold
not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	not applicable				

	Value	Temperature	at	Method	Remark
boiling point	> 35 °C		ca. 101 kPa		
melting point	not applicable				
Flash point	> 100 °C				
Vapourisation rate	not applicable				
Flammable (solid)	not determined				
Flammability (gas)	not determined				
Ignition temperature	not determined				
Self ignition temperature	not determined				
Lower explosion limit	not determined				
Upper explosion limit	not determined				
Vapour pressure	< 500 Pa	20 °C			
Relative density	1,9 g/cm3				
Vapour density	not applicable				
Solubility in water					insoluble
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	not determined				
Decomposition temperature	not determined				
Viscosity dynamic	not applicable				
Viscosity kinematic	not applicable				

Oxidising properties
No information available.

Explosive properties
not applicable

9.2. Other information
No information available.

! SECTION 10: Stability and reactivity

10.1. Reactivity
No information available.

10.2. Chemical stability
The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions
Reactions with acids.
Reactions with amines.

10.4. Conditions to avoid
Keep away from heat.

10.5. Incompatible materials
Substances to avoid
Amines
Acid
oxidising agent

10.6. Hazardous decomposition products
Carbon monoxide and carbon dioxide.
Nitrous oxides (NOx)
Toxic gases/vapours

Thermal decomposition

Remark No decomposition if used as directed.

! SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	11111 mg/kg			ATE
LD50 acute dermal	41749 mg/kg			ATE
LC50 acute inhalation	333 mg/l ()		dust/mist	ATE
Skin irritation	low irritant effect - not necessary to label			
Eye irritation	low irritant - no labeling duty			
Skin sensitization	non-sensitizing			

Experiences made from practice
Persons suffering from hypersensitivity (1 ppm) showed sensitization.
Frequent contact specially if dried out may cause skin and eye irritations.

! **Additional information**
The product is to be handled with the caution usual with chemicals.
Other hazardous properties may not be excluded.
The product has not been tested. The information is derived from the properties of the individual components.

! SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 2 mg/l (96 h)	Oncorhynchus mykiss		CAS: 25068-38-6
Daphnia	NOEC 0,3 mg/l (21 d)	Daphnia magna		CAS: 25068-38-6
Algae	EC50 11 mg/l (72 h)	Green algae		CAS: 25068-38-6
Bacteria	EC50 800 mg/l	activated sludge		CAS: 112-24-3

12.2. Persistence and degradability

	Elimination rate	Method of analysis	Method	Validation
Biological degradability	12 % (28 d) CAS: 25068-38-6			not degradable

12.3. Bioaccumulative potential

The product has not been tested. Because of the product's consistency and low solubility in water bioavailability is not likely.

12.4. Mobility in soil

no

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

! **General regulation**

Harmful to aquatic life with long lasting effects.
Do not allow uncontrolled leakage of product into the environment.
Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.
The ecotoxic effect of the product has not been tested. The information on this is given on the basis of details in the literature.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendations for the product

Cured material may be considered inert and disposed of as builders waste.
Remove in accordance with local official regulations.

Recommendations for packaging

Uncontaminated packaging may be treated as household waste.
Packaging that cannot be cleaned should be disposed of like the product.

General information

Assignment to a waste code number / waste identification according to the EWC is to be carried out on a sector or process-specific basis.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	-	-	-

	ADR/RID	IMDG	IATA-DGR
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)	-	-	-
14.4. Packing group	-	-	-
14.5. Environmental hazards	-	-	-

14.6. Special precautions for user
No information available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

Transport/further information
No dangerous goods as defined by the transport regulations - ADR/RID, IMDG, ICAO/IATA-DGR.

! SECTION 15: Regulatory information

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

VOC standard
VOC content 0 %

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

! SECTION 16: Other information

! **Recommended uses and restrictions**
National and local regulations concerning chemicals shall be observed.
For industrial use only.

Further information
Each user is responsible for the implementation of the national special regulations.
The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.
Please observe the following disclaimer! --- Our safety data sheets have been compiled according to effective EU-directives, WITHOUT taking into account the special national directives concerning the handling of hazardous substances.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.2

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H302; -?-
H312 Toxic in contact with skin.
H312 Harmful 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.
H331 Toxic if inhaled.
H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H373	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.