
SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Name of product RIEGLER LOCK AN 302-70 / 50 ml
Code-Nr. ID-Nr. 114558

**1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended intended purpose(s)**

1-Component Adhesives and Sealants, anaerobic curing

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
--------------------------------------	-------------------	--------------------------

Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
STOT SE 3	H335
Aquatic Chronic 4	H413

Hazard Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H413	May cause long lasting harmful effects to aquatic life.

2.2. Label elements

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

GHS07

Signal word

Warning

Hazard Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary Statements

P102	Keep out of reach of children.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing.
P363	Wash contaminated clothing before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to hazardous or special waste collection point.

! Hazardous ingredients for labeling

BISPHENOL A ETHOXYLATE DIMETHACRYLATE, cumene hydroperoxide, Methacrylic acid, monoester with propane-1,2-diol, (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triy)tri-2,1-ethanediyl triacrylate

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**

Anaerobic adhesive / sealant

Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
80-15-9	201-254-7	cumene hydroperoxide	1 - 2,5	Org. Perox. E, H242 / Acute Tox. 3, H331 / Acute Tox. 4, H312 / Acute Tox. 4, H302 / STOT RE 2, H373 / Skin Corr. 1B, H314 / Aquatic Chronic 2, H411
27813-02-1	248-666-3	Methacrylic acid, monoester with propane-1,2-diol	10 - 30	Eye Irrit. 2, H319 / Skin Sens. 1, H317
107-21-1	203-473-3	ethanediol	< 1	Acute Tox. 4, H302 / STOT RE 2, H373
41637-38-1	609-946-4	BISPHENOL A ETHOXYLATE DIMETHACRYLATE	60 - 100	Skin Irrit. 2, H315 / Skin Sens. 1, H317 / Eye Irrit. 2, H319 / STOT SE 3, H335 / Aquatic Chronic 4, H413
40220-08-4	254-843-6	(2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triy)tri-2,1-ethanediyl triacrylate	1 < 3	Eye Dam., H318 /

REACH

CAS No	Name	REACH registration number
80-15-9	cumene hydroperoxide	01-2119475796-19
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	01-2119490226-37
107-21-1	ethanediol	01-2119456816-28
41637-38-1	BISPHENOL A ETHOXYLATE DIMETHACRYLATE	01-2119980659-17

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

Remove contaminated soaked clothing immediately.

In case of inhalation

Ensure of fresh air.

In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off immediately with soap and water.

Consult a doctor if skin irritation persists.

In case of eye contact

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

In case of ingestion

Do not induce vomiting.

Refer to medical treatment.

If swallowed give water to drink.

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

Headache

Allergic 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

Foam

Dry fire-extinguishing substance

Carbon dioxide

sand

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.

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.

Additional information

Cool endangered containers with water spray jet.

Collect contaminated firefighting water separately, must not be discharged into the drains.

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.

Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).

After taking up the material dispose according to regulation.

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 and smoke.
 Remove soiled or soaked clothing immediately.
 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 only in original container.

Advice on storage compatibility

Do not store together with animal feedstuffs.
 Do not store together with food.
 Do not store together with oxidizing agents.
 Do not store together with reducing agents.

Further information on storage conditions

Store at +5 till +25 °C.
 Protect from heat and direct solar radiation.
 Store container at cool and aired 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/m ³]	[ppm]	Remark
107-21-1	Ethane-1,2-diol: particulate	8 hours	10		EH40/2005
107-21-1	Ethane-1,2-diol: vapour	8 hours	52	20	EH40/2005
		Short-term	104	40	

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

CAS No	Name	Code	[mg/m ³]	[ppm]	Remark
107-21-1	ethanediol	8 hours	52	20	skin
		Short-term	104	40	

DNEL-/PNEC-values
DNEL worker

CAS No	Substance name	Value	Code	Remark
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	4,2 mg/kg bw/day	DNEL long-term dermal (systemic)	
80-15-9	cumene hydroperoxide	6 mg/m ³	DNEL long-term inhalative (systemic)	

PNEC

CAS No	Substance name	Value	Code	Remark
27813-02-1	Methacrylic acid, monoester with propane-1,2-diol	10 mg/l	PNEC sewage treatment plant (STP)	
		6,28 mg/kg	PNEC sediment, marine water	
		6,28 mg/kg	PNEC sediment, freshwater	

DNEL-/PNEC-values (continued)

CAS No	Substance name	Value	Code	Remark
		0,904 mg/l	PNEC aquatic, freshwater	
		0,904 mg/l	PNEC aquatic, marine water	
		0,727 mg/kg	PNEC soil, freshwater	

! Additional advice

The statutory local and national regulations have to be observed.

8.2. Exposure controls
Respiratory protection

In case of insufficient ventilation or long-term effect use breathing apparatus.
 Breathing apparatus in the event of aerosol or mist formation.

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

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

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties
Appearance

liquid

Colour

green

Odour

hardly noticeable

Odour threshold

not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	not determined				
boiling point	not determined				
melting point	not determined				
Flash point	> 100 °C				
Vapourisation rate	not determined				
Flammable (solid)	not determined				
Flammability (gas)	not determined				

	Value	Temperature	at	Method	Remark
Ignition temperature	not determined				
Self ignition temperature					The product is not self-igniting.
Lower explosion limit	not determined				
Upper explosion limit	not determined				
Vapour pressure	not determined				
Relative density	1,1 g/ml				
Vapour density	not determined				
Solubility in water		20 °C			low soluble
Solubility/other				Organic solvent	teilweise mischbar
Partition coefficient n-octanol/water (log P O/W)	not determined				
Decomposition temperature	not determined				
Viscosity	ca. 550 mPa*s	25 °C			

Oxidising properties
 No information available.

Explosive properties
 no

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 strong oxidising agents.
 Reactions with reducing agents.
 Reactions with Metals.

10.4. Conditions to avoid
 Metal, Metal-Salts
 Keep away from heat.

10.5. Incompatible materials
Substances to avoid

radical former

Oxidising agent, strong

Reducing agent, strong

Metal, Metal-Salts

10.6. Hazardous decomposition products

Gases/vapours, toxic

Carbon monoxide and carbon dioxide.

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	2000 mg/kg	rat		CAS: 27813-02-1
LD50 acute dermal	5000 mg/kg	rabbit		CAS: 27813-02-1
LC50 acute inhalation	3 mg/l ()		estimate	CAS: 80-15-9
Skin irritation	irritant			
Eye irritation	irritant - risk of strong eye injuries			
Skin sensitization	sensitizing			

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Mutagenicity				No experimental information on genotoxicity in vitro available.
Reproduction-Toxicity				No indications of toxic effects were observed in reproduction studies in animals.
Carcinogenicity				No indications of carcinogenic effects are available from long-term trials.

Experiences made from practice

Sensitization through skin contact possible.

Risk of strong eye injuries.

Irritates eyes and skin.

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 products of similar composition.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 3,9 mg/l (96 h)	Oncorhynchus mykiss		CAS: 80-15-9
Daphnia	NOELR 100 mg/l (48 h)	Daphnia magna		CAS: 41637-38-1
Algae	EC50 > 97,2 mg/l (72 h)	Pseudokirchneriella subcapitata		CAS: 27813-02-1
Bacteria	NOEC 10 mg/l (3 h)	activated sludge		CAS: 41637-38-1

12.2. Persistence and degradability

	Elimination rate	Method of analysis	Method	Validation
Biological degradability	CAS: 41637-38-1			Biodegradable
Degradability	94,2 % (28 d) CAS: 27813-02-1			readily degradable

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

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 was derived from products of similar structure or composition.

! SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.
 08 04 09*

Name of waste
 waste adhesives and sealants containing organic solvents or other hazardous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

Recommendations for the product

Remove in accordance with local official regulations.

! Recommendations for packaging

Dispose of according to the local waste regulations.

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	-	-	-
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	ca.3 %
VOC value	26,7 g/L

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.

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: 8.3

H242 Heating may cause a fire.

H302	Harmful if swallowed.
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.
H335	May cause respiratory irritation.
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.
H413	May cause long lasting harmful effects to aquatic life.