

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.01.2022

Version number 10 (replaces version 9)

Revision: 24.01.2022

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

1.1 Product identifier

Trade name: **Radiator Leak Sealer**

Article number: 90101, 90104

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

No further relevant information available.

Application of the substance / the mixture

Sealant

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg

Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

Further information obtainable from:

Laboratory

1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 The product is not classified, according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Void

Hazard pictograms

Void

Signal word

Void

Hazard-determining components of labelling:

Not applicable.

Hazard statements

Void

Additional information:

Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.
Safety data sheet available on request.

2.3 Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

107-21-1	ethanediol STOT RE 2, H373 Acute Tox. 4, H302	1-5%
2634-33-5	1,2-benzisothiazol-3(2H)-one Acute Tox. 2, H300 Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 2, H411 Skin Irrit. 2, H315; Skin Sens. 1A, H317 Specific concentration limit: Skin Sens. 1; H317: C ≥ 0.05 %	<1%

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

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SECTION 4: First aid measures· **4.1 Description of first aid measures**

- General information: Immediately remove any clothing soiled by the product.
No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Rinse out mouth and then drink plenty of water.
Seek medical treatment.

- **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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

- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

- **5.3 Advice for firefighters**

- Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Not required.

- **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- **6.4 Reference to other sections**

No dangerous substances are released.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

No special measures required.

- Information about fire - and explosion protection:

No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- Storage:

- Requirements to be met by storerooms and receptacles:

No special requirements.

- Information about storage in one common storage facility:

Not required.

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- Further information about storage conditions: Protect from frost.
- Storage class: 12
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

- Ingredients with limit values that require monitoring at the workplace:

107-21-1 ethanediol

IOELV	Short-term value: 104 mg/m ³ , 40 ppm
	Long-term value: 52 mg/m ³ , 20 ppm
	Skin

- DNELs

107-21-1 ethanediol

Dermal	DNEL (Kurzzeit-akut)	0.04 mg/kg bw/day (ARB)
	DNEL (Langzeit-wiederholt)	106 mg/kg bw/day (ARB)
Inhalative		53 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	35 mg/m ³ Air (ARB)
		7 mg/m ³ Air (BEV)

2634-33-5 1,2-benzisothiazol-3(2H)-one

Dermal	DNEL (Langzeit-wiederholt)	0.966 mg/kg bw/day (ARB)
		0.345 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	6.81 mg/m ³ Air (ARB)
		1.2 mg/m ³ Air (BEV)

- PNECs

107-21-1 ethanediol

PNEC (wässrig)	199.5 mg/l (KA)
	1 mg/l (MW)
	10 mg/l (SW)
	10 mg/l (WAS)
	PNEC (fest)
	1.53 mg/kg Trockengew (BO)
	3.7 mg/kg Trockengew (MWS)
	37 mg/kg Trockengew (SWS)

2634-33-5 1,2-benzisothiazol-3(2H)-one

PNEC (wässrig)	1.03 mg/l (KA)
	0.0011 mg/l (MW)
	0.011 mg/l (SW)
	0.000403 mg/l (WAS)
	PNEC (fest)
	3 mg/kg Trockengew (BO)
	0.00499 mg/kg Trockengew (MWS)
	0.0499 mg/kg Trockengew (SWS)

- Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

- Appropriate engineering controls No further data; see item 7.
- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures: Do not eat, drink, smoke or sniff while working.
Clean skin thoroughly immediately after handling the product.
Immediately remove all soiled and contaminated clothing
- Respiratory protection: Not required.

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· Hand protection

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).

**Protective gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Nitrile rubber, NBR

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove materialValue for the permeation: Level ≤ 6 , 480 min

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Not applicable

· For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Camatril (KCL, Art_No. 730, 731, 732, 733)

Dermatril (Art_No. 740, 741, 742)

Chloroprene rubber, CR

Camapren (KCL, Art_No. 720, 722, 726)

· As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Dermatril (KCL, Art_No. 740, 741, 742)

Camatril (KCL, 730, 731, 732, 733)

· Not suitable are gloves made of the following materials:

Leather gloves

Strong material gloves

· Eye/face protection

Goggles recommended during refilling

· Body protection:

Apron

SECTION 9: Physical and chemical properties· **9.1 Information on basic physical and chemical properties**· General Information· Colour:

Dark brown

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· <u>Odour:</u>	Specific type
· <u>Melting point/freezing point:</u>	Undetermined.
· <u>Boiling point or initial boiling point and boiling range</u>	Undetermined.
· <u>Flash point:</u>	Not applicable.
· <u>Auto-ignition temperature:</u>	Product is not selfigniting.
· <u>pH</u>	Not determined.
· <u>Viscosity:</u>	
· <u>Kinematic viscosity</u>	Not determined.
· <u>Dynamic at 20 °C:</u>	200 mPas
· <u>Solubility</u>	
· <u>water:</u>	Fully miscible.
· <u>Vapour pressure:</u>	Not determined.
· <u>Density and/or relative density</u>	
· <u>Density at 20 °C:</u>	1.03 g/cm ³

· 9.2 Other information

· <u>Appearance:</u>	
· <u>Form:</u>	Viscous
· <u>Important information on protection of health and environment, and on safety.</u>	
· <u>Explosive properties:</u>	Product does not present an explosion hazard.
· <u>Solvent content:</u>	
· <u>Organic solvents:</u>	5.0 %

· Information with regard to physical hazard classes

· <u>Explosives</u>	
· <u>Flammable gases</u>	Void
· <u>Aerosols</u>	Void
· <u>Oxidising gases</u>	Void
· <u>Gases under pressure</u>	Void
· <u>Flammable liquids</u>	Void
· <u>Flammable solids</u>	Void
· <u>Self-reactive substances and mixtures</u>	Void
· <u>Pyrophoric liquids</u>	Void
· <u>Pyrophoric solids</u>	Void
	Void

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· Self-heating substances and mixtures

Void

· Substances and mixtures, which emit flammable gases in contact with water

Void

· Oxidising liquids

Void

· Oxidising solids

Void

· Organic peroxides

Void

· Corrosive to metals

Void

· Desensitised explosives

Void

SECTION 10: Stability and reactivity· **10.1 Reactivity**

No further relevant information available.

· **10.2 Chemical stability**· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions**

No dangerous reactions known.

· **10.4 Conditions to avoid**

No further relevant information available.

· **10.5 Incompatible materials:**

No further relevant information available.

· **10.6 Hazardous decomposition products:**

No dangerous decomposition products known.

SECTION 11: Toxicological information· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**· Acute toxicity

Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:**107-21-1 ethanediol**

Oral	LD50	7,712 mg/kg (rat)
Dermal	LD50	3,500 mg/kg (mouse)
		9,530 mg/kg (rbt)
Inhalative	LC50	>2.5 mg/l (rat)

2634-33-5 1,2-benzisothiazol-3(2H)-one

Oral	LD50	454 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4h	>2,050 mg/m3 (rat)

· Skin corrosion/irritation

Based on available data, the classification criteria are not met.

· Serious eye damage/irritation

Based on available data, the classification criteria are not met.

· Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

· Germ cell mutagenicity

Based on available data, the classification criteria are not met.

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- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

· 11.2 Information on other hazards

- Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

- Aquatic toxicity:

107-21-1 ethanediol

EC50/96h	>100 mg/l (green alge)
	6,500-13,500 mg/l (Selenastrum capricornutum)
IC50/72h	>10,000 mg/l (green alge)
EC50/48h	>100 mg/l (daphnia magna)
EC50/16h	10,000 mg/l (pseudomonas putida)
LC50/96h	>10,000 mg/l (piscis)
	18,500 mg/l (Oncorhynchus mykiss)
	72,860 mg/l (pimephales promelas)
	>18,500 mg/l (Salmo gairdneri)

2634-33-5 1,2-benzisothiazol-3(2H)-one

EC50	13 mg/l (BES)
EC50/16h	0.4 mg/l (pseudomonas putida)
EC20/3h	3.3 mg/l (BES) (OECD 209)
EC50/48h	2.94 mg/l (daphnia magna)
EC50/72h	0.11 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	1.6 mg/l (Oncorhynchus mykiss)
	2.18 mg/l (rainbow trout)

· 12.2 Persistence and degradability

No further relevant information available.

· 12.3 Bioaccumulative potential

No further relevant information available.

· 12.4 Mobility in soil

No further relevant information available.

· 12.5 Results of PBT and vPvB assessment

- PBT: Not applicable.

- vPvB: Not applicable.

· 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

· 12.7 Other adverse effects

- Additional ecological information:

- General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

- Recommendation

On the basis of the necessary technical regulations and after consultation with the disposal agent and the relevant authorities, can be disposed of with domestic waste or incinerated with domestic waste.

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Smaller quantities can be disposed of with household waste.

· <u>European waste catalogue</u>	
16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 03 00	off-specification batches and unused products
16 03 06	organic wastes other than those mentioned in 16 03 05

· Uncleaned packaging:· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.**SECTION 14: Transport information**

· 14.1 UN number or ID number	
· <u>ADR, ADN, IMDG, IATA</u>	Void
· 14.2 UN proper shipping name	
· <u>ADR, ADN, IMDG, IATA</u>	Void
· 14.3 Transport hazard class(es)	
· <u>ADR, ADN, IMDG, IATA</u>	
· <u>Class</u>	Void
· 14.4 Packing group	
· <u>ADR, IMDG, IATA</u>	Void
· 14.5 Environmental hazards:	
· <u>Marine pollutant:</u>	No
· 14.6 Special precautions for user	
	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	
	Not applicable.
· <u>Transport/Additional information:</u>	Not dangerous according to the above specifications.
· <u>UN "Model Regulation":</u>	Void

SECTION 15: Regulatory information· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**· Directive 2012/18/EU· Named dangerous substances - ANNEX I

None of the ingredients is listed.

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

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· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

· Information about limitation of use: Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

· Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· VOC EU 51.5 g/l

· **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Laboratory
 · Contact: Elke Hake
 Fon ++49 (0)911 64296-59
 @mail E.Hake@akemi.de
 Dieter Zimmermann

· Version number of previous version:

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· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 2: Acute toxicity – Category 2
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Skin Sens. 1A: Skin sensitisation – Category 1A
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

EU