

Safety data sheet

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.12.2022

Version: 1.2

Product: **Hardener 529 liquid**

(ID no. 30034887/SDS_GEN_00/EN)

Date of print 16.10.2025

1. Identification

Product identifier

Hardener 529 liquid

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

Relevant identified uses: Chemical

Recommended use: Chemical

Not recommended use: Technical information in support will be provided by BASF at the request of competent authorities.

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Division Monomers

Telephone: +49 621 60 42737

E-mail address: pss.monomers@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

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Acute Tox. 5 (oral)

Skin Corr./Irrit. 2

Aquatic Acute 2

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H315	Causes skin irritation.
H303	May be harmful if swallowed.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves.
P273	Avoid release to the environment.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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Other hazards

According to UN GHS criteria

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition/Information on Ingredients

Substances

Not applicable

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Mixtures

Chemical nature

salts of an inorganic acid

aqueous solution

Hazardous ingredients (GHS)

According to UN GHS criteria

Bis[(2-hydroxyethyl)ammonium] sulphite

Content (W/W): $\geq 43\%$ - $\leq 43\%$ Acute Tox. 5 (oral)

CAS Number: 15535-29-2 Skin Corr./Irrit. 2

EC-Number: 239-580-7 Aquatic Acute 2

H315, H303, H401

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: skin irritation

Hazards: No hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

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Suitable extinguishing media:

water spray, foam, carbon dioxide, dry powder

Special hazards arising from the substance or mixture

sulfur oxides, carbon oxides

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Suppress gases/vapours/mists with water spray jet.

6. Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing.

Environmental precautions

Do not release untreated into natural waters.

Methods and material for containment and cleaning up

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material.

7. Handling and Storage**Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances.

Suitable materials for containers: Stainless steel 1.4301 (V2), Polyester resin, glass reinforced (Palatal A410), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4401, enamelled

Unsuitable materials for containers: Aluminium, Galvanized carbon steel (Zinc), Lead-plated, Paper/Fibreboard, Carbon steel (Iron), tinned carbon steel (Tinplate)

Further information on storage conditions: Keep in a cool place. Keep container tightly closed.

The packed product is not damaged by low temperatures or by frost.

The packed product will not be damaged by high temperatures.

Specific end use(s)For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

No occupational exposure limits known.

Exposure controls

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate.

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Standard work clothes and shoes.

General safety and hygiene measures

Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	liquid	
Colour:	yellowish	
Odour:	faint odour	
Odour threshold:		
	No data available.	
pH value:	approx. 6,5 (20 °C)	(DIN ISO 976)
solidification temperature:	approx. -19 °C	
Boiling point:	approx. 114 °C 130 °C (1,013 bar)	
Flash point:	> 114 °C	(DIN 51758)
Evaporation rate:		
	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	not highly flammable	
Lower explosion limit:		(DIN 51649-1)
Ignition temperature:	445 °C	(DIN 51794)
Vapour pressure:	approx. 6,7 mbar (20 °C)	

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	10 mbar (20 °C)	
	47 mbar (50 °C)	
	59 mbar (55 °C)	
Density:	approx. 1,35 g/cm ³ (20 °C)	(ISO 2811-3)
Relative density:	No data available.	
Solubility in water:	miscible soluble (15 °C)	
Partitioning coefficient n-octanol/water (log K _{ow}):	not determined	
Self ignition:	not self-igniting	
Thermal decomposition:	approx. 114 °C No decomposition if correctly stored and handled.	
Viscosity, dynamic:	200 - 350 mPa.s (20 °C)	(DIN EN ISO 3219)
Viscosity, kinematic:	No data available.	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	

Other information

Self heating ability:	It is not a substance capable of spontaneous heating.	
Radioactivity:		not radioactive for transport purposes (ISO 697)
Bulk density:		
Miscibility with water:	(15 °C) completely (e.g. >=90%)	
Hygroscopy:	Non-hygroscopic	
Grain size distribution:	The substance / product is marketed or used in a non solid or granular form.	
Solids content:	80 %	

10. Stability and Reactivity**Reactivity**

Corrosion to metals:	Corrosive effect on metals.	
Reactions with water/air:	Flammable gases:	no
	Toxic gases:	no
	Corrosive gases:	no
	Smoke or fog:	no
	Peroxides:	no

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Formation of
flammable gases:

Remarks:

Forms no flammable gases in the
presence of water.**Chemical stability**

The product is chemically stable.

Peroxides:

Substance contains no organic peroxides.

Possibility of hazardous reactions

Evolution of sulphur dioxide under influence of acids.

The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materialsSubstances to avoid:
strong acids**Hazardous decomposition products**Hazardous decomposition products:
Sulphur dioxide

11. Toxicological Information**Information on toxicological effects**Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard.

Experimental/calculated data:

LD50 rat (oral): 3.560 mg/kg (BASF-Test)

rat (by inhalation): 7 h (IRT)

No mortality within the stated exposition time as shown in animal studies.

Irritation

Assessment of irritating effects:

Irritating to skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: Irritant. (Draize test)

Serious eye damage/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: non-irritant (Draize test)

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Respiratory/Skin sensitization

Assessment of sensitization:

The chemical structure does not suggest a sensitizing effect.

Germ cell mutagenicity

Assessment of mutagenicity:

The chemical structure does not suggest a specific alert for such an effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity

Assessment of carcinogenicity:

The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity:

The chemical structure does not suggest a specific alert for such an effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Developmental toxicity

Assessment of teratogenicity:

The chemical structure does not suggest a specific alert for such an effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

Study not necessary due to exposure considerations.

Aspiration hazard

No aspiration hazard expected.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

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Toxicity to fish:

LC50 (96 h) > 460 - < 680 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

Nominal concentration.

Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Nominal concentration.

Microorganisms/Effect on activated sludge:

EC20 approx. 90 mg/l, activated sludge, industrial (DIN EN ISO 8192-OECD 209-88/302/EEC, P. C, aerobic)

Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Easily eliminated from water.

Elimination information:

96 % DOC reduction (10 d) (OECD 302B; ISO 9888; 88/302/EEC, part C) (aerobic, activated sludge, industrial)

90 - 100 % (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic)

93 % DOC reduction (21 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic)

Bioaccumulative potential

Bioaccumulation potential:

Accumulation in organisms is not to be expected. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: No data available. Because of the high water solubility, part of the product will immediately dissolve.

Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

13. Disposal Considerations

Waste treatment methods

Incinerate in suitable incineration plant, observing local authority regulations.

14. Transport Information

Land transport

ADR

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

RID

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

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user

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Aquatic Acute	Hazardous to the aquatic environment - acute
H315	Causes skin irritation.
H303	May be harmful if swallowed.
H401	Toxic to aquatic life.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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