

# Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 11.01.2023

Version: 2.0

Date previous version: 29.07.2019

Previous version: 1.0

Date / First version: 29.07.2019

Product: **Hardener 529 liquid**

(ID no. 30034887/SDS\_GEN\_IE/EN)

Date of print 21.10.2025

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

### 1.1. Product identifier

## Hardener 529 liquid

UFI: VVRW-W0TW-4002-C2R5

### 1.2. 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.

### 1.3. Details of the supplier of the safety data sheet

Company:

BASF SE  
67056 Ludwigshafen  
GERMANY

Contact address:

BASF Ireland DAC  
Asgard House, 19-20 City Quay  
Dublin, D02 K744  
Ireland

Telephone: +353 21 451-7100

E-mail address: product-safety-uk-and-ireland@basf.com

### 1.4. Emergency telephone number

For products classified as hazardous in accordance with CLP:

National Poisons Information Centre, Beaumont Hospital, Dublin 9

Emergency medical information: 8am-10pm (seven days)

Tel.: 01 8092566

International emergency number:

Telephone: +49 180 2273-112

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## SECTION 2: Hazards Identification

### 2.1. Classification of the substance or mixture

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to Regulation (EC) No 1272/2008 [CLP]

| Skin Corr./Irrit. 2                      H315 Causes skin irritation.

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

### 2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Warning

Hazard Statement:

| H315                      Causes skin irritation.

Precautionary Statements (Prevention):

P280                      Wear protective gloves.

| P264                      Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

| P302 + P352              IF ON SKIN: Wash with plenty of soap and water.

| P332 + P313              If skin irritation occurs: Get medical attention.

P362 + P364              Take off contaminated clothing and wash it before reuse.

### 2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

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

The product does not contain a substance above legal limits fulfilling the PBT

(persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Product does not contain a substance above legal limits included in the list established in

accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting

properties or is identified to have endocrine disrupting properties in accordance with the criteria set

out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

#### Chemical nature

salts of an inorganic acid

aqueous solution

#### Regulatory relevant ingredients

Reaction mass of bis[(2-hydroxyethyl)ammonium] sulphite and 2-(methylamino)ethanol, compound with sulphur dioxide

Content (W/W):  $\geq 43\%$  -  $\leq 43\%$  Skin Corr./Irrit. 2

CAS Number: 15535-29-2 H315

EC-Number: 239-580-7

REACH registration number: 01-  
2119982394-27

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

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## SECTION 4: First-Aid Measures

### 4.1. 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.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms: skin irritation

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

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

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

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### **SECTION 5: Fire-Fighting Measures**

#### **5.1. Extinguishing media**

Suitable extinguishing media:  
water spray, foam, carbon dioxide, dry powder

#### **5.2. Special hazards arising from the substance or mixture**

Endangering substances: sulfur oxides, carbon oxides  
Advice: The substances/groups of substances mentioned can be released in case of fire.

#### **5.3. 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.

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### **SECTION 6: Accidental Release Measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing.

#### **6.2. Environmental precautions**

Do not release untreated into natural waters.

#### **6.3. Methods and material for containment and cleaning up**

For large amounts: Pump off product.  
For residues: Pick up with suitable absorbent material.

#### **6.4. Reference to other sections**

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## SECTION 7: Handling and Storage

### 7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

No special precautions necessary.

### 7.2. 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.

### 7.3. 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.

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## SECTION 8: Exposure Controls/Personal Protection

### 8.1. Control parameters

Components with occupational exposure limits

No occupational exposure limits known.

#### PNEC

No PNEC value available.

#### DNEL

No DNEL value available.

### 8.2. Exposure controls

#### Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate.

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

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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.

## SECTION 9: Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

State of matter:	liquid	
Form:	liquid	
Colour:	yellowish	
Odour:	faint odour	
Odour threshold:	No data available.	
solidification temperature:	approx. -19 °C	
Boiling point:	approx. 114 °C 130 °C (1.013 bar)	
Flammability:	not highly flammable	
Lower explosion limit:		(DIN 51649-1)
Flash point:	> 114 °C	(DIN 51758)
Auto-ignition temperature:	445 °C	(DIN 51794)
Thermal decomposition:	approx. 114 °C	
	No decomposition if correctly stored and handled.	
pH value:	approx. 6.5 (20 °C)	(DIN ISO 976)
Viscosity, kinematic:	No data available.	
Viscosity, dynamic:	200 - 350 mPa.s (20 °C)	(DIN EN ISO 3219)
Solubility in water:	miscible soluble (15 °C)	
Partitioning coefficient n-octanol/water (log Kow):	not determined	
Vapour pressure:	approx. 6.7 mbar (20 °C) 10 mbar (20 °C) 47 mbar (50 °C) 59 mbar (55 °C)	

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Relative density:

Density: No data available.  
approx. 1.35 g/cm<sup>3</sup> (ISO 2811-3)  
(20 °C)

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

**9.2. Other information****Information with regard to physical hazard classes**Explosives

Explosion hazard: not explosive

Oxidizing properties

Fire promoting properties: not fire-propagating

Self-heating substances and mixtures

Self heating ability: It is not a substance capable of spontaneous heating.

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

Formation of flammable gases:  
Forms no flammable gases in the presence of water.

Corrosion to metals

Corrosive effect on metals.

**Other safety characteristics**

Radioactivity:

not radioactive for transport purposes  
(ISO 697)

Bulk density:

Miscibility with water:

(15 °C)  
completely (e.g. >=90%)

Hygroscopy:

Solids content:

Evaporation rate:

Non-hygroscopic  
80 %

Value can be approximated from  
Henry's Law Constant or vapor  
pressure.

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**SECTION 10: Stability and Reactivity****10.1. Reactivity**

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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
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

## 10.2. Chemical stability

The product is chemically stable.

Peroxides: Substance contains no organic peroxides.

## 10.3. Possibility of hazardous reactions

Evolution of sulphur dioxide under influence of acids.

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

## 10.4. Conditions to avoid

See SDS section 7 - Handling and storage.

## 10.5. Incompatible materials

Substances to avoid:  
strong acids

## 10.6. Hazardous decomposition products

Hazardous decomposition products:  
Sulphur dioxide

# SECTION 11: Toxicological Information

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

### 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)



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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)

#### 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.

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#### 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.

#### Interactive effects

No data available.

### **11.2. Information on other hazards**

#### Endocrine disrupting properties

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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## **SECTION 12: Ecological Information**

### **12.1. 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.

Toxicity to fish:

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

Nominal concentration.

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Aquatic invertebrates:

EC50 (48 h) &gt; 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.

## 12.2. Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

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)

## 12.3. 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.

## 12.4. 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.

## 12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

## 12.6. Endocrine disrupting properties

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting

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properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## 12.7. Other adverse effects

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

## SECTION 13: Disposal Considerations

### 13.1. Waste treatment methods

Incinerate in suitable incineration plant, observing local authority regulations.

## SECTION 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

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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

### **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

#### **14.1. UN number or ID number**

See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

#### **14.2. UN proper shipping name**

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

#### **14.3. Transport hazard class(es)**

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

#### **14.4. Packing group**

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See corresponding entries for "Packing group" for the respective regulations in the tables above.

**14.5. Environmental hazards**

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

**14.6. Special precautions for user**

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

**14.7. Maritime transport in bulk according to IMO instruments**

Maritime transport in bulk is not intended.

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**SECTION 15: Regulatory Information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):  
Listed in above regulation: no

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

**15.2. Chemical Safety Assessment**

Chemical Safety Assessment not yet performed due to registration timelines. Exposure scenarios for the mixture can not be provided at the moment because exposure scenarios are not yet available for all relevant substances due to registration timelines. For advice on essential measures see sections 7 and 8 of this safety data sheet.

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**SECTION 16: Other Information**

Skin Corr./Irrit.

Skin corrosion/irritation

H315

Causes skin irritation.

Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract

Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective

concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association.

IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal

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concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

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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Vertical lines in the left hand margin indicate an amendment from the previous version.