

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended



Tana-Chemie GmbH
Werner & Mertz Group

ENERGY perfect

WM 0712615

Order number: 0712615

Version 5.11

Revision Date 12.03.2025

Print Date 23.10.2025

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

1.1 Product identifier

Trade name : ENERGY perfect
UFI : R655-S0N8-D00D-DDS6

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

Use of the Substance/Mixture : detergents for dishwashers
Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company : Tana Chemie GmbH
Rheinallee 96
55120 Mainz
Telephone : +49613196403
Telefax : +4961319642414
E-mail address : Produktsicherheit@werner-mertz.com
Responsible/issuing person :
Contact person : Product development / product safety

1.4 Emergency telephone number

+49(0)551-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1 H290: May be corrosive to metals.

Skin corrosion, Category 1A H314: Causes severe skin burns and eye damage.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary statements : P102 Keep out of reach of children.
Prevention: P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

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P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P310

Disposal:

P501

Dispose of container into the collection of recyclables only when it is completely empty.

Hazardous components which must be listed on the label:

sodium hydroxide

Additional Labelling:

Safety data sheet available on request.

2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Aqueous solution

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
sodium hydroxide	1310-73-2 215-185-5 011-002-00-6 01-2119457892-27	Met. Corr. 1; H290 Skin Corr. 1A; H314 Eye Dam. 1; H318 specific concentration limit Skin Corr. 1A; H314 ≥ 5 % Skin Corr. 1B; H314 2 - < 5 % Skin Irrit. 2; H315 0,5 - < 2 % Eye Irrit. 2; H319 0,5 - < 2 %	≥ 10 - < 15

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SECTION 4: First aid measures

4.1 Description of first aid measures

- | | | |
|-------------------------|---|---|
| General advice | : | Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance. |
| If inhaled | : | Move to fresh air.
If symptoms persist, call a physician. |
| In case of skin contact | : | Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. |
| In case of eye contact | : | Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
Protect unharmed eye.
Continue rinsing eyes during transport to hospital. |
| If swallowed | : | Clean mouth with water and drink afterwards plenty of water.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital. |

4.2 Most important symptoms and effects, both acute and delayed

- | | | |
|----------|---|---------------------------|
| Symptoms | : | corrosive effects |
| Risks | : | No information available. |

4.3 Indication of any immediate medical attention and special treatment needed

- | | | |
|-----------|---|--|
| Treatment | : | For specialist advice physicians should contact the Poisons Information Service. |
|-----------|---|--|

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | | |
|------------------------------|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|------------------------------|---|---|

5.2 Special hazards arising from the substance or mixture

- | | | |
|--------------------------------------|---|---|
| Specific hazards during firefighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | No hazardous combustion products are known |

5.3 Advice for firefighters

- | | | |
|---|---|--|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains. |

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Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Neutralise with acid.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., Treat recovered material as described in the section "Disposal considerations"., Refer to section 15 for specific national regulation.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store at room temperature in the original container.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : detergents for dishwashers

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
sodium hydroxide	Workers	Inhalation	Long-term local effects	1,0 mg/m3
	Workers	Inhalation	Long-term systemic effects, Long-term local effects	1,5 mg/m3
	Workers	Inhalation	Short-term exposure, Local effects, Systemic effects	3 mg/m3
	Consumers	Inhalation	Long-term local effects, Long-term systemic effects	0,6 mg/m3
	Consumers	Inhalation	Short-term exposure, Local effects, Systemic effects	1,2 mg/m3
	Consumers	Ingestion	Long-term local effects, Long-term systemic effects	25 mg/m3
Alanine, N,N-bis(carboxymethyl)-, trisodium salt	Workers	Inhalation	Acute systemic effects	40 mg/m3
	Workers	Inhalation	Acute local effects	40 mg/m3
	Workers	Inhalation	Long-term systemic effects	40 mg/m3
	Workers	Inhalation	Long-term local effects	4 mg/m3
	Consumers	Inhalation	Acute local effects	20 mg/m3
	Consumers	Inhalation	Acute systemic effects	20 mg/m3
	Consumers	Inhalation	Long-term systemic effects	20 mg/m3
	Consumers	Inhalation	Long-term local effects	2 mg/m3
	Consumers	Ingestion	Acute systemic effects	85 mg/kg

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	Consumers	Ingestion	Long-term systemic effects	17 mg/kg
tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	Workers	Inhalation	Acute systemic effects	55 mg/m3
	Workers	Inhalation	Acute local effects	55 mg/m3
	Workers	Skin contact	Long-term systemic effects	15000 mg/kg
	Workers	Inhalation	Long-term systemic effects	7,3 mg/m3
	Consumers	Skin contact	Long-term systemic effects	7500 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1,8 mg/m3
	Consumers	Ingestion	Long-term systemic effects	1,5 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Alanine, N,N-bis(carboxymethyl)-, trisodium salt	Fresh water	2 mg/l
	Marine water	0,2 mg/l
	Fresh water sediment	24 mg/kg
	Soil	2,5 mg/kg
	STP	100 mg/l
	intermittent release	1 mg/l
tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	Fresh water	> 2 mg/l
	Marine water	> 0,2 mg/l
	intermittent release	> 1 mg/l
	STP	> 41,2 mg/l
	Oral	67 mg/kg

8.2 Exposure controls

Personal protective equipment

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Eye/face protection : Tightly fitting safety goggles

Hand protection

Material : Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Remove and wash contaminated clothing before re-use.

Respiratory protection : Not required; except in case of aerosol formation.

Recommended Filter type:

ABEK-P3-filter

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: colourless
Odour	: characteristic
Melting point/freezing point	: No data available
Boiling point/boiling range	: No data available
Flammability (solid, gas)	: No data available
Flammability (liquids)	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Flash point	: does not flash

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Ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: ca. 12,3, 1 % at 20 °C
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Water solubility	: soluble
Solubility in other solvents	: No data available
Partition coefficient: n- octanol/water	: No data available
Vapour pressure	: No data available
Density	: ca. 1,260 g/cm ³ at 20 °C
Relative density	: No data available
Relative vapour density	: No data available
Particle characteristics	: No data available

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.
No decomposition if used as directed.

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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SECTION 11: Toxicological information

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

Our company is strongly against animal testing.

Our company does not place any orders for animal testing for the finished product or the ingredients.

However, as a result of EU legislation (REACH Regulation), the manufacturers of ingredients or EU importers are obliged to test ingredients with regard to their effects on human health and the environment before they are brought onto the market. Some of the tests made necessary by this took place decades ago.

Acute toxicity

Acute toxicity : Not Rated

Components:

sodium hydroxide

1310-73-2:

Acute oral toxicity : LD50 Oral (Rat): 2.000 mg/kg

Skin corrosion/irritation

Product:

Remarks : Extremely corrosive and destructive to tissue.

Components:

sodium hydroxide

1310-73-2:

Result : Corrosive

Serious eye damage/eye irritation

Product:

Remarks : May cause irreversible eye damage.

Components:

sodium hydroxide

1310-73-2:

Result : Corrosive

Respiratory or skin sensitisation

Product:

Remarks : No data available

Germ cell mutagenicity : Not Rated

Carcinogenicity : Not Rated

Reproductive toxicity : Not Rated

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- STOT - single exposure : The substance or mixture is not classified as specific target organ toxicant, single exposure.
- STOT - repeated exposure : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
- Aspiration toxicity : Not Rated

11.2 Information on other hazards

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

sodium hydroxide

1310-73-2:

- Toxicity to fish : LC50 (Fish): 33 - 189 mg/l
Exposure time: 96 h
- LC50 (Gambusia affinis (Mosquito fish)): 125 mg/l
Exposure time: 96 h
- LC50 (Poecilia reticulata (guppy)): 76 mg/l
Exposure time: 24 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 40,4 mg/l
- EC50 (Daphnia magna (Water flea)): 76 mg/l
Exposure time: 24 h
- EC50 (Ceriodaphnia (water flea)): 40,4 mg/l
Exposure time: 48 h
Test Type: Immobilization
- Toxicity to microorganisms : EC50 (Photobacterium phosphoreum): 22 mg/l
Exposure time: 15 min

12.2 Persistence and degradability

Product:

- Biodegradability : Remarks: The surfactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

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Components:

sodium hydroxide

1310-73-2:

Biodegradability

: Result: Biodegradable
Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Components:

sodium hydroxide

1310-73-2:

Bioaccumulation

: Species: Fish
Remarks: No bioaccumulation is to be expected (log Pow <= 4).

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment

: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).. This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product:

Additional ecological information : There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

: Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
In accordance with local and national regulations.

Contaminated packaging

: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

Waste Code

European Waste Catalogue
20 01 29*
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

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SECTION 14: Transport information

14.1 UN number or ID number

ADR : 3267
IMDG : 3267
IATA : 3267

14.2 UN proper shipping name

ADR : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(sodium hydroxide)
IMDG : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(sodium hydroxide)
IATA : Corrosive liquid, basic, organic, n.o.s.

14.3 Transport hazard class(es)

ADR : 8
IMDG : 8
IATA : 8

14.4 Packing group

ADR
Classification Code : C7
Packaging group : II
Hazard Identification Number : 80
Labels : 8
Tunnel restriction code : (E)
IMDG
Packaging group : II
Labels : 8
EmS Number : F-A, S-B
IATA
(Cargo) : Corrosive liquid, basic, organic, n.o.s.
Packaging group : II
Labels : 8

14.5 Environmental hazards

ADR
Environmentally hazardous : no
IMDG
Marine pollutant : no
IATA
Environmentally hazardous : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

For personal protection see section 8.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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SECTION 15: Regulatory information

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

: Directive 96/82/EC does not apply

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

TA Luft List (Germany) : Total dust: Not applicable
: Inorganic substances in powdered form: Not applicable
: Inorganic substances in vapour or gaseous form: Not applicable
: Organic Substances: : portionClass 1: < 0,01 %
: Carcinogenic substances: : portionClass 3: < 0,01 %
: Mutagenic: Not applicable
: Toxic to reproduction: Not applicable

Volatile organic compounds (VOC) content : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Update: Not applicable

according to Detergents Regulation EC 648/2004 : <5% phosphonates, polycarboxylates

GISBAU (D) : no assignment possible

15.2 Chemical safety assessment

There is no data available for this product.

SECTION 16: Other information

Full text of H-Statements

H290 : May be corrosive to metals.
H314 : Causes severe skin burns and eye damage.
H318 : Causes serious eye damage.

Full text of other abbreviations

Eye Dam. : Serious eye damage
Met. Corr. : Corrosive to metals
Skin Corr. : Skin corrosion

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian

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Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Met. Corr. 1	H290
Skin Corr. 1A	H314

Classification procedure:

On basis of test data.
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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