



## ENERGY ALU

WM 1201589

Order number: 0701589

Version 5.7

Revision Date 24.01.2023

Print Date 05.02.2023

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

#### 1.1 Product identifier

Trade name : ENERGY ALU  
UFI : 51J4-W0QR-3001-V8TT

#### 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

112  
Centru za kontrolu otrovanja u Zagrebu na tel. (01) 2348 342  
+49(0)6131-19240

### 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.



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### Prevention:

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response:

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 metasilicate,  
pentahydrate

### Additional Labelling:

Safety data sheet available on request.

### 2.3 Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Silicic acid, sodium salt	1344-09-8 215-687-4 01-2119448725-31	Eye Dam. 1; H318 Skin Irrit. 2; H315	>= 5 - < 10
Sodium metasilicate, pentahydrate	10213-79-3 01-2119449811-37	Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 5 - < 10

## 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.



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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  
Irritation

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.

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

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## SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation.



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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.

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## 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.

### 8.2 Exposure controls

Personal protective equipment



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Eye 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

Appearance	:	liquid
Colour	:	colourless
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	ca. 11,3, Concentration: 10,00 g/l at 20 °C
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Flammability (liquids)	:	No data available
Burning rate	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	ca. 1,217 g/cm <sup>3</sup> at 20 °C
Water solubility	:	soluble



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Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
alkali reserve	:	4,7 g/100g
Explosive properties	:	No data available
Oxidizing properties	:	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.

## 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



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### Components:

#### Silicic acid, sodium salt

##### SODIUM SILICATE:

- Acute oral toxicity : LD50 Oral (Rat): 3.400 mg/kg
- Acute inhalation toxicity : LC50 (Rat): 2,06 mg/l  
Exposure time: 4 h
- Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg

#### Sodium metasilicate, pentahydrate

##### SODIUM METASILICATE:

- Acute oral toxicity : LD50 (Rat): 1.152 - 1.349 mg/kg
- Acute inhalation toxicity : LC50 (Rat): 2,06 mg/l
- Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg

### Skin corrosion/irritation

#### Product:

- Remarks : Extremely corrosive and destructive to tissue.

### Components:

#### Silicic acid, sodium salt

##### SODIUM SILICATE:

- Result : Skin irritation

### Serious eye damage/eye irritation

#### Product:

- Remarks : May cause irreversible eye damage.

### Components:

#### Silicic acid, sodium salt

##### SODIUM SILICATE:

- Method : OECD Test Guideline 405
- Result : Causes serious eye damage.

### 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

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

#### **SODIUM SILICATE:**

Toxicity to fish : LC50 (Brachydanio rerio): 1.108 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.700 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to microorganisms : EC0 (Pseudomonas putida): > 1.000 mg/l  
Exposure time: 48 h

#### **SODIUM METASILICATE:**

Toxicity to fish : LC50 (Brachydanio rerio): 210 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.700 mg/l  
Exposure time: 48 h

### 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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### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 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.

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## 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.

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## SECTION 14: Transport information

### 14.1 UN number

ADR : 3267  
IMDG : 3267  
IATA : 3267

### 14.2 Proper shipping name

ADR : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.  
(Sodium metasilicate, pentahydrate)

IMDG : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.  
(Sodium metasilicate, pentahydrate)

IATA : Corrosive liquid, basic, organic, n.o.s.

### 14.3 Transport hazard class

ADR : 8  
IMDG : 8  
IATA : 8

### 14.4 Packing group

ADR  
Classification Code : C7



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Packaging group	: III
Hazard Identification Number	: 80
Labels	: 8
Tunnel restriction code	: (E)
<b>IMDG</b>	
Packaging group	: III
Labels	: 8
EmS Number	: F-A, S-B
<b>IATA</b>	
<b>(Cargo)</b>	: Corrosive liquid, basic, organic, n.o.s.
Packaging group	: III
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 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## 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, preparations and articles (Annex XVII) : Not applicable

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 : Directive 2010/75/EU of 24 November 2010 on industrial emissions



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(VOC) content	(integrated pollution prevention and control) Update: Percent volatile: < 0,01 % 0 g/l 0 % VOC content excluding water
Volatile organic compounds (VOC) content	: Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Update: Percent volatile: < 0,01 % 0 g/l 0 % VOC content valid only for coating materials used on wood surfaces
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.
H315	: Causes skin irritation.
H318	: Causes serious eye damage.
H335	: May cause respiratory irritation.

### Full text of other abbreviations

Eye Dam.	: Serious eye damage
Met. Corr.	: Corrosive to metals
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
STOT SE	: Specific target organ toxicity - single exposure

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



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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.
On basis of test data.

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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