ENERGY ALU 10L

WM 1201589 **Order number: 0701589**

Version 5.1 Revision Date 08.05.2020 Print Date 13.08.2020

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

1.1 Product identifier

Trade name : ENERGY ALU 10L
Identification number : 61304

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

+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.
	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.
P310	Immediately call a POISON CENTER/doctor.
Disposal:	
P501	Dispose of contents/ container to an approved waste disposal plant.

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

Hazardous components

Chemical name	CAS-No. EC-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	10213-79-3 229-912-9 01-2119449811-37	Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 5 - < 10

For explanation of abbreviations see section 16.

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 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.

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.

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 materials 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.

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : detergents for dishwashers

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

DNEL

Silicic acid, sodium salt 1344-09-8:	:	End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 1,59 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 5,61 mg/m3 End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 0,8 mg/kg End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 1,38 mg/m3 End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 0,8 mg/kg
Sodium metasilicate, pentahydrate 10213-79-3:	:	End Use: Consumers Exposure routes: Oral Potential health effects: Long-term systemic effects Value: 0,74 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 6,22 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 1,55 mg/m3 End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 1,49 mg/kg End Use: Consumers Exposure routes: Skin contact

Potential health effects: Long-term systemic effects
Value: 0,74 mg/kg

PNEC

Silicic acid, sodium salt 1344-09-8:	:	Fresh water Value: 7,5 mg/l Marine water Value: 1 mg/l intermittent release Value: 7,5 mg/l STP Value: 348 mg/l
Sodium metasilicate, pentahydrate 10213-79-3:	:	Fresh water Value: 7,5 mg/l Marine water Value: 1 mg/l intermittent release Value: 7,5 mg/l STP Value: 1000 mg/l

8.2 Exposure controls

Personal protective equipment

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

Environmental exposure controls

General advice	:	Do not flush into surface water or sanitary sewer system.

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 at20 °C
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
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. 1,2169 g/cm3 at 20 °C
Water solubility	:	soluble
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

Hazardous decomposition products	:	No hazardous decomposition products are known.
Other information	:	No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product

Skin corrosion/irritation	:	Extremely corrosive and destructive to tissue.
Serious eye damage/eye irritation	:	May cause irreversible eye damage.
Respiratory or skin sensitisation	:	No data available
Germ cell mutagenicity	:	Not Rated
Carcinogenicity	:	Not Rated
Reproductive toxicity	:	Not Rated
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
Further information	:	No data available

Components:
Silicic acid, sodium salt
1344-09-8:

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
Skin corrosion/irritation	:	Result: Skin irritation
Serious eye damage/eye irritation	:	Result: Causes serious eye damage. Method: OECD Test Guideline 405

Sodium metasilicate, pentahydrate
10213-79-3:

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

SECTION 12: Ecological information

12.1 Toxicity

Product:

Components:

Silicic acid, sodium salt
1344-09-8:

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 bacteria	:	EC0 (Pseudomonas putida): > 1.000 mg/l Exposure time: 48 h

Sodium metasilicate, pentahydrate
10213-79-3:

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.

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 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. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

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. Not permitted for transport

14.3 Transport hazard class

ADR	:	8
IMDG	:	8
IATA	:	8

14.4 Packing group

ADR		
Classification Code	:	C7
Packaging group	:	III
Hazard Identification Number	:	80
Labels	:	8
Tunnel restriction code	:	(E)
IMDG		
Packaging group	:	III
Labels	:	8
EmS Number	:	F-A, S-B
IATA		
(Cargo)	:	Corrosive liquid, basic, organic, n.o.s. Not permitted for transport
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	:	Not applicable

and articles (Annex XVII)

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: 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.

Further information

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Classification procedure:	H290	On basis of test data.
	H314	On basis of test data.

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; AICS - Australian Inventory of Chemical Substances; 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

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.