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

1.1 Product identifier

Acrylglas 400

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

1.2.1 Relevant uses

Silicon

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Ramsauer GmbH & Co KG
Sarstein 17
4822 Bad Goisern / H. / AUSTRIA
Phone +43(0)6135 8205-0
Fax +43(0)6135 8323
Homepage www.ramsauer.at
E-mail office@ramsauer.at

Address enquiries to

Technical information office@ramsauer.at

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +43 (0) 1 406 43 43 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Eye Irrit. 2: H319 Causes serious eye irritation.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

Signal word WARNING

Hazard statements H319 Causes serious eye irritation.

Precautionary statements P280 Wear eye protection / face protection.

Special labelling Contains: 3-Aminopropyltriethoxysilane. EUH208 May produce an allergic reaction.

2.3 Other hazards

Human health dangers Contact with moisture liberates Methanol and Ethanol.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

3.2 The product is a mixture.

Range [%]	Substance
1 - <3	N-[3-(Trimethoxysilyl)propylcyclohexylamine]
	CAS: 3068-78-8, EINECS/ELINCS: 221-329-8
	GHS/CLP: Skin Irrit. 2: H315 - Eye Dam. 1: H318
1 - <5	Tetraethyl silicate
	CAS: 78-10-4, EINECS/ELINCS: 201-083-8, EU-INDEX: 014-005-00-0, Reg-No.: 01-2119496195-28-XXXX
	GHS/CLP: Flam. Liq. 3: H226 - Acute Tox. 4: H332 - Eye Irrit. 2: H319 - STOT SE 3: H335
0,1 - <1	3-Aminopropyltriethoxysilane
	CAS: 919-30-2, EINECS/ELINCS: 213-048-4, EU-INDEX: 612-108-00-0, Reg-No.: 01-2119480479-24-XXXX
	GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1B: H314 - Skin Sens. 1: H317 - Eye Dam. 1: H318
0,1 - <0,25	1,2-Bis(triethoxysilyl)ethylene
	CAS: 87061-56-1, EINECS/ELINCS: 689-758-7
	GHS/CLP: Aquatic Chronic 3: H412 - Acute Tox. 3: H301 - Acute Tox. 4: H312
0,1 - <0,25	Dibutyltin bis(2-ethylhexanoate)
	CAS: 2781-10-4, EINECS/ELINCS: 220-481-2
	GHS/CLP: Acute Tox. 3: H301 - Skin Irrit. 2: H315 - Eye Irrit. 2: H319 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects
Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Carbon dioxide.
Water spray jet.
Dry powder.
Foam.

Extinguishing media that must not be used Full water jet.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx).

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. sand, sawdust, general purpose binder, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.

Wash hands before breaks and after work.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.

Do not store together with food and animal food/diet.

Keep container tightly closed.
Protect from heat/overheating.
Keep in a cool place. Store in a dry place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Tetraethyl silicate
CAS: 78-10-4, EINECS/ELINCS: 201-083-8, EU-INDEX: 014-005-00-0, Reg-No.: 01-2119496195-28-XXXX
Long-term exposure: 10 ppm, 85 mg/m³, ACGIH
Methanol
CAS: 67-56-1, EINECS/ELINCS: 200-659-6, EU-INDEX: 603-001-00-X, Reg-No.: 01-2119433307-44-XXXX
Long-term exposure: 200 ppm, 266 mg/m³, Sk
Short-term exposure (15-minute): 250 ppm, 333 mg/m³
Ethanol
CAS: 64-17-5, EINECS/ELINCS: 200-578-6, EU-INDEX: 603-002-00-5, Reg-No.: 01-2119457610-43-XXXX
Long-term exposure: 1000 ppm, 1920 mg/m³
Amorphus Silica
CAS: 112945-52-5, EINECS/ELINCS: 231-545-4, Reg-No.: 01-2119379499-16-XXXX
Long-term exposure: 6 mg/m³, total inhalable dust

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Tetraethyl silicate
CAS: 78-10-4, EINECS/ELINCS: 201-083-8, EU-INDEX: 014-005-00-0, Reg-No.: 01-2119496195-28-XXXX
Eight hours: 5 ppm, 44 mg/m³
Methanol
CAS: 67-56-1, EINECS/ELINCS: 200-659-6, EU-INDEX: 603-001-00-X, Reg-No.: 01-2119433307-44-XXXX
Eight hours: 200 ppm, 260 mg/m³, H

DNEL

Substance
Tetraethyl silicate, CAS: 78-10-4
Industrial, inhalative, Long-term - systemic effects: 85 mg/m³.
Industrial, inhalative, Long-term - local effects: 85 mg/m³.
Industrial, dermal, Long-term - systemic effects: 12,1 mg/kg bw/d.
Industrial, inhalative, Acute - local effects: 85 mg/m³.
Industrial, inhalative, Acute - systemic effects: 85 mg/m³.
Industrial, dermal, Acute - systemic effects: 12,1 mg/kg bw/d.
general population, dermal, Long-term - systemic effects: 8,4 mg/kg bw/d.
general population, inhalative, Long-term - systemic effects: 25 mg/m³.
general population, inhalative, Long-term - local effects: 25 mg/m³.
general population, inhalative, Acute - systemic effects: 25 mg/m³.
general population, inhalative, Acute - local effects: 25 mg/m³.
general population, dermal, Acute - systemic effects: 8,4 mg/kg bw/d.

PNEC

Substance
Tetraethyl silicate, CAS: 78-10-4
sewage treatment plants (STP), 4000 mg/l.
soil, 0,05 mg/kg dw.
sediment (freshwater), 0,83 mg/kg dw.

sediment (seawater), 0,083 mg/kg dw.
sediment (seawater), 0,018 mg/kg.
sediment (freshwater), 0,18 mg/kg.
sediment, 0,18 mg/kg dw.
seawater, 0,0192 mg/l.
freshwater, 0,192 mg/l.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,4 mm Butyl rubber, >480 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Not required under normal conditions.
Other	Avoid contact with eyes and skin. Do not inhale vapours.
Respiratory protection	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	pasty
Color	white
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not determined
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not determined
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/ml]	ca. 1,026 (DIN 52451)
Bulk density [kg/m³]	not applicable
Solubility in water	virtually insoluble
Partition coefficient [n-octanol/water]	not determined
Viscosity	not applicable
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	not applicable
Decomposition temperature [°C]	not determined

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with strong oxidizing agents.

10.4 Conditions to avoid

See SECTION 7.2.
Contact with moisture.

10.5 Incompatible materials

Strong oxidizing agent.

10.6 Hazardous decomposition products

Contact with moisture liberates Methanol and Ethanol.
In the case of heating (150-180°C) following modest (decomposition) products may occure:
Formaldehyde.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
ATE-mix, inhalation (vapour), > 20 mg/l (4 h).
ATE-mix, dermal, > 2000 mg/kg.
ATE-mix, oral, > 2000 mg/kg.

Substance
N-[3-(Trimethoxysilyl)propylcyclohexylamine], CAS: 3068-78-8
LD50, oral, Rat: > 2000 mg/kg.
Tetraethyl silicate, CAS: 78-10-4
LD50, oral, Rat: > 2500 mg/kg (OECD TG 423).
LC50, inhalative, Rat: 10 - 16 mg/l (OECD TG 403).
NOAEL, oral, Rat: 10 mg/kg (28 d) (OECD TG 422).

Serious eye damage/irritation	Irritant
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met. May cause an allergic skin reaction.
Specific target organ toxicity — single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity — repeated exposure	Based on available data, the classification criteria are not met.
Mutagenicity	Does not contain a relevant substance that meets the classification criteria.
Reproduction toxicity	Does not contain a relevant substance that meets the classification criteria.
Carcinogenicity	Does not contain a relevant substance that meets the classification criteria.
Aspiration hazard	Based on available data, the classification criteria are not met.
General remarks	
	Toxicological data of complete product are not available. The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Substance
N-[3-(Trimethoxysilyl)propylcyclohexylamine], CAS: 3068-78-8
LC50, (96h), Danio rerio: > 100 mg/l.
Tetraethyl silicate, CAS: 78-10-4
LC50, (96h), Brachidanio rerio: > 245 mg/l (OECD TG 203).
EC50, (72h), Pseudokirchneriella subcapitata: > 100 mg/l (OECD TG 201).
EC50, (48h), Daphnia magna: > 75 mg/l (OECD TG 202).
NOEC, (96h), Brachidanio rerio: > 245 mg/l (OECD TG 203).
NOEC, (48h), Daphnia magna: > 75 mg/l (OECD TG 202).
NOEC, (72h), Pseudokirchneriella subcapitata: > 100 mg/l (OECD TG 201).

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

not determined

12.4 Mobility in soil

not determined

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Ecological data of complete product are not available.
Do not discharge product unmonitored into the environment.
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

For recycling, consult manufacturer.
Disposal in an incineration plant in accordance with the regulations of the local authorities.

Waste no. (recommended) 070216*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110*

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID	NO DANGEROUS GOODS
Inland navigation (ADN)	NO DANGEROUS GOODS
Marine transport in accordance with IMDG	NOT CLASSIFIED AS "DANGEROUS GOODS"
Air transport in accordance with IATA	NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2016/2037/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2020)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for young people.
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 03)

H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H312 Harmful in contact with skin.
H301 Toxic if swallowed.
H412 Harmful to aquatic life with long lasting effects.
H317 May cause an allergic skin reaction.
H314 Causes severe skin burns and eye damage.
H302 Harmful if swallowed.
H335 May cause respiratory irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H226 Flammable liquid and vapour.
H318 Causes serious eye damage.
H315 Causes skin irritation.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)

Modified position

SECTION 3 been added: 1,2-Bis(triethoxysilyl)ethylene

SECTION 3 deleted: Zubereitung

SECTION 8 been added: In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.