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

1.1 Product identifier

Aquarium 410

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 8205-250
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 Call NHS 111 or a doctor

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

No classification.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms none

Signal word none

Hazard statements none

Precautionary statements none

Special labelling EUH210 Safety data sheet available on request.

2.3 Other hazards

Human health dangers Frequent persistent contact with the skin can cause skin irritation.
Contact with moisture liberates acetic acid.

Environmental hazards Does not contain any PBT or vPvB substances.
Contains no ingredients with endocrine-disrupting properties.

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

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
1 - <5	Triacetoxyethylsilane
	CAS: 17689-77-9, EINECS/ELINCS: 241-677-4, Reg-No.: 01-2119881778-15-XXXX
	GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1B: H314 - Eye Dam. 1: H318 - EUH014
1 - <2.5	Oligomeric ethyl and Methylacetoxysilane
	GHS/CLP: Skin Corr. 1B: H314 - Eye Dam. 1: H318
1 - <2.5	Triacetoxy(methyl)silane
	CAS: 4253-34-3, EINECS/ELINCS: 224-221-9, Reg-No.: 01-2119962266-32-XXXX
	GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1C: H314 - EUH014

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

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 Foam.
Dry powder.
Water spray jet.
Carbon dioxide.

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)

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.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).

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.

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

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

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
Acetic acid
CAS: 64-19-7, EINECS/ELINCS: 200-580-7, EU-INDEX: 607-002-00-6, Reg-No.: 01-2119475328-30-XXXX
Long-term exposure: 10 ppm, 25 mg/m³
Short-term exposure (15-minute): 15 ppm, 37 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
Acetic acid
CAS: 64-19-7, EINECS/ELINCS: 200-580-7, EU-INDEX: 607-002-00-6, Reg-No.: 01-2119475328-30-XXXX
Eight hours: 10 ppm, 25 mg/m³
Short-term (15-minute): 20 ppm, 50 mg/m³

DNEL

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
Industrial, dermal, Long-term - systemic effects, 11.39 mg/kg bw/da
Industrial, inhalative, Acute - local effects, 32.5 mg/m³
Industrial, inhalative, Long-term - local effects, 32.5 mg/m³
Industrial, inhalative, Long-term - systemic effects, 80.33 mg/m³
general population, oral, Long-term - systemic effects, 5.7 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 5.7 mg/kg bw/day
general population, inhalative, Long-term - local effects, 6.5 mg/m³
general population, inhalative, Long-term - systemic effects, 119.81 mg/m³
Triacetoxy(methyl)silane, CAS: 4253-34-3
Industrial, inhalative, Acute - local effects, 61 mg/m³
Industrial, inhalative, Long-term - local effects, 31 mg/m³
general population, inhalative, Long-term - local effects, 31 mg/m³
general population, inhalative, Acute - local effects, 61 mg/m³

PNEC

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
soil, 6.402 - 31 µg/kg soil dw
sediment (seawater), 2.303 - 74 µg/kg sediment dw
sediment (freshwater), 23.03 - 740 µg/kg sediment dw
sewage treatment plants (STP), 1 - 10.637 mg/L
seawater, 2.303 - 20 µg/L
freshwater, 23.03 - 200 µg/L
Triacetoxy(methyl)silane, CAS: 4253-34-3
soil, 190 µg/kg soil dw

sediment (seawater), 480 µg/kg sediment dw
sediment (freshwater), 4.8 mg/kg sediment dw
sewage treatment plants (STP), 6.9 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. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter E (DIN EN 14387).
Thermal hazards	no
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

Physical state	pasty
Color	various
Odor	acetic
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 applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not determined
Density [g/cm³]	1.012 (ISO 1183 B)
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	virtually insoluble
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not determined
Kinematic viscosity	not applicable
Relative vapour density	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Auto-ignition temperature	not applicable
Decomposition temperature [°C]	not determined
Particle characteristics	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Contact with moisture liberates acetic acid.
Reactions with strong oxidizing agents.

10.4 Conditions to avoid

See SECTION 7

10.5 Incompatible materials

Strong oxidizing agent.

10.6 Hazardous decomposition products

In the case of heating (150-180°C) following modest (decomposition) products may occure:
Formaldehyde.

SECTION 11: Toxicological information

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

Acute oral toxicity Based on available data, the classification criteria are not met.

Product
ATE-mix, oral, > 2000 mg/kg

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
LD50, oral, Rat, 1460 mg/kg bw, OECD 401
Triacetoxy(methyl)silane, CAS: 4253-34-3
LD50, oral, Rat, 1600 mg/kg, OECD 401

Acute dermal toxicity Based on available data, the classification criteria are not met.

Product
dermal, Based on the available information, the classification criteria are not fulfilled.

Acute inhalational toxicity Based on available data, the classification criteria are not met.

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.
Non-irritant.
No classification due to toxicological investigations.

Substance
Triacetoxy(methyl)silane, CAS: 4253-34-3
Rabbit, OECD 404, corrosive

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.
Non-irritant.
No classification due to toxicological investigations.

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
Rabbit, OECD 405, corrosive

Respiratory or skin sensitisation Does not contain a relevant substance that meets the classification criteria.

Specific target organ toxicity — single exposure Does not contain a relevant substance that meets the classification criteria.

Specific target organ toxicity — repeated exposure Does not contain a relevant substance that meets the classification criteria.

Mutagenicity Does not contain a relevant substance that meets the classification criteria.

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
Ames-test, negativ
Triacetoxy(methyl)silane, CAS: 4253-34-3
Ames-test, negativ

Reproduction toxicity Does not contain a relevant substance that meets the classification criteria.

Substance
Triacetoxyethylsilane, CAS: 17689-77-9

NOAEL, oral, Rat, 3048.62 mg/kg bw/day, OECD 422

Carcinogenicity Does not contain a relevant substance that meets the classification criteria.

Aspiration hazard Does not contain a relevant substance that meets the classification criteria.

General remarks

none

11.2 Information on other hazards

Endocrine disrupting properties Contains no ingredients with endocrine-disrupting properties.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Triacetoxyethylsilane, CAS: 17689-77-9
LC50, (96h), Danio rerio, 251 mg/l
EC50, (48h), Daphnia magna, 62 mg/l
IC50, (72h), Pseudokirchneriella subcapitata, 73 mg/l
Triacetoxy(methyl)silane, CAS: 4253-34-3
LC50, (96h), fish, 79 - 500 mg/L
EC50, (72h), Algae, 24.41 - 1562.5 mg/L
EC50, (48h), Invertebrates, 65 - 500 mg/L

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 applicable

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

Ecological data of complete product are not available.

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) 070217

Contaminated packaging

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

Waste no. (recommended) 150102

SECTION 14: Transport information

14.1 UN number or ID 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 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	no
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

EUH014 Reacts violently with water.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H302 Harmful if swallowed.

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
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
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
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
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

Modified position

SECTION 2 been added: Contains no ingredients with endocrine-disrupting properties.

SECTION 6 been added: Use personal protective equipment (protective gloves, safety glasses, protective clothing).

SECTION 8 been added: Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

SECTION 11 been added: Based on available data, the classification criteria are not met.

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SECTION 11 been added: Contains no ingredients with endocrine-disrupting properties.

SECTION 12 been added: Contains no ingredients with endocrine-disrupting properties.