Safety Data Sheet

according to Regulations 1907/2006/EC (REACh) and 2015/830/EU

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

1.1 Product identifier

REF 701490.1100
Product name Silyl-991, 1x100 mL

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

1 x 100 mL SILYL 991

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

Relevant identified uses
Product for analytical use.
Exposure Scenario Classification according REACh, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.
Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
MACHEREY-NAGEL GmbH & Co. KG
Valencienner Str. 11, 52355 Düren, GERMANY
Tel.: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.
DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

You find our current versions of SDS (22 languages) in Internet: **http://www.mn-net.com/SDS**

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

100 mL SILYL 991



GHS02 GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H315	Skin Irrit. 2
H319	Eye Irrit. 2

2.2 Label elements

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identificator(s) (EU 1272/2008 Annex I - 1.5.1.2). Inner packages up to 10 mL need max. 2 symbols (Annex I - 1.5.2.4.1 / 2).

Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2).

100 mL SILYL 991

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GHS02 GHS07

Signal word: WARNING

2.3 Other hazards

Possible hazards from physicochemical properties
In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties. ---

Information pertaining to particular risks to human and possible symptoms
---

Information pertaining to particular risks to the environment
---

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

100 mL SILYL 991

Chemical: *N,O-bis-trimethylsilyl-trifluoroacetamide (BSTFA)* CAS No.: 25561-30-2
Classification: H226, Flam. Liq. 3, H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: $C_8H_{18}F_3NOSi_2$
TSCA Inventory: not listed
EC No.: 247-103-9 MFCD: 00008269
Concentration: 95 - <100 %
acc. CLP (GHS): H226, Flam. Liq. 3, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Chemical: *trimethylchlorosilane (TMCS), chlorotrimethylsilane* CAS No.: 75-77-4
Classification: H225, Flam. Liq. 2, H301, Acute Tox. 3 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1B, H331, Acute Tox. 3 inh., H351, Carc. 2
Formula: C_3H_9ClSi
Pseudonym: chlorotrimethylsilane
TSCA Inventory: listed
REACH Reg. No.: 01-2119457596-25-xxxx
EC No.: 200-900-5
RTECS: VV2710000 MFCD: 00000502
KE No.: KE-05939
Concentration: 0.1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

3.3 Remarks

List of H and P phrases: see section 16.1

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

4.1.1 After SKIN Contact
Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 After EYE Contact
After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

4.1.3 After INHALATION of vapours
After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. ---

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4.1.4 **After ORAL Intake**
After oral intake lots of water should be drunk after it has been ingested. ---

4.2 Most important symptoms and effects, both acute and delayed
---

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture
WARNING: Flammable (GHS regulation). May form explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible. ---

5.3 Advice for firefighters
No, for listed product. Product package burns like paper or plastic.

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Regular staff training is necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Bind any escaping liquid with inert absorbent.
Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handling in accordance with the test instruction, that comes with the product.

7.2 Conditions for safe storage, including any incompatibilities
The original product package of MACHEREY-NAGEL allows a safe storage.
Storage class (VCI): 3
Water hazard class (DE): 2

7.2.1 **Requirements for stock rooms and containers**
Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

100 mL SILYL 991
Chemical: *N,O-bis-trimethylsilyl-trifluoroacetamide (BSTFA)* CAS No.: 25561-30-2

Chemical: *trimethylchlorosilane (TMCS), chlorotrimethylsilane* CAS No.: 75-77-4
DNEL: [inh] 89 mg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$: 250 µg/L
PNEC = Predicted No Effected Concentration

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8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory protection
No additional recommendations.

8.2.2 Hand protection
Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC (f.ex. from Ansell or KCL). Use for short times chemical resistant latex or nitril gloves with code EN 374-3 level 1.

8.2.3 Eye protection
Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

8.2.4 Skin protection
Not necessary.

8.2.5 Personal hygiene
Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

100 mL SILYL 991

Appearance: liquid	Colour: colourless	Odor: penetrative
Melting point:	-10 °C	
Boiling point:	40/12 mm Hg °C	
Flash point:	7 °C	
Specific gravity:	0,97 g/cm³	

9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.
Relevant Properties of Substance Group

SECTION 10: Stability and reactivity

10.1 Reactivity

. Reacts with water (sometimes violent) and diverse organic compounds. no further data available.

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

No further data available.

10.4 Conditions to avoid

10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

10.6 Hazardous decomposition products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

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100 mL SILYL 991

Chemical: *N,O-bis-trimethylsilyl-trifluoroacetamide (BSTFA)* CAS No.: 25561-30-2
TSCA Inventory: not listed

Chemical: *trimethylchlorosilane (TMCS), chlorotrimethylsilane* CAS No.: 75-77-4
TSCA Inventory: listed
Target Organs:
Korea Exist.Chem.Inventory: KE-05939
$LD50_{orl\ rat}$: 250-6630 mg/kg
$LC50_{ihl\ rat}$: [1h] 4257 ppm
$LD50_{drm\ rbt}$: 1780-2780 mg/kg

EU carcinogen: carc. 2

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

100 mL SILYL 991

Chemical: *N,O-bis-trimethylsilyl-trifluoroacetamide (BSTFA)* CAS No.: 25561-30-2
Water hazard class (DE): 2
Storage class (VCI): 3

Chemical: *trimethylchlorosilane (TMCS), chlorotrimethylsilane* CAS No.: 75-77-4
$PNEC_{(fresh\ water)}$: 250 µg/L
PNEC = Predicted No Effected Concentration
$LC50_{fish/96h}$: [LD50 24h] 949 mg/L
$EC50_{daphnia/48h}$: 124 mg/L
$EC10_{pseudomonas\ putita/16h}$: [72h] 555-1053 mg/L
Water hazard class (DE): 1 WGK No.: 0557
$Dispersion\ coefficient_{(octanol\text{-}water)}$: 1.19
Storage class (VCI): 3

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1. UN number: 3316 **14.2. UN proper shipping name: Chemical Kit**
14.3. Class: 9 **14.4. Packing group: II**
Road transport
Classification code: M11 Tunnel restriction code: E
Limited Quantity: acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation
Air transport
PAX: 960 max. weight PAX: 10 KG
CAO: 960 max. weight CAO: 10 KG

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Maritime transport
EmS: F-A, S-P Storage category: A

Or use **Alternative declaration for transportation:**

14.1 UN number: 2924
14.2 UN proper shipping name: Flammable liquid, corrosive, n.o.s. (N,O-bis-trimethylsilyl-trifluoroacetamide (BSTFA), trimethylchlorosila
14.3 Class: 3 Additionally class: **8 _14.4 Packing group: III**
Road transport
Classification code: FC
Limited Quantity: 5 L Tunnel restriction code: E
Excepted Quantity: E 1
Air transport
PAX: 354 max. weight PAX: 5 L
CAO: 365 max. weight CAO: 60 L
Maritime transport
EmS: F-E, S-C Storage category: A
Maritime pollutant (5.2.1.6): P* (Limited Quantity (LQ) until 5 L|kg per inner package)

14.5 Environmental hazards
none, contains only small quantities of hazardous substances

14.6 Special precautions for user
not necessary

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
German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011
MN Leaflet/User manual, also see www.mn-net.com
Look for your country-specific regulations.

15.2 Chemical safety assessment
not necessary for these small amounts ---

SECTION 16: Other information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

16.1.2 List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280sh	Wear protective gloves/eye protection.

16.2 Training advice
Regular safety training.

16.3 Recommended restriction on use
Only for professional user.
An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further information
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16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
Regulation 1480/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
Regulation 849/2021/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated 03/2019
SUVA .CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates
Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU

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