

SAFETY DATA SHEET

NEUSIL K682

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

1.1. Product identifier

Trade name

NEUSIL K682

Other names / Synonyms

elektrisch leitfähiger 1-k Kleber (Silikonbasis), Leitpartikel: versilbertes Kupfer (Ag/Cu)

Unique formula identifier (UFI)

K6JK-8UG7-325H-CCMK

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

Relevant identified uses of the substance or mixture

Industrial purposes

Restricted to professional users.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Neuhaus Elektronik GmbH

Drontheimerstraße 21

13359 Berlin

Deutschland

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<https://www.neuhaus-elektronik.de/>

Contact person

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E-mail

neuhaus-elektronik@t-online.de

Revision

26/03/2024

SDS Version

4.6

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. Classification of the substance or mixture

Flam. Liq. 2; H225, Highly flammable liquid and vapour.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Dam. 1; H318, Causes serious eye damage.

STOT SE 3; H336, May cause drowsiness or dizziness.

Repr. 2; H361d, Suspected of damaging the unborn child.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazard pictogram(s)

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577



Signal word

Danger

Hazard statement(s)

Highly flammable liquid and vapour. (H225)
Causes skin irritation. (H315)
Causes serious eye damage. (H318)
May cause drowsiness or dizziness. (H336)
Suspected of damaging the unborn child. (H361d)
May cause damage to organs through prolonged or repeated exposure. (H373)

Precautionary statement(s)

General

-

Prevention

Obtain special instructions before use. (P201)
Wear eye protection/protective gloves. (P280)

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing. (P305+P351+P338)
IF exposed or concerned: Get medical advice/attention. (P308+P313)

Storage

Store in a well-ventilated place. Keep cool. (P403+P235)

Disposal

Dispose of contents/container in accordance with local regulation
(P501)

Hazardous substances

Silver
toluene
N,N',N''-tributyl-1-methylsilanetriamine
Butan-2-one O,O',O''-(methylsilylidyne)trioxime
butanone oxime; ethyl methyl ketoxime; ethyl methyl ketone oxime
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime

Additional labelling

UFI: K6JK-8UG7-325H-CCMK

2.3. Other hazards

Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Copper	CAS No.: 7440-50-8 EC No.: 231-159-6 UK-REACH: Index No.:	40-60%		
Silver	CAS No.: 7440-22-4 EC No.: 231-131-3 UK-REACH: Index No.:	10-15%		[1]

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

toluene	CAS No.: 108-88-3 EC No.: 203-625-9 UK-REACH: Index No.: 601-021-00-3	3-5%	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361 STOT RE 2, H373	[1], [3]
N,N',N''-tributyl-1-methylsilanetriamine	CAS No.: 16411-33-9 EC No.: 240-462-2 UK-REACH: Index No.:	3-5%	Flam. Liq. 2, H225 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318	
Butan-2-one O,O',O''-(methylsilylidyne)trioxime	CAS No.: 22984-54-9 EC No.: 245-366-4 UK-REACH: Index No.:	1-3%	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319	
butanone oxime; ethyl methyl ketoxime; ethyl methyl ketone oxime	CAS No.: 96-29-7 EC No.: 202-496-6 UK-REACH: Index No.: 616-014-00-0	1-3%	Acute Tox. 3, H301 Acute Tox. 4, H312 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Dam. 1, H318 STOT SE 3, H336 Carc. 1B, H350 STOT SE 1, H370 STOT RE 2, H373	
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime	CAS No.: 2224-33-1 EC No.: 218-747-8 UK-REACH: Index No.:	1-3%	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Dam. 1, H318	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners. If skin irritation occurs: Get medical advice/attention.

Eye contact

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

Ingestion

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Highly flammable liquid and vapour.

In use may form flammable/explosive vapour-air mixture.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: ●3YE

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

- Ground and bond container and receiving equipment.
- Use explosion-proof [electrical/lighting/ventilating] equipment.
- Use non-sparking tools.
- Take action to prevent static discharges.
- Avoid direct contact with the product.
- Avoid contact during pregnancy and while nursing.
- Smoking, drinking and consumption of food is not allowed in the work area.
- See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

- Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
- Take action to prevent static discharges.
- Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material

Keep only in original packaging.

Storage temperature

Für gute Raum- und Arbeitsplatzbe- und -entlüftung sorgen. Verschüttete Substanz bewirkt erhöhte Rutschgefahr. Trocken und kühl lagern. Behälter dicht geschlossen halten. Vor Feuchtigkeit schützen. Vor direkter Sonneneinstrahlung schützen. Lagerklasse (TRGS 510): 3
Gefährdete Behälter mit Wasser kühlen. Dämpfe können in geschlossenen Räumen mit Luft Gemische bilden, die in Gegenwart von Zündquellen zur Explosion führen, auch in leeren, ungereinigten Behältern.

Incompatible materials

Water

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper

Long term exposure limit (8 hours) (mg/m³): 0,2(fume)/1(dust)
Short term exposure limit (15 minutes) (mg/m³): 2 (dusts, mists)

Silver

Long term exposure limit (8 hours) (mg/m³): 0.1

toluene

Long term exposure limit (8 hours) (ppm): 50
Long term exposure limit (8 hours) (mg/m³): 191
Short term exposure limit (15 minutes) (ppm): 100
Short term exposure limit (15 minutes) (mg/m³): 384

Annotations:

Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.
EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

Butan-2-one O,O',O''-(methylsilylidyne)trioxime

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	72.5 µg/kgbw/day
Long term – Systemic effects - Workers	Dermal	145 µg/kgbw/day
Long term – Systemic effects - General population	Inhalation	130 µg/m ³
Long term – Systemic effects - Workers	Inhalation	510 µg/m ³
Long term – Systemic effects - General population	Oral	72.5 µg/kgbw/day

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime

Duration:	Route of exposure:	DNEL:
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According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Long term – Systemic effects - General population	Dermal	75 µg/kgbw/day
Long term – Systemic effects - Workers	Dermal	150 µg/kgbw/day
Long term – Systemic effects - General population	Inhalation	130 µg/m ³
Long term – Systemic effects - Workers	Inhalation	530 µg/m ³
Long term – Systemic effects - General population	Oral	75 µg/kgbw/day

butanone oxime; ethyl methyl ketoxime; ethyl methyl ketone oxime

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - Workers	Dermal	4 µg/kgbw/day
Long term – Local effects - General population	Inhalation	430 µg/m ³
Long term – Local effects - Workers	Inhalation	900 µg/m ³
Long term – Systemic effects - General population	Inhalation	4.82 µg/m ³
Long term – Systemic effects - Workers	Inhalation	28 µg/m ³
Long term – Systemic effects - General population	Oral	1.6 µg/kgbw/day

Copper

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	137 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	137 mg/kg bw/day
Short term – Systemic effects - General population	Dermal	273 mg/kg bw/day
Short term – Systemic effects - Workers	Dermal	273 mg/kg bw/day
Long term – Local effects - General population	Inhalation	1 mg/m ³
Long term – Local effects - Workers	Inhalation	1 mg/m ³
Short term – Local effects - General population	Inhalation	1 mg/m ³
Short term – Local effects - Workers	Inhalation	1 mg/m ³
Long term – Systemic effects - General population	Oral	41 µg/kgbw/day

Silver

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Inhalation	2.3 µg/m ³
Long term – Local effects - Workers	Inhalation	7.6 µg/m ³
Long term – Systemic effects - General population	Inhalation	2.3 µg/m ³
Long term – Systemic effects - Workers	Inhalation	7.6 µg/m ³
Long term – Systemic effects - General population	Oral	110 µg/kgbw/day

toluene

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	226 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	384 mg/kg bw/day
Long term – Local effects - General population	Inhalation	56.5 mg/m ³
Long term – Local effects - Workers	Inhalation	192 mg/m ³
Long term – Systemic effects - General population	Inhalation	56.5 mg/m ³
Long term – Systemic effects - Workers	Inhalation	192 mg/m ³
Short term – Local effects - General population	Inhalation	226 mg/m ³
Short term – Local effects - Workers	Inhalation	384 mg/m ³
Short term – Systemic effects - General population	Inhalation	226 mg/m ³
Short term – Systemic effects - Workers	Inhalation	384 mg/m ³

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Long term – Systemic effects - General population	Oral	8.13 mg/kg bw/day
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PNEC

Butan-2-one O,O',O''-(methylsilyldiylidene)trioxime

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		18.45 µg/L
Freshwater sediment		557.543 mg/kg
Marine water		1.845 µg/L
Marine water sediment		55.754 mg/kg
Predators		3.22 mg/kg
Sewage treatment plant		3.9 mg/L
Soil		65.63 mg/kg

Butan-2-one O,O',O''-(vinylsilyldiylidene)trioxime

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		19.19 µg/L
Freshwater sediment		1136.562 mg/kg
Marine water		1.919 µg/L
Marine water sediment		113.656 mg/kg
Predators		3.333 mg/kg
Sewage treatment plant		4.06 mg/L
Soil		133.8 mg/kg

butanone oxime; ethyl methyl ketoxime; ethyl methyl ketone oxime

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		256 µg/L
Freshwater sediment		1.012 mg/kg
Intermittent release (freshwater)		118 µg/L
Intermittent release (marine water)		11.8 µg/L
Marine water		25.6 µg/L
Marine water sediment		101.17 µg/kg
Sewage treatment plant		177 mg/L
Soil		52.2 µg/kg

Copper

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		6.3 µg/L
Freshwater sediment		87 mg/kg
Marine water		5.2 µg/L
Marine water sediment		676 mg/kg
Sewage treatment plant		230 µg/L
Soil		65 mg/kg

Silver

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		40 ng/L
Freshwater sediment		438.13 mg/kg
Marine water		860 ng/L

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Marine water sediment	438.13 mg/kg
Sewage treatment plant	25 µg/L
Soil	1.41 mg/kg
toluene	
Route of exposure:	Duration of Exposure:
Freshwater	PNEC:
Freshwater sediment	74-680 µg/L
Intermittent release (freshwater)	1.78-16.39 mg/kg
Intermittent release (marine water)	37.8-680 µg/L
Marine water	3.78 µg/L
Marine water sediment	7.4-680 µg/L
Sewage treatment plant	178-16390 µg/kg
Soil	840-13610 µg/L
	313-2890 µg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Do not recirculate outlet air that contain the substances.

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures

Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally

Use only UKCA marked protective equipment.

Respiratory Equipment

Work situation	Type	Class	Colour	Standards
Wenn eine inhalative Exposition oberhalb des Arbeitsplatz-Grenzwerts nicht ausgeschlossen werden kann, ist eine geeignete Atemschutzausrüstung zu verwenden. Geeignetes Atemschutzgerät: Atemschutzgerät mit Vollmaske, entsprechend anerkannten Normen wie EN 136. Empfohlener Filtertyp:	Full mask			EN136




According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Work situation	Type	Class	Colour	Standards	
Gasfilter ABEK (bestimmte anorganische, organische und saure Gase und Dämpfe; Ammoniak/Amine), entsprechend anerkannten Normen wie EN 14387 Bei Exposition durch Sprühnebel oder Aerosol geeignetes Atemschutzgerät und Schutzkleidung tragen. Geeignetes Atemschutzgerät: Atemschutzgerät mit Vollmaske, entsprechend anerkannten Normen wie EN 136. Empfohlener Filtertyp: Kombinationsfilter ABEK-P2 (bestimmte anorganische, organische und saure Gase und Dämpfe; Ammoniak/Amine; Partikel), entsprechend anerkannten Normen wie EN 14387 Bei langer oder starker Einwirkung sind Atemschutzgeräte zu verwenden. Geeignetes Atemschutzgerät: Umgebungsluftunabhängiges Atemschutzgerät, entsprechend anerkannten Normen wie EN 137. Die Tragezeitbegrenzung für Atemschutz sowie Hinweise des Geräteherstellers sind zu beachten.	Combination filter AXP1		Brown/White	EN14387, EN143	
	Self contained breathing apparatus			EN137, EN139	

Skin protection

No specific requirements.

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Fluoropolymer elastomer (e.g. Viton®)	0,7	> 480	EN374-2, EN374-3, EN388	

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Eye protection

Type	Standards
Safety glasses	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Paste

Colour

Beige, sand

Odour / Odour threshold

Disagreeable

pH

Not applicable

Density (g/cm³)

2.4

Kinematic viscosity

Not applicable

Dynamic viscosity

Keine Angabe (pastös)

Particle characteristics

Testing not relevant or not possible due to the nature of the product.

Phase changes

Melting point/Freezing point (°C)

No data available

Boiling point (°C)

111

Vapour pressure

29 hPa (20 °C)

Relative vapour density

Testing not relevant or not possible due to the nature of the product.

Decomposition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

8

Flammability (°C)

The material is ignitable.

Auto-ignition temperature (°C)

420

Lower and upper explosion limit (% v/v)

1.2 - 7

Solubility

Solubility in water

Practically insoluble

n-octanol/water coefficient (LogKow)

Testing not relevant or not possible due to the nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Oxidizing properties

Testing not relevant or not possible due to the nature of the product.

Other physical and chemical parameters

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Moisture

10.5. Incompatible materials

Water

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

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

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

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

Skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

Suspected of damaging the unborn child.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

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

11.2. Information on other hazards

Long term effects

Reproductive toxicity: This product contains teratogenic substances, which may produce anomalies and/or developmental defects to the human offspring. Adverse effects include: death, growth retardation, congenital disorders, delayed mental development, and functional disorders.

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

toluene has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

12.1. Toxicity

No data available.

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

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

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 3 - Flammable

HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 7 - Carcinogenic

HP 10 - Toxic for reproduction

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code



Not applicable.

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1	14.2	14.3	14.4	14.5	Other
	UN / ID	UN proper shipping name	Hazard class(es)	PG*	Env**	information:
ADR	UN1993	FLAMMABLE LIQUID, N.O.S.	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 1 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1993	FLAMMABLE LIQUID, N.O.S.	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 1 L EmS: F-E S-E See below for additional information.
IATA	UN1993	FLAMMABLE LIQUID, N.O.S.	Transport hazard class: 3 Label: 3 Classification code: F1	II	No	See below for additional information.

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
					

* Packing group

** Environmental hazards

Additional information

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: ●3YE

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

P5c - FLAMMABLE LIQUIDS, Qualifying quantity (lower-tier): 5.000 tonnes / (upper-tier): 50.000 tonnes

Regulation on drug precursors

toluene is included (Category 3)

UK-REACH, Annex XVII

toluene is subject to restrictions, UK-REACH annex XVII (entry 48).

toluene is subject to UK-REACH restrictions, UK-REACH annex XVII (entry 40).

N,N',N''-tributyl-1-methylsilanetriamine is subject to UK-REACH restrictions, UK-REACH annex XVII (entry 40).

Additional information

Not applicable.

Sources

The Management of Health and Safety at Work Regulations 1999.

The Health and Safety at Work etc. Act 1974 Regulations 2013.

Control of Major Accident Hazards (COMAH) Regulations 2015.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

The Controlled Drugs (Drug Precursors) Regulations 2008.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Full text of H-phrases as mentioned in section 3

- H225, Highly flammable liquid and vapour.
- H301, Toxic if swallowed.
- H302, Harmful if swallowed.
- H304, May be fatal if swallowed and enters airways.
- H312, Harmful in contact with skin.
- H314, Causes severe skin burns and eye damage.
- H315, Causes skin irritation.
- H317, May cause an allergic skin reaction.
- H318, Causes serious eye damage.
- H319, Causes serious eye irritation.
- H336, May cause drowsiness or dizziness.
- H350, May cause cancer.
- H361, Suspected of damaging fertility or the unborn child.
- H370, Causes damage to organs.
- H373, May cause damage to organs through prolonged or repeated exposure.

Abbreviations and acronyms

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- CAS = Chemical Abstracts Service
- CE = Conformité Européenne (European conformity)
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- CSA = Chemical Safety Assessment
- CSR = Chemical Safety Report
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EINECS = European Inventory of Existing Commercial chemical Substances
- ES = Exposure Scenario
- EUH statement = CLP-specific Hazard statement
- EuPCS = European Product Categorisation System
- EWC = European Waste Catalogue
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IARC = International Agency for Research on Cancer (IARC)
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- OECD = Organisation for Economic Co-operation and Development
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- RRN = REACH Registration Number
- SCL = A specific concentration limit
- SVHC = Substances of Very High Concern
- STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
- STOT-SE = Specific Target Organ Toxicity - Single Exposure
- TWA = Time weighted average
- UN = United Nations
- UVBC = Unknown or variable composition, complex reaction products or of biological materials
- VOC = Volatile Organic Compound
- vPvB = Very Persistent and Very Bioaccumulative

Additional information

- The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.
- The classification of the mixture in regard to physical hazards has been based on experimental data.

The safety data sheet is validated by

A. Neuhaus

According to REACH Regulation (EC) No 1907/2006, as retained and amended SI 2019/758 and SI 2020/1577

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

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