

Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

TETRA TACK

Date of first edition: 4/17/2023

Safety Data Sheet dated 17/04/2023

version 1

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

1.1. Product identifier

Mixture identification:

Trade name: TETRA TACK

Trade code: K50459

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

Recommended use: Adhesives, sealants

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL France

25, avenue de l'Industrie - 69960 Corbas - France

Tel. +33 472 890 684

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Ireland Poison information centre: 01 809 2166 (Daily 8am-10pm) In case of emergency call 999 or 112

Malta In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

0 The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Special Provisions:

EUH208 Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.

EUH210 Safety data sheet available on request.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: TETRA TACK

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
5-9,9 %	Trimethoxyphenylsilane	CAS:2996-92-1 EC:221-066-9	Acute Tox. 4, H302; STOT RE 2, H373	01-2119964479-19

1-2,4 %	Fatty acids, C16-18	CAS:67701-03-5 EC:266-928-5	Skin Irrit. 2, H315; Eye Irrit. 2, H319
< 1 %	N-(3-(trimethoxysilyl)propyl)ethylenediamine	CAS:1760-24-3 EC:217-164-6	Eye Dam. 1, H318; Skin Sens. 1, H317; Acute Tox. 4, H332

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

N.A.

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

N.A.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials:

None in particular.

Instructions as regards storage premises:
Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)
None in particular

Industrial sector specific solutions:
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behavi our	Notes
Calcium carbonate	NATIONAL	AUSTRALIA		10.000					This value is for inhalable dust containing no asbestos and <1 % crystalline silica.
	NATIONAL	FRANCE		10.000					inhalable aerosol
	NATIONAL	HUNGARY		10.000					inhalable aerosol
	NATIONAL	IRELAND		10.000					Inhalable fraction
	NATIONAL	IRELAND		4.000					Respirable fraction
	NATIONAL	LATVIA		6.000					
	NATIONAL	POLAND		10.000					
	NATIONAL	SWITZERLAND		3.000					respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		10.000					inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		4.000					respirable aerosol
	NATIONAL	BELGIUM		10.000					
	NATIONAL	CROATIA		10.000					
	NATIONAL	NETHERLANDS		10.000					
	NATIONAL	PORTUGAL		10.000					
	NATIONAL	SPAIN		10.000					
di isononylphthalate	NATIONAL	DENMARK		3.000		6.000			
	NATIONAL	IRELAND		5.000					
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		5.000					
Aluminium oxide	NATIONAL	FRANCE		10.000					Respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		10.000					Inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		4.000					Respirable aerosol

methanol	NATIONAL	AUSTRALIA	10.000					Inhalable dust containing no asbestos and < 1% crystalline silica
	NATIONAL	AUSTRIA	10.000		20.000			Long term: inhalable fraction; Short term: inhalable fraction, 60 minutes average value
	NATIONAL	AUSTRIA	5.000		10.000			Long term: respirable fraction; Short term: respirable fraction, 60 minutes average value
	NATIONAL	DENMARK	5.000		10.000			Calculated as AI; Long term and Short term: inhalable aerosol
	NATIONAL	DENMARK	2.000		4.000			Calculated as AI; Long term and Short term: respirable aerosol
	NATIONAL	GERMANY	4.000					Inhalable aerosol
	NATIONAL	GERMANY	1.500					Respirable aerosol
	NATIONAL	HUNGARY	6.000					Respirable aerosol
	NATIONAL	IRELAND	10.000					Inhalable fraction
	NATIONAL	IRELAND	4.000					Respirable fraction
	NATIONAL	LATVIA	6.000					
	NATIONAL	POLAND	2.500		16.000			Dz. U. 2018 poz. 1286 wraz z późn. zm
	NATIONAL	POLAND	1.200					Aluminium trioxide as AI fume; Long term: respirable dust
	NATIONAL	ROMANIA	2.000	0.500	5.000	1.200		Long term and short term: aerosol
	NATIONAL	SPAIN	10.000					Inhalable aerosol
	NATIONAL	SPAIN	5.000					Respirable aerosol
	NATIONAL	SWEDEN	5.000					Inhalable aerosol
	NATIONAL	SWEDEN	2.000					Respirable aerosol
	NATIONAL	SWITZERLAND	3.000					Respirable aerosol
	EU	NNN	260	200				Skin
	NATIONAL	AUSTRIA	260.000	200.000	1040.000	800.000		
	NATIONAL	BELGIUM	266.000	200.000	333.000	250.000		Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air
	NATIONAL	DENMARK	260.000	200.000	328.000	250.000		
	NATIONAL	FINLAND	270.000	200.000	330.000	250.000		
	NATIONAL	FRANCE	260.000	200.000				Bold type: Restrictive statutory limit values Skin
	NATIONAL	GERMANY	270.000	200.000	1080.000	800.000		AGS
	NATIONAL	GERMANY	130.000	100.000	260.000	200.000		DFG
	NATIONAL	HUNGARY	260.000					
	NATIONAL	IRELAND	260.000	200.000				
	NATIONAL	ITALY	260.000	200.000				Cute
	NATIONAL	LATVIA	260.000	200.000				
	NATIONAL	POLAND	100.000		300.000			
	NATIONAL	ROMANIA	260.000	200.000				
	NATIONAL	SPAIN	266.000	200.000	333.000	250.000		
	NATIONAL	SWEDEN	250.000	200.000	350.000	250.000		
	NATIONAL	SWITZERLAND	260.000	200.000	1040.000	800.000		
	NATIONAL	NETHERLANDS	133.000					
	NATIONAL	UNITED KINGDOM OF	266.000	200.000	333.000	250.000		

GREAT
BRITAIN AND
NORTHERN
IRELAND

Diisooctyl 2,2'- [(dioctylstannylene) bis(thio)]diacetate	NATIONAL	ITALY	262.000	200.000	328.000	250.000	TWA
	NATIONAL	ITALY	260.000	200.000	1040.000	800.000	TLV
	NATIONAL	BULGARIA	260.000	200.000			
	NATIONAL	CZECHIA	250.000		1000.000		
	NATIONAL	CROATIA	260.000	200.000			
	NATIONAL	ESTONIA	250.000	200.000	350.000	250.000	
	NATIONAL	GREECE	260.000	200.000	325.000	250.000	
	NATIONAL	IRELAND	260.000	200.000			
	NATIONAL	LITHUANIA	260.000	200.000			
	NATIONAL	PORTUGAL		200.000		250.000	
	ACGIH	NNN		200.000		250.000	Skin, BEI - Headache, eye dam, dizziness, nausea
	EU	NNN	260.000	200.000			Skin
	NATIONAL	AUSTRIA	0.100		0.200		Long term and short term: inhalable fraction
	NATIONAL	GERMANY	0.010	0.002	0.020	0.004	Long term and short term: inhalable fraction and vapour
	NATIONAL	AUSTRALIA	0.100		0.200		
	NATIONAL	BELGIUM	0.100		0.200		
	NATIONAL	BULGARIA	0.100				
	NATIONAL	CZECHIA	0.100		0.200		
	NATIONAL	CROATIA	0.100		0.200		
	NATIONAL	DENMARK	0.100				
	NATIONAL	ESTONIA	0.100		0.200		
	NATIONAL	FINLAND	0.100		0.300		
	NATIONAL	GREECE	0.100		0.200		
	NATIONAL	IRELAND	0.100		0.200		
	NATIONAL	LITHUANIA	0.100		0.200		
	NATIONAL	PORTUGAL	0.100		0.200		
	NATIONAL	ROMANIA	0.050		0.150		
	NATIONAL	SLOVAKIA	0.100		0.200		
	NATIONAL	SLOVENIA	0.010	0.002	0.020	0.004	
	NATIONAL	SPAIN	0.100		0.200		
	NATIONAL	SWEDEN	0.100		0.200		
	NATIONAL	SWITZERLAND	0.020	0.004	0.020	0.004	
	NATIONAL	HUNGARY	0.100		0.400		

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency	Remark
Trimethoxyphenylsilane	2996-92-1	240.000 µg/l	Fresh Water		
		2.400 mg/l	Intermittent releases (fresh water)		
		24.000 µg/l	Marine water		
		2.400 mg/l	Intermittent releases (marine water)		
		74.000 mg/l	Microorganisms in sewage		

			treatments
		1.100 mg/kg	Freshwater sediments
		110.000 µg/kg	Marine water sediments
		80.000 µg/kg	Soil
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	62.000 µg/l	Fresh Water
		620.000 µg/l	Intermittent releases (fresh water)
		6.200 µg/l	Marine water
		25.000 mg/l	Microorganisms in sewage treatments
		220.000 µg/kg	Freshwater sediments
		22.000 µg/kg	Marine water sediments
		8.500 µg/kg	Soil

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
Trimethoxyphenylsilane	2996-92-1		40.200 mg/m ³	10.000 mg/m ³	Human Inhalation		Long Term, systemic effects
			260.000 mg/m ³	50.000 mg/m ³	Human Inhalation		Short Term, systemic effects
			260.000 mg/m ³	50.000 mg/m ³	Human Inhalation		Long Term, local effects
			260.000 mg/m ³	50.000 mg/m ³	Human Inhalation		Short Term, local effects
			2.500 mg/kg	1.730 mg/kg	Human Dermal		Long Term, systemic effects
				33.300 mg/kg	Human Dermal		Short Term, systemic effects
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3			700.000 µg/kg	Human Oral		Long Term, systemic effects
			260.000 mg/m ³	50.000 mg/m ³	Human Inhalation		Long Term, systemic effects
			260.000 mg/m ³	50.000 mg/m ³	Human Inhalation		Short Term, systemic effects
			600.000 µg/m ³	100.000 µg/m ³	Human Inhalation		Long Term, local effects
			5.360 mg/m ³	4.000 mg/m ³	Human Inhalation		Short Term, local effects
				8.000 mg/kg	Human Oral		Long Term, systemic effects

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

N.A.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Solid

Colour: White

Odour: Odourless

Odour threshold: N.A.

pH: N.A.

Kinematic viscosity: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: N.A.

Flash point: 85 °C (185 °F)

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.52 g/cm³

Solubility in water: N.A.

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): N.A.

Auto-ignition temperature: N.A.

Decomposition temperature: N.A.

Flammability: N.A.

Volatile Organic compounds - VOCs = 0.12 % ; 1.87 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

Miscibility: N.A.

Conductivity: N.A.

Evaporation rate: N.A. No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity

Not classified

	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified
	Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	Not classified
	Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

Trimethoxyphenylsilane	a) acute toxicity	LD50 Oral Rat = 1049.00 mg/kg LD50 Skin Rabbit = 3014.00 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Rat Negative	Inhalation route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 500.00 mg/kg	
N-(3-(trimethoxysilyl)propyl)ethylenediamine	a) acute toxicity	LD50 Oral Rat = 2295.00 mg/kg LC50 Inhalation of aerosol Rat > 1.49 mg/l 4h LD50 Skin Rabbit > 2000.00 mg/kg 24h	<2.44 mg/l
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Negative	Mouse intraperitoneal route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 500.00 mg/kg	

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Trimethoxyphenylsilane	CAS: 2996-92-1 - EINECS: 221-066-9	a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 1400.00 mg/L 96h OECD Guideline 203 a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 600.00 mg/L 96h OECD Guideline 202 a) Aquatic acute toxicity : EC50 Algae Pseudokirchnerella subcapitata = 120.00 mg/L 96h OECD Guideline 201 a) Aquatic acute toxicity : NOEC Sludge activated sludge = 1000.00 mg/L 3h OECD 209
N-(3-(trimethoxysilyl)propyl)ethylenediamine	CAS: 1760-24-3 - EINECS: 217-164-6	a) Aquatic acute toxicity : LC50 Fish Danio rerio = 597.00 mg/L 96h a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 81.00 mg/L 48h b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna >= 1.00 ppm - 21days a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 8.80 mg/L 72h c) Bacteria toxicity : EC50 Pseudomonas putida = 67.00 mg/L d) Terrestrial toxicity : LC50 Worm Eisenia foetida > 1000.00 mg/kg - 14days

12.2. Persistence and degradability

Component	Persistence/Degradability:	Test	Value	Notes:
Trimethoxyphenylsilane	Non-readily biodegradable			
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Non-readily biodegradable	Dissolved organic carbon	39.000	28days

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force. Disposal through discharge into wastewater is not permitted

A waste code according to the European List of Wastes (LoW) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

N.A.

SECTION 14: Transport information

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Technical name: N/A

IMDG-Technical name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A
IATA-Class: N/A
IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A
IATA-Packing group: N/A
IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No
Environmental Pollutant: No
IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: N/A
ADR - Hazard identification number: N/A
ADR-Special Provisions: N/A
ADR-Transport category (Tunnel restriction code): N/A
ADR Limited Quantities: N/A
ADR Excepted Quantities: N/A

Air (IATA):

IATA-Passenger Aircraft: N/A
IATA-Cargo Aircraft: N/A
IATA-Label: N/A
IATA-Subsidiary hazards: N/A
IATA-Erg: N/A
IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage Code: N/A
IMDG-Stowage Note: N/A
IMDG-Subsidiary hazards: N/A
IMDG-Special Provisions: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2020/878

Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: None.

Restrictions related to the substances contained: 40, 52, 69, 75
Provisions related to directive EU 2012/18 (Seveso III):

N.A.

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

3: Severe hazard to waters

SVHC Substances:

No data available

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

Code	Hazard class and hazard category	Description
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAHF: Keep Away From Heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.



Exposure Scenario

N-(3-(trimethoxysilyl)propyl)ethylenediamine

Exposure Scenario, 12/01/2022

Substance identity	
	N-(3-(trimethoxysilyl)propyl)ethylenediamine
CAS No.	1760-24-3
EINECS No.	217-164-6

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1. **ES 1** Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1. ES 1		Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)	
1.1 TITLE SECTION			
Exposure Scenario name	Professional application of coatings and inks		
Date - Version	12/01/2022 - 1.0		
Life Cycle Stage	Widespread use by professional workers		
Main user group	Professional uses		
Sector(s) of use	Professional uses (SU22)		
Product Categories	Coatings and paints, thinners, paint removers (PC9a)		
Environment Contributing Scenario			
CS1	ERC8c - ERC8f		
Worker Contributing Scenario			
CS2 Rolling, Brushing - Roller, spreader, flow application - Manual	PROC10 - PROC11 - PROC19		
1.2 Conditions of use affecting exposure			
1.2. CS1: Environment Contributing Scenario (ERC8c, ERC8f)			
Environmental release categories	Widespread use leading to inclusion into/onto article (indoor) - Widespread use leading to inclusion into/onto article (outdoor) (ERC8c, ERC8f)		
<i>Product (article) characteristics</i>			
Physical form of product: Liquid			
Concentration of substance in product: Covers percentage substance in the product up to 5 %.			
<i>Amount used, frequency and duration of use (or from service life)</i>			
Amounts used: Daily amount per site <= 1.37 kg/day Annual site tonnage <= 0.5 tonnes/day			
Emission days: 365 days per year			
<i>Technical and organisational conditions and measures</i>			
Control measures to prevent releases Prevent discharge of undissolved substance to or recover from onsite wastewater.			
<i>Conditions and measures related to treatment of waste (including article waste)</i>			
Waste treatment Dispose of solid residue according to applicable regulations.			
1.2. CS2: Worker Contributing Scenario: Rolling, Brushing - Roller, spreader, flow application - Manual (PROC10, PROC11, PROC19)			
Process Categories	Roller application or brushing - Non industrial spraying - Manual activities involving hand contact (PROC10, PROC11, PROC19)		
<i>Product (article) characteristics</i>			
Physical form of product: Liquid			
Concentration of substance in product: Covers percentage substance in the product up to 5 %.			
<i>Amount used, frequency and duration of use/exposure</i>			

Amounts used:

Annual site tonnage ≤ 0.5 t(tonnes)/year
Daily amount per site ≤ 1.37 kg/day

Duration:

Covers daily exposures up to 8 hours

Frequency:

Covers use up to ≤ 5 days per week

Technical and organisational conditions and measures**Technical and organisational measures**

Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

Conditions and measures related to personal protection, hygiene and health evaluation**Personal protection**

Wear suitable gloves tested to EN374.

Wear suitable coveralls to prevent exposure to the skin.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8c, ERC8f)

Release route	Release rate	Release estimation method
Air	0.17 kg/day	N/A
Water	0.011 kg/day	N/A

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure Scenario

Trimethoxyphenylsilane

Exposure Scenario, 15/06/2022

Substance identity	
	Trimethoxyphenylsilane
CAS No.	2996-92-1
EINECS No.	221-066-9
Registration number	01-2119964479-19

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1. **ES 1** Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a); Building and construction work (SU19)

1. ES 1

Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a); Building and construction work (SU19)

1.1 TITLE SECTION

Exposure Scenario name	Use in rigid foams, coatings, adhesives and sealants
Date - Version	15/06/2022 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22) - Building and construction work (SU19)
Product Categories	Coatings and paints, thinners, paint removers (PC9a)

Environment Contributing Scenario

CS1	ERC8c - ERC8f
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Worker Contributing Scenario

CS2 Rolling, Brushing - Mixing operations	PROC10 - PROC19
CS3 Roller, spreader, flow application	PROC11

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8c, ERC8f)

Environmental release categories	Widespread use leading to inclusion into/onto article (indoor) - Widespread use leading to inclusion into/onto article (outdoor) (ERC8c, ERC8f)
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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 Pa (Standard Temperature and Pressure)

Vapour pressure:

= 18.2 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual site tonnage = 1 t

Emission days: 365 days per year

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

STP effluent (m³/day): 2000*Other conditions affecting environmental exposure*

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

1.2. CS2: Worker Contributing Scenario: Rolling, Brushing - Mixing operations (PROC10, PROC19)

Process Categories	Roller application or brushing - Manual activities involving hand contact (PROC10, PROC19)
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Product (article) characteristics

Physical form of product:

Liquid, vapour pressure > 10 Pa (Standard Temperature and Pressure)

Vapour pressure:

= 18.2 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

*Amount used, frequency and duration of use/exposure***Duration:**

Covers daily exposures up to 8 hours

Frequency:

Covers exposure up to days per week

*Technical and organisational conditions and measures***Technical and organisational measures**

Open windows during application to ensure natural ventilation.

*Conditions and measures related to personal protection, hygiene and health evaluation***Personal protection**

Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training.

Dermal - minimum efficiency of: 80 %

1.2. CS3: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)**Process Categories**

Non industrial spraying (PROC11)

*Product (article) characteristics***Physical form of product:**

Liquid, vapour pressure > 10 Pa (Standard Temperature and Pressure)

Vapour pressure:

= 18.2 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

*Amount used, frequency and duration of use/exposure***Duration:**

Covers daily exposures up to 8 hours

Frequency:

Covers exposure up to days per week

*Technical and organisational conditions and measures***Technical and organisational measures**

Open windows during application to ensure natural ventilation.

*Conditions and measures related to personal protection, hygiene and health evaluation***Personal protection**

Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training.

Dermal - minimum efficiency of: 80 %

1.3 Exposure estimation and reference to its source**1.3. CS1: Environment Contributing Scenario (ERC8c, ERC8f)**

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	0.00056 mg/L	EUSES v2.1	0.0023

marine water	5.5E-05 mg/L	EUSES v2.1	0.0023
freshwater sediment	0.00047 mg/kg wet weight	EUSES v2.1	0.002
marine sediment	4.6E-05 mg/kg wet weight	EUSES v2.1	0.0019
soil	0.000217 mg/kg wet weight	EUSES v2.1	0.0031
Sewage treatment plant	< 1E-06 mg/L	EUSES v2.1	< 1E-06

1.3. CS2: Worker Contributing Scenario: Rolling, Brushing - Mixing operations (PROC10, PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	2.85 mg/m ³	Stoffenmanager v5.6.10	0.071
dermal, long-term	0.0274 mg/kg bw/day	ECETOC TRA worker v3	0.011

1.3. CS3: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	9.66 mg/m ³	Stoffenmanager v5.6.10	0.24
dermal, long-term	0.0429 mg/kg bw/day	ECETOC TRA worker v3	0.017

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.