Safety Data Sheet

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

TETRA SEAL

Date of first edition: 4/14/2023

Safety Data Sheet dated 4/14/2023

version 1

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

1.1. Product identifier

Mixture identification:

Trade name: TETRA SEAL

Trade code: K50453

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

Kerakoll Italy (+39) 0536 816511

Ireland

Poison information centre: (+353) 809 2166 (Daily 8am-10pm)

In case of emergency call 999 or 112

Malta

In case of emergency call: 112 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin Sens. 1A	May cause an allergic skin reaction.
Aquatic Chronic 3	Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words

Warning

Hazard statements

H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe vapours.
P280	Wear protective gloves and eye protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P501	Dispose of contents/container in accordance with applicable regulations.

Contains

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate

Trimethoxyvinilsilane

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 >= 0.1%.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: TETRA SEAL

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

Qty	Name	Ident. Numb.	Classification	Registration Number
2,5-4,9 %	Trimethoxyvinilsilane	CAS:2768-02-7 EC:220-449-8 Index:014-049-00-0	Skin Sens. 1B, H317; Flam. Liq. 2, H225; Acute Tox. 4, H332	01-2119513215-52
< 1 %	1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	CAS:1065336-91-5 EC:915-687-0	Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Repr. 2, H361; Skin Sens. 1A, H317, M-Chronic:1, M-Acute:1	01-2119491304-40-XXXX
< 0,1 %	1-methoxy-2-propanol; monopropylene glycol methyl ether	CAS:107-98-2 EC:203-539-1 Index:603-064-00-3	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119457435-35
< 0,01 %	methanol	CAS:67-56-1 EC:200-659-6 Index:603-001-00-X	Flam. Liq. 2, H225 STOT SE 1, H370 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Specific Concentration Limits: C ≥ 10%: STOT SE 1 H370 3% ≤ C < 10%: STOT SE 2 H371	01-2119433307-44

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediatley and dispose off safely.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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, inhaltion of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

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	Notes
Limestone	NATIONAL	BELGIUM		10.000				
	NATIONAL	HUNGARY		10.000				
	NATIONAL	SPAIN		10.000				Inhalable aerosol
	NATIONAL	SWITZERLAND		3.000				Respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND		10.000				Inhalable aerosol

		NORTHERN IRELAND			
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	4.000		Respirable aerosol
	NATIONAL	CROATIA	10.000		
	NATIONAL	FRANCE	10.000		
	NATIONAL	NETHERLANDS	10.000		
	NATIONAL	PORTUGAL	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		
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		
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
	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 Al; Long term and Short term: inhalable aerosol
	NATIONAL	DENMARK	2.000		4.000		Calculated as Al; 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 Al 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
1-methoxy-2-propanol; monopropylene glycol methyl ether	EU	NNN	375	100	563	150	Skin
	NATIONAL	AUSTRIA	187.000	50.000	187.000	50.000	
	NATIONAL	BELGIUM	184.000	50.000	369.000	100.000	
	NATIONAL	DENMARK	185.000	50.000	370.000	100.000	
	NATIONAL	FINLAND	370.000	100.000	560.000	150.000	
	NATIONAL	FRANCE	188.000	50.000	375.000	100.000	
	NATIONAL	GERMANY	370.000	100.000	740.000	200.000	AGS
	NATIONAL	GERMANY	370.000	100.000	740.000	200.000	DFG
	NATIONAL	HUNGARY	375.000		568.000		
	NATIONAL	IRELAND	375.000	100.000	568.000	150.000	
	NATIONAL	ITALY	375.000	100.000	568.000	150.000	Cute
	NATIONAL	LATVIA	375.000	100.000	568.000	150.000	
	NATIONAL	ROMANIA	375.000	100.000	568.000	150.000	
	NATIONAL	SPAIN	375.000	100.000	568.000	150.000	
	NATIONAL	SWEDEN	190.000	50.000	568.000	150.000	

	NATIONAL	SWITZERLAND	360.000	100.000	720.000	200.000	
	NATIONAL	NETHERLANDS	375.000		563.000		
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	375.000	100.000	560.000	150.000	
	NATIONAL	BULGARIA	375.000	100.000	568.000	150.000	
	NATIONAL	CZECHIA	270.000		550.000		
	NATIONAL	CROATIA	375.000	100.000	568.000	150.000	
	NATIONAL	ESTONIA	375.000	100.000	568.000	150.000	
	NATIONAL	GREECE	360.000	100.000	1080.000	300.000	
	NATIONAL	LITHUANIA	190.000	50.000	300.000	75.000	
	ACGIH	NNN		50.000		100.000	A4 - Eye and URT irr
	EU	NNN	375.000	100.000	563.000	150.000	Skin
methanol	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 GREAT BRITAIN AND NORTHERN IRELAND	266.000	200.000	333.000	250.000	
	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
Diisooctyl 2,2'-[(dioctylstannylene) bis(thio)]diacetate	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		

Biological limit values

CAS-No.	Component	Value	UoM	Medium	Biological Indicator	Sampling Period
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	20	mg/L	Urine	1-Methoxypropanol-2	End of turn
67-56-1	methanol	30	mg/L	Urine	Methyl alcohol	End of turn; End of working week

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
Trimethoxyvinilsilane	2768-02-7	400.000 µg/l	Freshwater	
		2.400 mg/l	Intermittent releases (freshwater)	
		40.000 µg/l	Marine water	
		6.600 mg/l	Microorganisms in sewage treatments	
		1.500 mg/kg	Freshwater sediments	
		150.000 µg/kg	Marine water sediments	
		60.000 µg/kg	Soil	
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate	1065336-91-5	2.200 µg/l	Freshwater	

bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate			
		9.000 µg/l	Intermittent releases (freshwater)
		220.000 ng/L	Marine water
		1.000 mg/l	Microorganisms in sewage treatments
		1.050 mg/kg	Freshwater sediments
		110.000 µg/kg	Marine water sediments
		210.000 µg/kg	Soil
1-methoxy-2-propanol; monopropylene glycol methyl ether	107-98-2	10.000 mg/l	Freshwater
		100.000 mg/l	Intermittent releases (freshwater)
		1.000 mg/l	Marine water
		100.000 mg/l	Microorganisms in sewage treatments
		52.300 mg/kg	Freshwater sediments
		5.200 mg/kg	Marine water sediments
		4.590 mg/kg	Soil
methanol	67-56-1	20.800 mg/l	Freshwater
		1540.000 mg/l	Intermittent releases (freshwater)
		2.080 mg/l	Marine water
		100.000 mg/l	Microorganisms in sewage treatments
		77.000 mg/kg	Freshwater sediments
		7.700 mg/kg	Marine water sediments
		100.000 mg/kg	Soil

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency
Trimethoxyvinilsilane	2768-02-7		27.600 mg/m³	6.700 mg/m³	Human Inhalation	Long Term, systemic effects
			260.000 mg/m³	50.000 mg/m³	Human Inhalation	Short Term, systemic effects
			3.900 mg/kg	7.800 mg/kg	Human Dermal	Short Term, systemic effects
				300.000 µg/kg	Human Oral	Long Term, systemic effects
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	1065336-91-5		680.000 µg/m³	170.000 µg/m³	Human Inhalation	Long Term, systemic effects
			500.000 µg/kg	250.000 µg/kg	Human Dermal	Long Term, systemic effects
				50.000 µg/kg	Human Oral	Long Term, systemic effects
1-methoxy-2-propanol; monopropylene glycol methyl ether	107-98-2		369.000 mg/m³	43.900 mg/m³	Human Inhalation	Long Term, systemic effects
			553.500 mg/m³		Human Inhalation	Short Term, systemic effects

		553.500 mg/m³		Human Inhalation	Short Term, local effects
		183.000 mg/kg	78.000 mg/kg	Human Dermal	Long Term, systemic effects
			33.000 mg/kg	Human Oral	Long Term, systemic effects
methanol	67-56-1	130.000 mg/m³	26.000 mg/m³	Human Inhalation	Long Term, systemic effects
		130.000 mg/m³	26.000 mg/m³	Human Inhalation	Short Term, systemic effects
		130.000 mg/m³	26.000 mg/m³	Human Inhalation	Long Term, local effects
		130.000 mg/m³	26.000 mg/m³	Human Inhalation	Short Term, local effects
		20.000 mg/kg	4.000 mg/kg	Human Dermal	Long Term, systemic effects
		20.000 mg/kg	4.000 mg/kg	Human Dermal	Short Term, systemic effects
			4.000 mg/kg	Human Oral	Long Term, systemic effects
			4.000 mg/kg	Human Oral	Short Term, systemic effects

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.(EN166)

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Neoprene, Nitrile rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

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 Liquid

Color: White

Odour: N.A.

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: > 93°C

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

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.48 g/cm3

Solubility in water: Insoluble

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 = 0.52 % ; 7.77 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	The product is classified: Skin Sens. 1A(H317)
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:

Trimethoxyvinilsilane	a) acute toxicity	LD50 Oral Rat = 7.34000 ml/Kg	
		LC50 Inhalation Vapour Rat = 2773.00000 Ppm 4h	
		LD50 Skin Rabbit = 3.36000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No 24h	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Rat Negative	Inhalation route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 250.00000 mg/kg	

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	a) acute toxicity	LD50 Oral Rat = 3230.00 mg/kg	
		LD50 Skin Rat > 3170.00 mg/kg	
	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 Positive	
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 30.00 mg/kg	
1-methoxy-2-propanol; monopropylene glycol methyl ether	a) acute toxicity	LD50 Oral Rat = 4016.00 mg/kg	
		LC50 Inhalation Vapour Rat Negative 6h	No mortalities observed
		LD50 Skin Rat > 2000.00 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity	Mouse intraperitoneal rout
		Carcinogenicity Negative	
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 300.00	ppm
methanol	a) acute toxicity	LD50 Oral Rat >= 2528.00000 mg/kg	
		LC50 Inhalation = 43.68000 mg/l 6h	Cat
		LD50 Skin Rabbit = 17100.00000 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative	Mouse intraperitoneal rout
		Carcinogenicity Rat Negative	
	g) reproductive toxicity	Lowest Observed Adverse Effect Level Oral = 1000.00000 mg/kg	Mouse

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 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:

Harmful to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Trimethoxyvinilsilane	CAS: 2768-02-7 - EINECS: 220-449-8 - INDEX: 014-049-00-0	a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 137.00000 mg/L 96h
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 121.00000 mg/L 48h
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 20.00000 mg/L - 21days
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata > 89.00000 mg/L 72h
		a) Aquatic acute toxicity : EC10 microorganisms > 100.00000 mg/L 3h OECD 209
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	CAS: 1065336-91-5 - EINECS: 915-687-0	a) Aquatic acute toxicity : LC50 Fish Danio rerio = 0.90 mg/L 96h OECD Guideline 203
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 1.00 mg/L OECD guideline 211
		a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 1.68 mg/L 72h OECD Guideline 201
		a) Aquatic acute toxicity : EC20 Sludge activated sludge >= 100.00 mg/L 3h OECD guideline 209
1-methoxy-2-propanol; monopropylene glycol methyl ether	CAS: 107-98-2 - EINECS: 203-539-1 - INDEX: 603-064-00-3	a) Aquatic acute toxicity : LC50 Fish Leuciscus idus = 6812.00 mg/L OECD guideline 203
		a) Aquatic acute toxicity : LC50 Daphnia = 23300.00 mg/L 48h OECD guideline 202
		a) Aquatic acute toxicity : EC50 Algae = 1000.00 mg/L OECD guideline 201 - 7days
		a) Aquatic acute toxicity : NOEC Sludge = 1000.00 mg/L OECD guideline 201
methanol	CAS: 67-56-1 - EINECS: 200-659-6 - INDEX: 603-001-00-X	a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 15400.00000 mg/L 96h
		b) Aquatic chronic toxicity : NOEC Fish = 450.00000 mg/L
		a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 22200.00000 mg/L 48h
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 208.00000 mg/L
		a) Aquatic acute toxicity : EC50 Algae Selenastrum capricornutum = 22000.00000 mg/L 96h OECD 201 Guideline.
		d) Terrestrial toxicity : NOEC Worm Eisenia andrei = 10000.00000 mg/kg
		d) Terrestrial toxicity : NOEC Folsomia candida = 1000.00000 mg/kg OECD Guideline 232

12.2. Persistence and degradability

Component	Persitence/Degradability:	Value	Notes
Trimethoxyvinilsilane	Readily biodegradable		
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	Non-readily biodegradable	38.000	28days
1-methoxy-2-propanol; monopropylene glycol methyl	Readily biodegradable	69.000	28days

ether

methanol	Readily biodegradable

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Notes
1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate	Not bioaccumulative		
methanol	Not bioaccumulative	BCF - Bioconcentrantion factor	< 10

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

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.

A waste code according to European waste catalogue (EWC) 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 Provisioning: N/A

Sea (IMDG) :

IMDG-Stowage Code: N/A

IMDG-Stowage Note: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisioning: 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: 3

Restrictions related to the substances contained: 40, 52, 69, 70, 75

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

Regulation (EU) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

Class 3: extremely hazardous.

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
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.

H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.8/1	STOT SE 1	Specific target organ toxicity — single exposure, Category 1
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
3.4.2/1A	Calculation method
4.1/C3	Calculation method

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
KAFH: 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

1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate

Exposure Scenario, 20/04/2022

Substance identity	
	1-Methyl 1,2,2,6,6-pentamethylpiperidin-4-yl decanedioate bis(1,2,2,6,6-pentamethylpiperidin-4-yl) decanedioate
CAS No.	1065336-91-5
EINECS No.	915-687-0

Table of contents

1. **ES 1** Widespread use by professional workers; Various products (PC9a, PC9b)

1. ES 1 Widespread use by professional workers; Various products (PC9a, PC9b)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks - Use in rigid foams, coatings, adhesives and sealants
Date - Version	20/04/2022 - 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) - Fillers, putties, plasters, modelling clay (PC9b)

Environment Contributing Scenario

CS1	ERC8c

Worker Contributing Scenario

CS2 Material transfers	PROC8a
CS3 Rolling, Brushing	PROC10

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8c)

Environmental release categories	Widespread use leading to inclusion into/onto article (indoor) (ERC8c)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
Vapour pressure < 0.01 Pa at standard temperature and pressure 0.0001 Pa

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

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

	Air - minimum efficiency of: 15 % Water - minimum efficiency of: 1 %

Conditions and measures related to sewage treatment plant

STP type:
Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 88.9 %
STP effluent (m³/day): 2000

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10
Receiving surface water flow: 18000 m³/day
Indoor use

1.2. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
Vapour pressure < 0.01 Pa at standard temperature and pressure 0.0001 Pa

Concentration of substance in product:
Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use/exposure

Duration:
Covers use up to 480 min

Frequency:
Covers use up to 5 days per week

Technical and organisational conditions and measures

Technical and organisational measures
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.
Ensure operatives are trained to minimise exposures.

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: = 90 %
Wear suitable face shield. Wear suitable coveralls to prevent exposure to the skin.	

Other conditions affecting worker exposure

Indoor use
Professional use

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:
Ensure no splashing occurs during transfer.

1.2. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Process Categories	Roller application or brushing (PROC10)

Product (article) characteristics

Physical form of product:
Liquid

Vapour pressure:
Vapour pressure < 0.01 Pa at standard temperature and pressure 0.0001 Pa

Concentration of substance in product:
Covers percentage substance in the product up to 5 %.

Amount used, frequency and duration of use/exposure

Duration:
Covers use up to 480 min

Frequency:
Covers use up to 5 days per week

Technical and organisational conditions and measures

Technical and organisational measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.
Ensure operatives are trained to minimise exposures.

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: = 90 %
Wear suitable face shield. Wear suitable coveralls to prevent exposure to the skin.	

Other conditions affecting worker exposure

Indoor use
Professional use

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Ensure no splashing occurs during transfer.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8c)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
soil	N/A	ECETOC TRA environment v2.0	0.0579

Additional information on exposure estimation:

Risk from environmental exposure is driven by soil.

1.3. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	= 0.2743 mg/kg bw/day	ECETOC TRA worker v3	= 0.137143
inhalative, systemic, long-term	= 0.4233 mg/m³	ECETOC TRA worker v3	= 0.119924

1.3. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	= 0.5486 mg/kg bw/day	ECETOC TRA worker v3	= 0.274286
inhalative, systemic, long-term	= 0.274286 mg/m³	ECETOC TRA worker v3	= 0.097

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
Trimethoxyvinilsilane

Exposure Scenario, 08/06/2021

Substance identity	
	Trimethoxyvinilsilane
CAS No.	2768-02-7
INDEX No.	014-049-00-0
EINECS No.	220-449-8
Registration number	01-2119513215-52

Table of contents

1. **ES 1**

1. ES 1

1.1 TITLE SECTION

Exposure Scenario name	Use in rigid foams, coatings, adhesives and sealants - Barrier (Sealant)
Date - Version	18/05/2021 - 1.0
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22) - Building and construction work (SU19)
Product Categories	Adhesives, sealants (PC1)

Environment Contributing Scenario

CS1 Low environmental release	ERC8c - ERC8f

Worker Contributing Scenario

CS2 Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application	PROC0
CS3 Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application	PROC1

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario: Low environmental release (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)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Concentration after dilution for use maximum [%]: 0.7 %

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

Amounts used:
Daily amount per site = 0.28 kg/day

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

	Water - minimum efficiency of: 1.5 %

Conditions and measures related to sewage treatment plant

STP type:
Onsite Sewage Treatment Plant
Water - minimum efficiency of: = 0.013 %

Conditions and measures related to treatment of waste (including article waste)

Waste treatment
Dispose of waste product or used containers according to local regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10
Receiving surface water flow: 20000 m³/day

Covers indoor and outdoor use

1.2. CS2: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC0)

Process Categories	Other (PROC0)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers concentrations up to 0.7 %

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration <= 6 h

Frequency:
Use frequency = 250 days per year

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.
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
For further specification, refer to section 8 of the SDS.

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use
Room size: Covers use in room size of = 20 m³
Temperature: Covers use at ambient temperatures. 25°C

1.2. CS3: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC1)

Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers concentrations up to 2 %

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration = 8 h

Frequency:
Use frequency = 1 days per year

Duration:
Covers use up to = 6 h

Frequency:
Use frequency = 1 days per year

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use
Room size: Covers use in room size of = 20 m³
Ventilation rate: = 0.6 ach (air changes per hour)

1.3 Exposure estimation and reference to its source

1.3. CS2: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC0)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 1.9 mg/m³	N/A	= 0.069
dermal, long-term	= 4.53 mg/kg bw/day	ConsExpo	= 0.038
combined routes, long-term	N/A	N/A	0.107

1.3. CS3: Worker Contributing Scenario: Wiping - Hand application - finger paints, pastels, adhesives - Preparation of material for application (PROC1)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 4.57 mg/m³	N/A	= 0.682
dermal, long-term	= 0.044 mg/kg bw/day	ConsExpo	< 0.01
combined routes, short-term	N/A	N/A	0.682

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.