according to Regulation (EC) No. 1907/2006

Carsystem Etch Primer

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1.2	DE / EN	10.10.2023	Date of first issue: 09.08.2022

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

1.1 Product identifier	
Trade name	: Carsystem Etch Primer
Product code	: 143.028
1.2 Relevant identified uses of	the substance or mixture and uses advised against
Use of the Sub- stance/Mixture	: Base coating, Paints
Recommended restrictions on use	: Industrial use, professional use
1.3 Details of the supplier of t	he safety data sheet
Company	: JASA AG Müslistrasse 43 8957 Spreitenbach Schweiz
	info@jasa-ag.ch, www.jasa-ag.ch
Telephone Telefax	: +41 (0)44 431 60 70 : +41 (0)44 432 63 17
Responsible Department	: Productmanagement, Tel: +41 (0)44 431 60 70, sds@jasa-ag.ch

1.4 Emergency telephone

Telephone : Tox Info Suisse (STIZ), Te	phone	Tox Info Suisse (STIZ), Tel: 145
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Long-term (chronic) aquatic hazard, Cat- egory 3	H412: Harmful to aquatic life with long lasting ef- fects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Labeling (REGULATION (EC) No 1272/2008)				
Hazard pictograms :				
Signal Word :	Danger			
Hazard Statements :	 H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H336 May cause drowsiness or dizziness. H412 Harmful to aquatic life with long lasting effects. 			
Supplemental Hazard : Statements	EUH066 Repeated exposure may cause skin dryness or cracking.			
	Buildup of explosive mixtures possible without sufficient ventilation.			
Precautionary Statements :	P101 If medical advice is needed, have product container or label at hand.P102 Keep out of reach of children.			
	 Prevention: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. 			

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		P260 Do not b	preathe spray.
		with water for se	P338 + P310 IF IN EYES: Rinse cautiously everal minutes. Remove contact lenses, if pre- o do. Continue rinsing. Immediately call a ER/ doctor.
			Protect from sunlight. Do not expose to tem- ding 50 °C/ 122 °F.
		•	of contents/ container to an approved facility in local, regional, national and international regu-
aceto propa	ne an-1-ol	hich must be listed o	n the label:
2-me	thylpropan-1-ol		

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Additional Labeling

EUH211

Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : aerosol

Mixture

Components

Chemical name	CAS-No. EC-No.	Classification	Concentration (% w/w)
	Index-No. Registration number		

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acetone	67-64-1 200-662-2 606-001-00-8 01-2119471330-49	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system) EUH066	>= 20 - < 2
propan-1-ol	71-23-8 200-746-9 603-003-00-0 01-2119486761-29	Flam. Liq. 2; H225 Eye Dam. 1; H318 STOT SE 3; H336 (Central nervous system)	>= 12,5 - <
2-methylpropan-1-ol	78-83-1 201-148-0 603-108-00-1 01-2119484609-23	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system)	>= 5 - < 1
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system)	>= 2,5 - <
titanium dioxide; [in powder form containing 1 % or more of parti- cles with aerodynamic diameter ≤ 10 µm]	13463-67-7 236-675-5 022-006-00-2 01-2119489379-17	Carc. 2; H351	>= 2,5 - <
bis-[4-(2,3- epoxipropoxi)phenyl]propane	1675-54-3 216-823-5 603-073-00-2 01-2119456619-26	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411	>= 2,5 - <
		specific concentration limit Eye Irrit. 2; H319 >= 5 % Skin Irrit. 2; H315 >= 5 %	
1-methoxy-2-propanol	107-98-2 203-539-1 603-064-00-3 01-2119457435-35	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system)	>= 1 - < 2
Substances with a workplace expo dimethyl ether	115-10-6	Flam. Gas 1A; H220	>= 5 - < 1
	204-065-8 603-019-00-8 01-2119472128-37	Press. Gas Compr. Gas; H280	

For explanation of abbreviations see section 16.

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SECTION 4: First aid measures

4.1 Description of first-aid measures				
General advice	:	First aider needs to protect himself. Remove from exposure, lie down. If unconscious, place in recovery position and seek medical advice. Take off contaminated clothing and shoes immediately.		
If inhaled	:	Move to fresh air. If symptoms persist, call a physician.		
In case of skin contact	:	Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.		
In case of eye contact	:	In case of eye contact, remove contact lens and rinse imme- diately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. Protect unharmed eye. Call a physician immediately.		
If swallowed	:	Swallowing is not regarded as a possible method for expo- sure. Immediately give large quantities of water to drink. Call a physician immediately.		
4.2 Most important symptoms and effects, both acute and delayed				
Risks	:	May cause an allergic skin reaction. Causes serious eye damage. May cause drowsiness or dizziness. Repeated exposure may cause skin dryness or cracking.		

4.3 Indication of any immediate medical attention and special treatment needed

: Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media		
Suitable extinguishing media	:	Carbon dioxide (CO2) Dry powder Water spray jet Alcohol-resistant foam
Unsuitable extinguishing media	:	High volume water jet

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5.2	Special	hazards arising from	the	e substance or mi	xture
	Specifi fighting	c hazards during fire	:		explosive mixtures with air. rous/toxic fumes possible in cases of ure.
	Hazaro ucts	dous combustion prod-	:	Carbon monoxide bons (smoke).	e, carbon dioxide and unburned hydrocar-
5.3	Advice	for firefighters			
	•	Il protective equipment -fighters	:	Use personal proprotection equipm	tective equipment. Wear suitable respiratory nent.
	Furthe	r information	:	cumstances and Fire residues and be disposed of in Use water spray t	measures that are appropriate to local cir- the surrounding environment. contaminated fire extinguishing water must accordance with local regulations. o cool unopened containers. e and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	: Wear personal protective equipment.
	Evacuate personnel to safe areas.
	Remove all sources of ignition.
	Ensure adequate ventilation.
	Avoid inhalation of vapor or mist.
	Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Environmental precautions	:	Should not be released into the environment.
		If the product contaminates rivers and lakes or drains inform
		respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Ventilate the area.
		Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling							
Local/Total ventilation :		Ensure adequate ventilation.					
Advice on safe handling :		Pressurized container: Protect from sunlight and do not ex-					

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			do not open with	ures exceeding 50°C / 122 °F. Also after use, force or burn. air exchange and/or exhaust in work rooms.
	Advice on protection against fire and explosion	:	Keep away from	a naked flame or any incandescent material. open flames, hot surfaces and sources of ay from direct sunlight.
			Take measures to	prevent the build up of electrostatic charge.
	Hygiene measures	:	Do not inhale aer	osol.
7.2	Conditions for safe storage,	inc	luding any incom	patibilities
	Requirements for storage areas and containers	:	containers tightly vent vapors are h	he storage instructions for aerosols! Keep closed in a cool, well-ventilated place. Sol- eavier than air and may spread along floors. direct sunlight. Keep away from heat and n.
	Further information on stor- age conditions	:	Storage must be	in accordance with the BetrSichV (Germany).
	Advice on common storage	:	Keep away from	food and drink.
	Storage class (TRGS 510)	:	2B	
7.3	Specific end use(s) Specific use(s)	:	No data available	

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Componente	CAS-No.	Value type (Form	Control parameters	Basis				
Components	CA3-N0.	Value type (Form						
		of exposure)						
acetone	67-64-1	TWA	500 ppm	2000/39/EC				
			1.210 mg/m3					
	Further inform	nation: Indicative						
		AGW	500 ppm	DE TRGS				
			1.200 mg/m3	900				
	Peak-limit cat	Peak-limit category: 2;(I)						
		Further information: When there is compliance with the OEL and biological						
	tolerance valu	ies, there is no risk o	of harming the unborn child					
propane	74-98-6	AGW	1.000 ppm	DE TRGS				
			1.800 mg/m3	900				
	Peak-limit cat	Peak-limit category: 4;(II)						
dimethyl ether	115-10-6			2000/39/EC				
-			1.920 mg/m3					

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		Further inform	nation: Indicative		
			AGW	1.000 ppm 1.900 mg/m3	DE TRGS 900
		Peak-limit cat	egory: 8;(II)		
	butane (containing < 0,1 % butadiene (203-450-8))	106-97-8	AGW	1.000 ppm 2.400 mg/m3	DE TRGS 900
		Peak-limit cat	egory: 4:(II)		
	isobutane (< 0,1% 1,3-butadiene (203-450-8))	75-28-5	AGW	1.000 ppm 2.400 mg/m3	DE TRGS 900
		Peak-limit cat	egory: 4;(II)		
	2-methylpropan-1- ol	78-83-1	AGW	100 ppm 310 mg/m3	DE TRGS 900
		Peak-limit cat	egory: 1;(I)		
		tolerance valu		e is compliance with the OEL ar k of harming the unborn child	-
	2-methoxy-1- methylethyl ace- tate	108-65-6	STEL	100 ppm 550 mg/m3	2000/39/EC
		Further inform skin, Indicativ		ne possibility of significant uptak	through the
			TWA	50 ppm 275 mg/m3	2000/39/EC
		Further inform skin, Indicativ	e	ne possibility of significant uptak	
			AGW	50 ppm 270 mg/m3	DE TRGS 900
		Peak-limit cat	egory: 1;(I)		
		tolerance valu	es, there is no ris	e is compliance with the OEL ar k of harming the unborn child	
	titanium dioxide; [in powder form con- taining 1 % or more of particles with aerodynamic diameter \leq 10 µm]	13463-67-7	AGW (Inhalable fraction)	10 mg/m3 (Titanium dioxide)	DE TRGS 900
		Peak-limit cat			
			ies, there is no ris	e is compliance with the OEL ar k of harming the unborn child	-
			AGW (Alveolate fraction)	1,25 mg/m3 (Titanium dioxide)	DE TRGS 900
		Peak-limit cat			
				e is compliance with the OEL ar k of harming the unborn child	nd biological
	1-methoxy-2- propanol	107-98-2	TWA	100 ppm 375 mg/m3	2000/39/EC
		Further inform skin, Indicativ		ne possibility of significant uptak	through the
			STEL	150 ppm 568 mg/m3	2000/39/EC

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		er information Indicative	n: Identifies the p	possibili	ty of significant uptal	ke through th
	51(11),	AG	W	100 pp	m	DE TRGS
		_		370 m		900
		-limit categor				
					ance with the OEL and the unborn child	nd biological
Biological occupat	ional e	xposure lim	its			
Substance name		CAS-No.	Control para	meters	Sampling time	Basis
acetone		67-64-1	Acetone: 80 (Urine)	mg/l	Immediately after exposure or after working hours	TRGS 90
1-methoxy-2-propan	ol	107-98-2	1-Methoxypr 2-ol: 15 mg/l (Urine)		Immediately after exposure or after working hours	TRGS 90
Derived No Effect I	_evel (I	DNEL) accor		tion (EC	•	
Substance name	Er	nd Use	Routes of exp		otential health ef-	Value
acetone	W	orkers	Inhalation		ng-term systemic	1210 mg/m
	W	orkers	Inhalation		ng-term local ef-	2420 mg/m
	W	orkers	Skin contact	ef	ng-term systemic	186 mg/kg bw/day
	Co	onsumers	Inhalation	ef	ng-term systemic	200 mg/m3
		onsumers	Skin contact, Oral	ef	ng-term systemic	62 mg/kg bw/day
propan-1-ol		orkers	Inhalation	ef	ng-term systemic	268 mg/m3
		orkers	Inhalation		cute systemic ef-	1723 mg/n
	W	orkers	Skin contact	ef	ng-term systemic	136 mg/kg
	Co	onsumers	Inhalation	ef	ng-term systemic	80 mg/m3
	Co	onsumers	Inhalation	fe	cute systemic ef-	1036 mg/m
	Co	onsumers	Skin contact	ef	ng-term systemic	81 mg/kg
	Co	onsumers	Oral	ef	ng-term systemic	61 mg/kg
2-methylpropan-1-ol		onsumers	Inhalation	ef	ng-term systemic	55 mg/m3
	W	orkers	Inhalation		ng-term local ef-	310 mg/m3
2-methoxy-1- methylethyl acetate	W	orkers	Inhalation		ng-term systemic fects	275 mg/m3
•	W	orkers	Skin contact		ng-term systemic	796 mg/kg bw/day

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	Consumers	Inhalation	Long-term systemic effects	33 mg/m3
	Consumers	Skin contact	Long-term systemic effects	320 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	36 mg/kg bw/day
bis-[4-(2,3- epox- ipropoxi)phenyl]propa ne	Workers	Inhalation	Long-term systemic effects	4,93 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,75 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0,5 mg/kg bw/day
	Consumers	Dermal	Long-term systemic effects	0,0893 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,87 mg/m3
1-methoxy-2-propanol	Workers	Inhalation	Long-term systemic effects	369 mg/m3
	Workers	Inhalation	Acute systemic ef- fects, Acute local effects	553,5 mg/m3
	Workers	Skin contact	Long-term systemic effects	183 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	43,9 mg/m3
	Consumers	Skin contact	Long-term systemic effects	78 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	33 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
acetone	Fresh water	10,6 mg/l
	Sea water	1,06 mg/l
	Sewage treatment plant (STP)	100 mg/l
	Fresh water sediment	30,4 mg/kg dry
		weight (d.w.)
	Sea sediment	3,04 mg/kg dry
		weight (d.w.)
	Soil	29,5 mg/kg dry
		weight (d.w.)
propan-1-ol	Fresh water	10 mg/l
	Sea water	1 mg/l
	Sewage treatment plant (STP)	96 mg/l
	Fresh water sediment	22,8 mg/kg
	Sea sediment	2,28 mg/kg
	Soil	2,2 mg/kg
2-methoxy-1-methylethyl acetate	Fresh water	0,635 mg/l
	Sea water	0,064 mg/l
	Sewage treatment plant (STP)	100 mg/l

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		Fresh water s	ediment	3,29 mg/kg dry weight (d.w.)	
		Sea sediment	t	0,329 mg/kg dry weight (d.w.)	
		Soil		0,29 mg/kg dry weight (d.w.)	
	4-(2,3- ipropoxi)phenyl]propan	Fresh water		0,006 mg/l	
		Sea water		0,001 mg/l	
		Fresh water s	Fresh water sediment		
		Sea sediment	t	0,034 mg/kg dry weight (d.w.)	
		Sewage treat	ment plant (STP)	10 mg/l	
		Soil		0,065 mg/kg dry weight (d.w.)	
		Oral		11 mg/kg food	
1-me	ethoxy-2-propanol	Fresh water		10 mg/l	
		Sea water		1 mg/l	
		Sewage treat	ment plant (STP)	100 mg/l	
		Fresh water s	ediment	52,3 mg/kg dry weight (d.w.)	
		Sea sediment		5,2 mg/kg dry weight (d.w.)	
		Soil		4,59 mg/kg dry weight (d.w.)	

8.2 Exposure controls

Personal protective equipment						
Eye/face protection :	Tightly fitting safety goggles Safety glasses with side-shields conforming to EN166					
Glove thickness : Directive :	butyl-rubber > 480 min >= 0,4 mm DIN EN 374 Class 6					
Remarks :	The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed. Preventive skin protection					
Skin and body protection :	Please wear suitable protective clothing, e.g. made of cotton or heat-resistant synthetic fibres. Long sleeved clothing					
Respiratory protection :	No personal respiratory protective equipment normally re- quired.					

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			When workers are	uate ventilation wear respiratory protection. e facing concentrations above the exposure e appropriate certified respirators.
Filter ty	уре	:	Filter type A-P	
Protective	e measures	:	Avoid contact with	equate ventilation. ot eat, drink or smoke. n skin, eyes and clothing. apors or spray mist.
Environm	nental exposure co	ontro	ols	

Soil	: Avoid subsoil penetration.			
Water	: Do not flush into surface water or sanitary sewer system.			

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	aerosol
Color		gray
Odor	:	solvent
Melting point/freezing point	:	not determined
Initial boiling point and boiling range	:	Not applicable
Upper explosion limit / Upper flammability limit		13 %(V)
Lower explosion limit / Lower flammability limit		1,2 %(V)
Flash point		Not applicable
Autoignition temperature		240 °C
рН		not determined substance/mixture is non-soluble (in water)
Viscosity Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	not determined
Solubility(ies) Water solubility	:	immiscible
Partition coefficient: n- octanol/water		not determined

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	Vapor	pressure	:	4.000 hPa (20 °(C)
	Density	у	: 0,8 g/cm3 (20 °C)		;)
9.2 (Other iı	nformation			
	Explos	ives	:	Not explosive In use, may form	flammable/explosive vapor-air mixture.
	Self-ig	nition	: not auto-flammable		ble

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if used as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Vapors may form explosive mixture with air.
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10.4 Conditions to avoid

Conditions to avoid : Keep away from heat and sources of ignition. Strong sunlight for prolonged periods.

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified based on available information.

Components:

acetone:		
Acute oral toxicity	:	LD50 Oral (Rat): 5.800 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): ca. 76 mg/l Exposure time: 4 h Test atmosphere: vapor

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Acute dermal toxicity	: LD50 Dermal (Rabbit): > 7.400 mg/kg
propan-1-ol:	
Acute oral toxicity	: LD50 Oral (Rat): ca. 8.000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	: LC50 (Rat): > 33,8 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403
Acute dermal toxicity	: LD50 Dermal (Rabbit): 4.032 mg/kg Method: OECD Test Guideline 402
2-methylpropan-1-ol:	
Acute oral toxicity	: LD50 Oral (Rat): > 2.830 mg/kg
Acute inhalation toxicity	: LC50 (Rat): 24,6 mg/l Exposure time: 4 h Test atmosphere: vapor
Acute dermal toxicity	: LD50 Dermal (Rabbit): 2.460 mg/kg Method: OECD Test Guideline 402
2-methoxy-1-methylethy	acetate:
Acute oral toxicity	: LD50 Oral (Rat): 6.190 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	: Assessment: The substance or mixture has no acute inhala- tion toxicity
Acute dermal toxicity	: LD50 Dermal (Rabbit): > 5.000 mg/kg Method: OECD Test Guideline 402
titanium dioxide; [in pow diameter ≤ 10 μm]:	der form containing 1 % or more of particles with aerodynamic
Acute oral toxicity	: LD50 Oral (Rat): > 5.000 mg/kg
Acute inhalation toxicity	: LD50 (Rat): > 6,82 mg/l Exposure time: 4 h Test atmosphere: dust/mist
bis-[4-(2,3-epoxipropoxi)	phenyl]propane:
Acute oral toxicity	: LD50 Oral (Rat): > 15.000 mg/kg
Acute inhalation toxicity	: Assessment: The substance or mixture has no acute inhala- tion toxicity

sion DE / EN	Revision Date:Date of last issue: 26.04.202310.10.2023Date of first issue: 09.08.2022
	Method: OECD Test Guideline 402
1-methoxy-2-propanol	:
Acute oral toxicity	: LD50 Oral (Rat): 4.016 mg/kg
Acute inhalation toxicity	 LC0 (Rat): > 7000 ppm Test atmosphere: vapor Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhala- tion toxicity
Acute dermal toxicity	: LD50 Dermal (Rat): > 2.000 mg/kg Method: Regulation (EC) No. 440/2008, Annex, B.3
Skin corrosion/irritatio	
	y cause skin dryness or cracking.
Product:	
Result	: No skin irritation
Result	: Repeated exposure may cause skin dryness or cracking.
Components:	
titanium dioxide; [in p diameter ≤ 10 μm]:	owder form containing 1 % or more of particles with aerodynamic
Remarks	: No skin irritation
bis-[4-(2,3-epoxipropo	xi)phenyl]propane:
Species	: Rabbit
Assessment	: Irritating to skin.
Method	: OECD Test Guideline 404
Result	: Mild skin irritant
Serious eye damage/e	ye irritation
Causes serious eye dar	nage.
Components:	
titanium dioxide; [in p diameter ≤ 10 µm]:	owder form containing 1 % or more of particles with aerodynamic
Remarks	: Dust contact with the eyes can lead to mechanical irritation.
hie_[1_(2 2_onovintors	vi)nbonullaronano.
bis-[4-(2,3-epoxipropo	
Species Assessment	: Rabbit
Method	: Irritating to eyes. : OECD Test Guideline 405
Result	: Mild eye irritant
	······· - , - ·······

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Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter \leq 10 µm]:

Remarks

: No known sensitising effect.

bis-[4-(2,3-epoxipropoxi)phenyl]propane:

Routes of exposure	:	Dermal
Species	:	Mouse
Assessment	:	May cause sensitization by skin contact.
Method	:	OECD Test Guideline 429
Result	:	May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

May cause drowsiness or dizziness.

Components:

2-methoxy-1-methylethyl acetate:

Routes of exposure	:	Oral
Target Organs	:	Central nervous system
Assessment	:	May cause drowsiness or dizziness.

1-methoxy-2-propanol:

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

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Components:

1-methoxy-2-propanol:

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

TTOXICITY			
Components:			
acetone:			
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 5.540 mg/l Exposure time: 96 h	
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia pulex (Water flea)): 8.800 mg/l End point: mortality Exposure time: 48 h	
Toxicity to algae/aquatic plants	:	NOEC (algae): 430 mg/l Exposure time: 96 h	
Toxicity to microorganisms	:	EC10 (Bacteria): 1.000 mg/l Exposure time: 0,5 h Method: OECD Test Guideline 209	
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 2.212 mg/l Exposure time: 28 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211	
propan-1-ol:			
Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 4.555 mg/l End point: mortality Exposure time: 96 h Method: OECD Test Guideline 203	
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 3.644 mg/l End point: Immobilization Exposure time: 48 h	
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		Method: DIN 3847	12
Toxicity to algae/aquatic plants	:	EC50 (Pseudokiro mg/l End point: Growth Exposure time: 48	
Toxicity to microorganisms	:	IC50 (Bacteria): > Exposure time: 3 Method: OECD Te	h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)		NOEC: > 100 mg/ Exposure time: 21 Species: Daphnia Method: OECD To	l d magna (Water flea)
2-methylpropan-1-ol:			
Toxicity to fish	:	LC50 (Pimephale Exposure time: 96	s promelas (fathead minnow)): 1.430 mg/l 5 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia p Exposure time: 48	
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)		Exposure time: 21	l d magna (Water flea)
2-methoxy-1-methylethyl ac	eta	te:	
Toxicity to fish			test
Toxicity to daphnia and other aquatic invertebrates	:	Exposure time: 48 Test Type: static t	
Toxicity to algae/aquatic plants	:	EC50 (Pseudokiro 1.000 mg/l Exposure time: 96 Test Type: static t Method: OECD To	test
Toxicity to fish (Chronic tox- icity)	:	NOEC: 47,5 mg/l Exposure time: 14 Species: Oryzias Method: OECD Te	latipes (Orange-red killifish)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)		NOEC: >= 100 m Exposure time: 21 Species: Daphnia	

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			Method: OECD To	est Guideline 211
	ım dioxide; [in powder ter ≤ 10 μm]:	r fo	rm containing 1 %	or more of particles with aerodynamic
	y to daphnia and other c invertebrates	:	EC50 (Daphnia m Exposure time: 48	nagna (Water flea)): > 1.000 mg/l 3 h
bis-[4·	(2,3-epoxipropoxi)phe	eny]propane:	
Toxicit	y to fish	:	LC50 (Oncorhync Exposure time: 96 Test Type: static t Method: OECD To	test
	y to daphnia and other c invertebrates	:	EC50 (Daphnia m Exposure time: 48 Method: OECD Te	
Toxicit plants	y to algae/aquatic	:	EC50 (Scenedesr mg/l Exposure time: 72	mus capricornutum (fresh water algae)): 11 2 h
	y to daphnia and other c invertebrates (Chron- city)	:	NOEC: 0,3 mg/l Exposure time: 21 Species: Daphnia Method: OECD To	magna (Water flea)
1-metl	hoxy-2-propanol:			
Toxicit	y to fish	:	LC50 (Oncorhync End point: mortali Exposure time: 96 Method: OECD Te	Sh
	y to daphnia and other c invertebrates	:	LC50 (Daphnia m End point: Immob Exposure time: 48	
	xicology Assessment	:	This product has	no known ecotoxicological effects.
2.2 Persis	stence and degradabil	ity		
<u>Comp</u>	onents:			
acetor Biodeg	ne: gradability	:	Result: Readily bi Biodegradation: 9 Exposure time: 28	90,9 %
				est Guideline 301B

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	propan-1-ol:						
	Biodegradability	Expo	 Biodegradation: 83 - 92 % Exposure time: 28 d Method: OECD Test Guideline 301F 				
	2-methylpropan-1-ol:						
	Biodegradability	: Resu	It: Readily bi	odegradable.			
	2-methoxy-1-methylethyl a	cetate:					
	Biodegradability	Biode Expo	egradation: 9 sure time: 28				
	bis-[4-(2,3-epoxipropoxi)pl	nenyl]prop	ane:				
	Biodegradability	Resu Kinet 28 d:	ic: 5 %	mg/l y biodegradable. est Guideline 301F			
	1-methoxy-2-propanol:						
	Biodegradability	Biode Expo	Result: Readily biodegradable. Biodegradation: 96 % Exposure time: 28 d Method: OECD Test Guideline 301E				
12.3	Bioaccumulative potential						
	Components:						
	acetone:						
	Bioaccumulation		oncentration arks: Calcula	factor (BCF): 3 tion			
	Partition coefficient: n- octanol/water	: log P	ow: -0,24 (20) °C)			
	propan-1-ol:						
	Bioaccumulation	: Bioco	oncentration	factor (BCF): 0,88			
	Partition coefficient: n- octanol/water		1,6 (25 °C) ow: 0,2 (25 °	C)			
	2-methylpropan-1-ol:						
	Partition coefficient: n- octanol/water	: log P	ow: 1 (25 °C)			
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according to Regulation (EC) No. 1907/2006

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2-m	ethoxy-1-methylethyl	acetate:	
	tition coefficient: n- anol/water	: log Pow: 1,2 pH: 6,8 Method: OE	2 (20 °C) CD Test Guideline 117
	nium dioxide; [in powo meter ≤ 10 µm]:	ler form containin	g 1 % or more of particles with aerodynamic
Par	tition coefficient: n- anol/water	: Remarks: N	ot applicable
bis	·[4-(2,3-epoxipropoxi)p	henyl]propane:	
	accumulation	: Bioconcentr	ation factor (BCF): 31 oes not bioaccumulate.
	tition coefficient: n-	: log Pow: 3,2	242 (25 °C)
octa	anol/water	pH: 7,1 Method: OE	CD Test Guideline 117
1-m	ethoxy-2-propanol:		
	tition coefficient: n- anol/water	: log Pow: < 1 pH: 6,8	(20 °C)
dim	ethyl ether:		
	tition coefficient: n- anol/water	: log Pow: 0,0	07 (25 °C)
12.4 Mo	bility in soil		
	data available		
12.5 Res	sults of PBT and vPvB	assessment	
Pro	duct:		
Ass	essment	to be either	nce/mixture contains no components considered persistent, bioaccumulative and toxic (PBT), or ent and very bioaccumulative (vPvB) at levels of ner.
12.6 En	docrine disrupting pro	perties	
Pro	duct:		
Ass	essment	ered to have REACH Arti (EU) 2017/2	e endocrine disrupting properties according to cle 57(f) or Commission Delegated regulation 100 or Commission Regulation (EU) 2018/605 at % or higher.

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12.7 Other adverse effects

Product:

Additional ecological infor- : No data available mation

Global warming potential

Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) of the United Nations Framework Convention on Climate Change (UNFCCC)

Components:

propane:

20-year global warming potential: 0,072 100-year global warming potential: 0,02 500-year global warming potential: 0,006 Atmospheric lifetime: 0,036 yr Radiative efficiency: 0 Wm2ppb Further information: Miscellaneous compounds

butane (containing < 0,1 % butadiene (203-450-8)):

20-year global warming potential: 0,022 100-year global warming potential: 0,006 500-year global warming potential: 0,002 Atmospheric lifetime: 0,019 yr Radiative efficiency: 0 Wm2ppb Further information: Miscellaneous compounds

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Dispose of in conjunction with appropriate waste disposal authorities and in accordance with disposal regulations.
Contaminated packaging	:	Dispose of in accordance with local regulations.
Waste Code	:	The following Waste Codes are only suggestions: 08 01 11, waste paint and varnish containing organic solvents or other hazardous substances 15 01 10, packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

ADN	: UN 1950
ADR	: UN 1950

according to Regulation (EC) No. 1907/2006

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	RID	:	UN 1950		
	IMDG	:	UN 1950		
	ΙΑΤΑ	:	UN 1950		
14.2	UN proper shipping name				
	ADN	:	AEROSOLS		
	ADR	:	AEROSOLS		
	RID	:	AEROSOLS		
	IMDG	:	AEROSOLS		
	ΙΑΤΑ	:	Aerosols, flamma	ble	
14.3	Transport hazard class(es)				
			Class		Subsidiary risks
	ADN	:	2		2.1
	ADR	:	2		2.1
	RID	:	2		2.1
	IMDG	:	2.1		
	ΙΑΤΑ	:	2.1		
14.4	Packing group				
	ADN Packing group Classification Code Labels	:	Not assigned by r 5F 2.1	egu	lation
	ADR Packing group Classification Code Labels Tunnel restriction code	:	Not assigned by r 5F 2.1 (D)	egu	lation
	RID Packing group Classification Code Hazard Identification Number Labels	:	Not assigned by r 5F 23 2.1	egu	lation
	IMDG Packing group Labels EmS Code	:	Not assigned by r 2.1 F-D, S-U	egu	lation
	IATA (Cargo) Packing instruction (cargo aircraft) Packing instruction (LQ) Packing group Labels	: : :	203 Y203 Not assigned by r Flammable Gas	egu	lation

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	IATA (Passenger) Packing instruction (passen- ger aircraft) Packing instruction (LQ) Packing group Labels	:	203 Y203 Not assigned by Flammable Gas	regulation
14.	5 Environmental hazards			
	ADN Environmentally hazardous	:	no	
	ADR Environmentally hazardous	:	no	
	RID Environmentally hazardous	:	no	
	IMDG Marine pollutant	:	no	

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

the market and use of certain dangerous substances, mixtures and articles (Annex XVII) If you intend to use this product tattoo ink, please contact you dor.	
REACH - Candidate List of Substances of Very High : Not applicable Concern for Authorization (Article 59).	
Regulation (EC) No 1005/2009 on substances that de- : Not applicable plete the ozone layer	
Regulation (EU) 2019/1021 on persistent organic pollu- : Not applicable tants (recast)	
REACH - List of substances subject to authorisation : Not applicable (Annex XIV)	

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	Regulation (EU) 2019/1148 on the marketing and use of explo- sives precursors				
	This product is regulated by R cious transactions, and signifi should be reported to the rele	can	t disappearances a	and thefts	
	Seveso III: Directive 2012/18/ pean Parliament and of the C control of major-accident haza dangerous substances.	oun	cil on the	a FLAMMABLE AEROSOLS	
	Water hazard class (Germa- ny)	:		ater endangering ording to AwSV, Annex 1 (5.2)	
	Volatile organic compounds	:	-	/EC ompounds (VOC) content: < 840 g/l he product in a ready to use condition.	

Other regulations:

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical Safety Assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

SECTION 16: Other information

Full text of H-Statements

H220 :	Extremely flammable gas.
H225 :	Highly flammable liquid and vapor.
H226 :	Flammable liquid and vapor.
H280 :	Contains gas under pressure; may explode if heated.
H315 :	Causes skin irritation.
H317 :	May cause an allergic skin reaction.
H318 :	Causes serious eye damage.
H319 :	Causes serious eye irritation.
H335 :	May cause respiratory irritation.
H336 :	May cause drowsiness or dizziness.
H351 :	Suspected of causing cancer if inhaled.
H411 :	Toxic to aquatic life with long lasting effects.
EUH066 :	Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

according to Regulation (EC) No. 1907/2006

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Aquatic Chronic Carc. Eye Dam. Eye Irrit. Flam. Gas Flam. Liq. Press. Gas Skin Irrit. Skin Sens. STOT SE		: Lona-term (c	hronic) aquatic hazard					
		: Carcinogenicity						
		: Serious eye damage						
		: Eye irritation	0					
		: Flammable g	: Flammable gases : Flammable liquids					
		: Flammable li						
		: Gases under pressure						
		: Skin irritatior	l					
		: Skin sensitiz	ation					
		: Specific targ	: Specific target organ toxicity - single exposure					
2000/39/EC : Europe. Commission Directive 2000/39/ list of indicative occupational exposure I			mission Directive 2000/39/EC establishing a first ve occupational exposure limit values					
DE TRGS 900 TRGS 903 2000/39/EC / TWA 2000/39/EC / STEL		: Germany. TF	RGS 900 - Occupational exposure limit values.					
		: c - Biological	limit values					
		: Limit Value -	eight hours					
		: Short term e	xposure limit					
	DE TRGS 900 / AGW	: Time Weight	ed Average					

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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Cla	ssification of the m	lixture:	Classification procedure:
Aer	osol 1	H222, H229	Calculation method
Eye	Dam. 1	H318	Calculation method
Skir	n Sens. 1	H317	Calculation method
STO	DT SE 3	H336	Calculation method
Aqu	atic Chronic 3	H412	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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