MS Adhesive Sealant White 310ml

Version	Revision Date:	SDS Number:	Date of last issue: 15.11.2022
8.0	05.06.2023	9818259-00005	Date of first issue: 22.12.2009

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

1.1 Product identifier

Trade name	:	MS Adhesive Sealant White 310ml
Product code	:	0893 225 1

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

Use of the Sub-stance/Mixture	:	Adhesives, Sealant Professional use product
Recommended restrictions on use	:	Not applicable

1.3 Details of the supplier of the safety data sheet

Company	:	Wurth UK Ltd 1 Centurion Way Erith, Kent
Telephone	:	+44 (0)3300 555 444
Telefax	:	+44 (0)3300 555 666
E-mail address of person responsible for the SDS	:	prodsafe@wuerth.com

1.4 Emergency telephone number

+44 (0)870 190 6777

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

Additional Labelling

EUH210 Safety data sheet available on request.

EUH208 Contains Trimethoxyvinylsilane.
May produce an allergic reaction.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Trimethoxyvinylsilane	2768-02-7 220-449-8 014-049-00-0 01-2119513215-52	Flam. Liq. 3; H226 Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Sens. 1B; H317 STOT SE 2; H371 (Central nervous system, optic nerve)	>= 0.1 - < 1
Substances with a workplace exposure limit :			
Calcium carbonate	471-34-1 207-439-9 01-2119486795-18		>= 70 - < 90
Di-isononyl phthalate	28553-12-0 249-079-5 01-2119430798-28		>= 1 - < 10
Diiron trioxide	1309-37-1 215-168-2		>= 1 - < 10
Yellow iron oxide	51274-00-1 257-098-5		>= 1 - < 10
Titanium dioxide	13463-67-7 236-675-5 022-006-00-2		>= 1 - < 10
Carbon black	1333-86-4 215-609-9		>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Protection of first-aiders	:	No special precautions are necessary for first aid responders.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	Wash with water and soap as a precaution. Get medical attention if symptoms occur.
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides Silicon oxides Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do

so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep away from water.

Protect from moisture.
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Gases

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Calcium carbonate	471-34-1	TWA (inhalable dust)	10 mg/m3	GB EH40
		TWA (Respirable dust)	4 mg/m3	GB EH40
Di-isononyl phthalate	28553-12-0	TWA	5 mg/m3	GB EH40
Diiron trioxide	1309-37-1	TWA (inhalable dust)	10 mg/m3	GB EH40
		TWA (Respirable dust)	4 mg/m3	GB EH40
Carbon black	1333-86-4	TWA	3.5 mg/m3	GB EH40
		STEL	7 mg/m3	GB EH40
Yellow iron oxide	51274-00-1	TWA (Fumes)	5 mg/m3 (Iron)	GB EH40
		STEL (Fumes)	10 mg/m3 (Iron)	GB EH40
Titanium dioxide	13463-67-7	TWA (inhalable dust)	10 mg/m3	GB EH40
		TWA (Respirable dust)	4 mg/m3	GB EH40

This substance(s) is not bioavailable and therefore does not contribute to a dust inhalation hazard.

Calcium carbonate

Titanium dioxide

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Methanol	67-56-1	TWA	200 ppm 266 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	250 ppm 333 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	200 ppm 260 mg/m3	2006/15/EC
	Further information: Indicative, Identifies the possibility of significant uptake through the skin			

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
Diiron trioxide	Workers	Inhalation	Long-term local effects	10 mg/m3
	Workers	Inhalation	Long-term systemic effects	10 mg/m3
Di-isononyl phthalate	Workers	Inhalation	Long-term systemic effects	51.72 mg/m3
	Workers	Skin contact	Long-term systemic effects	366 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	15.3 mg/m3
	Consumers	Skin contact	Long-term systemic effects	220 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	4.4 mg/kg bw/day
Trimethoxyvinylsilane	Workers	Inhalation	Long-term systemic effects	4.9 mg/m3
	Workers	Skin contact	Long-term systemic effects	0.69 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.04 mg/m3
	Consumers	Inhalation	Acute systemic effects	93.4 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.3 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	26.9 mg/kg bw/day

	Consumers	Ingestion	Long-term systemic effects	0.3 mg/kg bw/day
Carbon black	Workers	Inhalation	Long-term local effects	0.5 mg/m3
Calcium carbonate	Workers	Inhalation	Long-term systemic effects	6.36 mg/m3
	Consumers	Ingestion	Acute systemic effects	6.1 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.06 mg/m3
	Consumers	Ingestion	Long-term systemic effects	6.1 mg/kg bw/day

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
Di-isononyl phthalate	Soil	30 mg/kg
Trimethoxyvinylsilane	Fresh water	0.34 mg/l
	Marine water	0.034 mg/l
	Intermittent use/release	3.4 mg/l
	Sewage treatment plant	110 mg/l
	Fresh water sediment	1.24 mg/kg
	Marine sediment	0.12 mg/kg
	Soil	0.052 mg/kg
Carbon black	Fresh water	1 mg/l
	Freshwater - intermittent	10 mg/l
	Marine water	0.1 mg/l
	Marine water - intermittent	1 mg/l
Calcium carbonate	Sewage treatment plant	100 mg/l

8.2 Exposure controls

Engineering measures

Processing may form hazardous compounds (see section 10).
Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Eye/face protection : Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.

Wear the following personal protective equipment:
Safety glasses
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Equipment should conform to BS EN 166

Hand protection
Material : Rubber gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications,

		we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often!
Skin and body protection	:	Skin should be washed after contact.
Respiratory protection	:	If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to BS EN 137
Filter type	:	Self-contained breathing apparatus

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	paste
Colour	:	coloured
Odour	:	characteristic, mild
Odour Threshold	:	No data available
pH	:	substance/mixture is non-soluble (in water)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	100 - < 200 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1.7 g/cm³ (20 °C)

Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Flammability (liquids)	:	No data available
Particle size	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air.

10.4 Conditions to avoid

Conditions to avoid	:	Exposure to moisture

10.5 Incompatible materials

Materials to avoid	:	Oxidizing agents Water

10.6 Hazardous decomposition products

Contact with water or humid air	:	Methanol

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute toxicity estimate (Humans): > 300 - 2,000 mg/kg
Method: Expert judgement
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): 16.8 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Calcium carbonate:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Di-isononyl phthalate:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 4.4 mg/l

Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Diiron trioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Yellow iron oxide:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Titanium dioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Carbon black:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Species : Rabbit
Result : No skin irritation

Calcium carbonate:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Di-isononyl phthalate:

Species : Rabbit
Method : Draize Test
Result : No skin irritation

Diiron trioxide:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Yellow iron oxide:

Species : Rabbit
Result : No skin irritation

Titanium dioxide:

Species : Rabbit
Result : No skin irritation

Carbon black:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Calcium carbonate:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Di-isononyl phthalate:

Species : Rabbit
Method : Draize Test
Result : No eye irritation

Diiron trioxide:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Yellow iron oxide:

Species : Rabbit
Result : No eye irritation

Titanium dioxide:

Species : Rabbit

Result : No eye irritation

Carbon black:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : positive

Assessment : Probability or evidence of low to moderate skin sensitisation rate in humans

Calcium carbonate:

Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : negative

Di-isononyl phthalate:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Method : Directive 67/548/EEC, Annex V, B.6.
Result : negative
Remarks : Based on data from similar materials

Diiron trioxide:

Exposure routes : Skin contact
Species : Guinea pig
Result : negative

Yellow iron oxide:

Test Type : Maurer optimisation test

Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Titanium dioxide:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Result	:	negative

Carbon black:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Result: negative

Calcium carbonate:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative

Di-isononyl phthalate:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative

Diiron trioxide:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Yellow iron oxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: in vitro micronucleus test
Method: OECD Test Guideline 487
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 476
Result: negative

Titanium dioxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

Carbon black:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: In vitro sister chromatid exchange assay in mammalian cells

Method: OECD Test Guideline 479
Result: negative

Test Type: in vitro micronucleus test
Method: OECD Test Guideline 487
Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in Drosophila melanogaster (in vivo)
Species: Drosophila melanogaster (vinegar fly)
Application Route: Ingestion
Method: OECD Test Guideline 477
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Di-isononyl phthalate:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	104 weeks
Result	:	negative

Diiron trioxide:

Species	:	Rat
Application Route	:	Intraperitoneal injection
Exposure time	:	790 - 914 days
Result	:	negative

Titanium dioxide:

Species	:	Rat
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	2 Years
Method	:	OECD Test Guideline 453
Result	:	positive
Remarks	:	The mechanism or mode of action may not be relevant in humans. This substance(s) is not bioavailable and therefore does not contribute to a dust inhalation hazard.

Carbon black:

Species	:	Rat
Application Route	:	Inhalation
Exposure time	:	24 Months
Result	:	positive

Species	:	Rat
Application Route	:	Ingestion

Exposure time	:	2 Years
Result	:	negative
Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

Reproductive toxicity

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Effects on fertility	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: negative
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: inhalation (vapour) Result: negative

Calcium carbonate:

Effects on fertility	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: negative
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative

Di-isononyl phthalate:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative

Yellow iron oxide:

Effects on fertility	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: negative Remarks: Based on data from similar materials
Effects on foetal development	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: negative Remarks: Based on data from similar materials

Carbon black:

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative Test Type: Embryo-foetal development Species: Mouse Application Route: inhalation (dust/mist/fume) Result: negative

STOT - single exposure

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Exposure routes	:	Ingestion
Target Organs	:	Central nervous system, optic nerve
Assessment	:	May cause damage to organs.
Remarks	:	Based on data from similar materials

STOT - repeated exposure

Not classified based on available information.

Components:

Trimethoxyvinylsilane:

Exposure routes	:	Ingestion
Assessment	:	No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

Trimethoxyvinylsilane:

Species	:	Rat
LOAEL	:	62.5 mg/kg
Application Route	:	Ingestion
Exposure time	:	54 Days
Method	:	OECD Test Guideline 422

Calcium carbonate:

Species	:	Rat
NOAEL	:	> 1,000 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 Days
Method	:	OECD Test Guideline 422

Di-isononyl phthalate:

Species	:	Rat, male
NOAEL	:	88.3 mg/kg
Application Route	:	Ingestion
Exposure time	:	104 Weeks

Yellow iron oxide:

Species	:	Rat
NOAEL	:	>= 1,000 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408

Titanium dioxide:

Species	:	Rat
NOAEL	:	24,000 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 Days

Species	:	Rat
NOAEL	:	10 mg/m3
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	2 yr

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Trimethoxyvinylsilane:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 191 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 168.7 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 957 mg/l Exposure time: 72 h NOEC (Desmodesmus subspicatus (green algae)): > 957 mg/l Exposure time: 72 h

Calcium carbonate:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	NOELR (Pseudokirchneriella subcapitata (green algae)): 50 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201
Toxicity to microorganisms	:	NOEC : 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 EC50 : > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Di-isononyl phthalate:

Toxicity to fish	:	LL50 (Danio rerio (zebra fish)): > 102 mg/l Exposure time: 96 h Method: Directive 67/548/EEC, Annex V, C.1.
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 74 mg/l Exposure time: 48 h Method: Directive 67/548/EEC, Annex V, C.2. Remarks: No toxicity at the limit of solubility
Toxicity to algae/aquatic plants	:	EL50 (Desmodesmus subspicatus (green algae)): > 88 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3. Remarks: No toxicity at the limit of solubility NOELR (Desmodesmus subspicatus (green algae)): 88 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3. Remarks: No toxicity at the limit of solubility
Toxicity to microorganisms	:	EC50 : > 83.9 mg/l Exposure time: 30 min Method: OECD Test Guideline 209 Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOELR: > 101 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Diiron trioxide:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 50,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to microorganisms	:	EC50 : > 10,000 mg/l Exposure time: 3 h

Yellow iron oxide:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to microorganisms	:	EC50 (activated sludge): > 10,000 mg/l Exposure time: 3 h Method: ISO 8192

Titanium dioxide:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l Exposure time: 72 h
Toxicity to microorganisms	:	EC50 : > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Carbon black:

Toxicity to fish	:	LL50 (Danio rerio (zebra fish)): > 1,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 5,600 mg/l Exposure time: 24 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EL10 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 EL50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201

12.2 Persistence and degradability

Components:

Trimethoxyvinylsilane:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 51 % Exposure time: 28 d Method: OECD Test Guideline 301F

Di-isononyl phthalate:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 81 % Exposure time: 28 d

Method: Regulation (EC) No. 440/2008, Annex, C.4-C

12.3 Bioaccumulative potential

Components:

Di-isononyl phthalate:

Bioaccumulation	:	Species: Oncorhynchus mykiss (rainbow trout) Bioconcentration factor (BCF): < 3
Partition coefficient: n-octanol/water	:	log Pow: 8.8 - 9.7

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	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.

12.6 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.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

Waste Code : The following Waste Codes are only suggestions:

used product
08 04 10, waste adhesives and sealants other than those mentioned in 08 04 09

unused product
08 04 10, waste adhesives and sealants other than those mentioned in 08 04 09

uncleaned packagings
15 01 06, mixed packaging

SECTION 14: Transport information

14.1 UN number

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.4 Packing group

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Di-isononyl phthalate (Number on list 52) Dioctyltin oxide (Number on list 20)
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation	:	Not applicable

Control of Major Accident Hazards Regulations 2015 (COMAH)
Not applicable

Volatile organic compounds	:	Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 0 %

Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the

Pregnant Workers Directive 92/85/EEC.

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information	:	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H317	:	May cause an allergic skin reaction.
H332	:	Harmful if inhaled.
H371	:	May cause damage to organs.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Flam. Liq.	:	Flammable liquids
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure
2006/15/EC	:	Europe. Indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
2006/15/EC / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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