

MS-11 BROWN
Supersedes Date: 19-Nov-2020

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

1.1. Product identifier

Product Name MS-11 BROWN
Pure substance/mixture Mixture

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

Recommended use Adhesives and/or sealants.
Uses advised against Not to be used in production of toys or childcare articles

1.3. Details of the supplier of the safety data sheet

Company Name

Arc Building Products
IDA Business & Technology Park
Ballynattin, Arklow
Arklow, Co. Wicklow, Ireland.
Tel: +353 (0)402 32370
Email: sales@arcbuildingproducts.ie

1.4. Emergency telephone number

+353 (0)402 32370
(Office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

Signal word

None

Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

EU Specific Hazard Statements

EUH208 - Contains Trimethoxyvinylsilane & N-(3-(trimethoxysilyl)propyl)ethylenediamine & 1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- & Dioctyltinbis(acetylacetonate). May produce an allergic reaction
EUH210 - Safety data sheet available on request

2.3. Other hazards

Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. May be harmful in contact with skin.

PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no

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substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH registration number
Trimethoxyvinylsilane	220-449-8	2768-02-7	1- <2.5	Skin Sens. 1B (H317) Acute Tox. 4 (H332) Flam. Liq. 3 (H226)		01-2119513215-52-XXXX
N-(3-(trimethoxysilyl)propyl)ethylenediamine	217-164-6	1760-24-3	0.1 - <1	Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 4 (H332) STOT SE 3 (H335)		01-2119970215-39-XXXX
Diocetyl tinbis(acetylacetonate)	483-270-6	54068-28-9	0.1 - <1	STOT SE 2 (H371) Skin Sens. 1 (H317)	Skin Sens. 1 :: C>=5%	01-0000020199-67-XXXX
1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]-	221-336-6	3069-29-2	0.1 - <1	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1A (H317)		01-2119963926-21-xxxx
Titanium dioxide	236-675-5	13463-67-7	0.1 - <1	Carc. 2 (H351i)		01-2119489379-17-XXXX

Full text of H- and EUH-phrases: see section 16

Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance. If medical advice is needed,

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	have product container or label at hand.
Inhalation	Remove to fresh air. If symptoms persist, call a doctor.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Call a doctor immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Small amounts of toxic methanol are released by hydrolysis.

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

Symptoms None known.

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

Note to doctors Treat symptomatically. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Unsuitable extinguishing media Full water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous combustion products Carbon oxides. Carbon monoxide. Carbon dioxide (CO₂). Silicon dioxide.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent product from entering drains. Do not allow to enter into soil/subsoil. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Do not scatter spilled material with high pressure water streams.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

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Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures between 5 and 35°C. Protect from moisture. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Specific use(s)
Adhesives and/or sealants.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other information Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing

Chemical name	European Union	Ireland	United Kingdom
Diisononyl phthalate 28553-12-0	-	TWA: 5 mg/m ³ STEL: 15 mg/m ³	TWA: 5 mg/m ³ STEL: 15 mg/m ³
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ *	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 600 ppm STEL: 780 mg/m ³ Sk*	TWA: 200 ppm TWA: 266 mg/m ³ STEL: 250 ppm STEL: 333 mg/m ³ Sk*

Chemical name	European Union	Ireland	United Kingdom
Methyl alcohol 67-56-1	-	15 mg/L (urine - Methanol end of shift)	-

Derived No Effect Level (DNEL) No information available

Derived No Effect Level (DNEL)			
Trimethoxyvinylsilane (2768-02-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Systemic health effects Long term	Inhalation	27,6 mg/m ³	
worker Systemic health effects Long term	Dermal	3,9 mg/kg bw/d	

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)

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Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Systemic health effects Long term	Inhalation	35.5 mg/m ³	
worker Systemic health effects Long term	Dermal	5 mg/kg bw/d	

Diocetylbinbis(acetylacetonate) (54068-28-9)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects worker	Dermal	0.07 mg/kg bw/d	
Long term Systemic health effects worker	Inhalation	84 mg/m ³	
Short term Systemic health effects worker	Inhalation	84 mg/m ³	
Long term Short term Local health effects worker	Inhalation	0.091 mg/m ³	

1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (3069-29-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	12 mg/m ³	
worker Long term Systemic health effects	Dermal	1.7 mg/kg bw/d	

Titanium dioxide (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Local health effects	Inhalation	10 mg/m ³	

Derived No Effect Level (DNEL)			
Trimethoxyvinylsilane (2768-02-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Systemic health effects Long term	Inhalation	18,9 mg/m ³	
Consumer Systemic health effects Long term	Dermal	7,8 mg/kg bw/d	
Consumer Systemic health effects Long term	Oral	0,3 mg/kg bw/d	

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor

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Consumer Systemic health effects Long term	Oral	2.5 mg/kg bw/d	
Consumer Systemic health effects Long term	Inhalation	8.7 mg/m ³	
Consumer Systemic health effects Long term	Dermal	2.5 mg/kg bw/d	

1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (3069-29-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	2.9 mg/m ³	
Consumer Long term Systemic health effects	Dermal	0.83 mg/kg bw/d	
Consumer Long term Systemic health effects	Oral	0.83 mg/kg bw/d	

Titanium dioxide (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Oral	700 mg/kg bw/d	

Predicted No Effect Concentration (PNEC) No information available.

Predicted No Effect Concentration (PNEC)	
Trimethoxyvinylsilane (2768-02-7)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.34 mg/l
Marine water	0.034 mg/l
Microorganisms in sewage treatment	110 mg/l

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.062 mg/l
Marine water	0.0062 mg/l
Sewage treatment plant	25 mg/l

Diocetyl tinbis(acetylacetonate) (54068-28-9)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	26 µg/l
Marine water	2.6 µg/l
Freshwater - intermittent	260 µg/l
Sewage treatment plant	1 mg/l
Freshwater sediment	0.155 mg/kg dry weight
Marine sediment	0.0155 mg/kg dry weight
Soil	0.0158 mg/kg dry weight

1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (3069-29-2)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.062 mg/l
Marine water	0.006 mg/l
Sewage treatment plant	25 mg/l
Freshwater sediment	0.24 mg/kg dry weight

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Marine sediment	0.024 mg/kg dry weight
Soil	0.01 mg/kg dry weight

Titanium dioxide (13463-67-7)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Marine water	0.0184 mg/l
Freshwater sediment	1000 mg/kg
Freshwater	0.184 mg/l
Marine sediment	100 mg/kg
Soil	100 mg/kg
Microorganisms in sewage treatment	100 mg/l
Freshwater - intermittent	0.193 mg/l

8.2. Exposure controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.
Hand protection	Wear suitable gloves. Recommended Use: Neoprene™. Nitrile rubber. Butyl rubber. Glove thickness > 0.7mm. The breakthrough time for the mentioned glove material is in general greater than 480 min. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374
Skin and body protection	None under normal use conditions.
Respiratory protection	In case of inadequate ventilation wear respiratory protection. Wear a respirator conforming to EN 140 with Type A/P2 filter or better. Ensure adequate ventilation, especially in confined areas.
Recommended filter type:	Organic gases and vapours filter conforming to EN 14387. White. Brown.

Environmental exposure controls Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Paste
Colour	See section 1 for more information
Odour	Characteristic
Odour threshold	No information available

Property	Values	Remarks • Method
pH	.	
pH (as aqueous solution)	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Flash point	> 60 °C	
Evaporation rate	No data available	
Flammability	Not applicable for liquids .	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	
Relative vapour density	No data available	
Relative density	No data available	
Water solubility	Product cures with moisture	
Solubility(ies)	No data available	
Partition coefficient	No data available	

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Autoignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	> 21 mm ² /s
Dynamic viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2. Other information

Solid content (%)	No information available
VOC Content (%)	
Density	1.58 g/cm ³

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Product cures with moisture.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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10.4. Conditions to avoid

Conditions to avoid	Product cures with moisture. Protect from moisture. Exposure to air or moisture over prolonged periods. Do not freeze. Keep away from open flames, hot surfaces and sources of ignition.
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10.5. Incompatible materials

Incompatible materials	None known based on information supplied.
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10.6. Hazardous decomposition products

Hazardous decomposition products	None under normal use conditions. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Based on available data, the classification criteria are not met.
Eye contact	Based on available data, the classification criteria are not met.
Skin contact	Based on available data, the classification criteria are not met. May be harmful in contact with skin. May cause sensitisation in susceptible persons.

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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (dermal) 3,552.50 mg/kg

ATEmix (inhalation-vapour) 699.5098 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Trimethoxyvinylsilane 2768-02-7	LD50 = 7120 -7236 mg/kg (Rattus) OECD 401	= 3360 µL/kg (Oryctolagus cuniculus)	LC50 (4hr) 16.8 mg/l (Rattus) OECD TG 403
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	=2295 mg/kg (Rattus)	>2000 mg/Kg (Rattus)	LC50 4H (Aerosol)1.5 - 2.44 mg/L air
Dioctyltinbis(acetylacetonate) 54068-28-9	LD50 =2500 mg/kg (Rattus)	LD50 >2000 mg/kg (Rattus)	
1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- 3069-29-2	=200 - 2000 mg/Kg (Rattus) (OECD 401)	>5000 mg/Kg (Oryctolagus cuniculus) (OECD 402)	
Titanium dioxide 13463-67-7	>10000 mg/kg (Rattus)	LD50 > 10000 mg/Kg	>5 mg/l

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation OECD Test No. 406: Skin Sensitisation. No sensitisation responses were observed. No classification is proposed, based on conclusive negative data. May cause sensitisation in susceptible persons.

Product Information			
Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	No sensitisation responses were observed
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	No sensitisation responses were observed

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

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

Chemical name	European Union
Titanium dioxide 13463-67-7	Carc. 2

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

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea	M-Factor	M-Factor (long-term)
Trimethoxyvinylsilane 2768-02-7	EC 50 (72h) > 957 mg/l (Desmodesmus subspicatus) EU Method C.3	LC50 (96h) = 191 mg/l (Oncorhynchus mykiss)	-	EC50(48hr) 168.7mg/l (Daphnia magna)		
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-	LC50 (96H) = 597 mg/L (Danio rerio)Semi-static	-	EC50 (48h) = 81mg/L Daphnia magna Static		
Diocetyl tinbis(acetylacetonate) 54068-28-9	-	LC50 (96h) = 86 mg/L (Static)	-	EC50 (48h) = 58.6 mg/L (Daphnia magna)		
Titanium dioxide 13463-67-7	LC50 (96h) > 10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-		

12.2. Persistence and degradability

Persistence and degradability No information available.

Component Information			
Trimethoxyvinylsilane (2768-02-7)			
Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric	28 days	BOD	51 % Not readily biodegradable

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Respirometry Test (TG 301 F)			
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12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient	Bioconcentration factor (BCF)
Trimethoxyvinylsilane 2768-02-7	1.1	-
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-0.3	-

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Trimethoxyvinylsilane 2768-02-7	The substance is not PBT / vPvB
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	The substance is not PBT / vPvB
Diocetyl tinbis(acetylacetonate) 54068-28-9	The substance is not PBT / vPvB
1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- 3069-29-2	The substance is not PBT / vPvB
Titanium dioxide 13463-67-7	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Uncured product should be disposed of as hazardous waste. Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging Handle contaminated packages in the same way as the product itself.

European Waste Catalogue 08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09

Other information Waste codes should be assigned by the user based on the application for which the product was used.

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Land transport (ADR/RID)

14.1 UN number or ID number Not regulated
14.2 Proper Shipping Name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Provisions None

IMDG

14.1 UN number or ID number Not regulated
14.2 Proper Shipping Name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant NP
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable

Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number Not regulated
14.2 Proper Shipping Name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

SVHC: Substances of Very High Concern for Authorisation:

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical name	CAS No	Restricted substance per REACH Annex XVII
Diisononyl phthalate	28553-12-0	52[a].

52 . Not to be used in toys or childcare articles above 0.1% which can be placed in the mouth by children.

Substance subject to authorisation per REACH Annex XIV

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Export Notification requirements

This product contains substances which are regulated pursuant to Regulation (EC) No. 649/2012 of the European parliament

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and of the council concerning the export and import of dangerous chemicals

Chemical name	European Export/Import Restrictions per (EC) 689/2008 - Annex Number
Diocetylindis(acetylacetonate)	I.1

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Persistent Organic Pollutants
Not applicable

National regulations

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H371 - May cause damage to organs

Legend

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value
*	Skin designation
SVHC	Substance(s) of Very High Concern
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
vPvB	Very Persistent and very Bioaccumulative (vPvB) Chemicals
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
EWC	European Waste Catalogue

Key literature references and sources for data

No information available

Prepared By Product Safety & Regulatory Affairs

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Indication of changes

Revision note Not applicable.

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Training Advice When working with hazardous materials, regular training of operators is required by law

Further information No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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.

End of Safety Data Sheet