

ARDEX S 21

Safety Data Sheet

according to Regulation (EU) 2015/830

Issue date: 1/6/2017

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Supersedes: 1/6/2017

Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Product name : ARDEX S 21
Product code : 18320

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

1.2.1. Relevant identified uses

Main use category : Construction materials
Industrial/Professional use spec : For professional use only
Use of the substance/mixture : Tiling Adhesives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Ardex UK Limited

Homefield Road

CB9 8QP Haverhill Suffolk

T 01440 714939 - F 01440 716667

E-mail address of competent person responsible for the SDS : safetydatasheets@ardex.co.uk

1.4. Emergency telephone number

Emergency number : +44 (0) 870 190 6777
24 hours

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2 H315

Serious eye damage/eye irritation, Category 1 H318

Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Causes skin irritation. Causes serious eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

Hazardous ingredients :

Portland cement

Hazard statements (CLP) :

H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P102 - Keep out of reach of children.
P280 - Wear eye protection, protective gloves.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P261 - Avoid breathing dust.

Extra phrases :

Dispose of contents/container in accordance with regional/national/international/local

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regulations.

2.3. Other hazards

Other hazards not contributing to the classification : The product contains chromate reducer, whereby the content of water-soluble chromium (VI) is less than 0.0002%.
With proper storage (dry) and consumption within the specified storage time, a sensitizing effect of the cement / binder by contact with skin cannot occur (H317 or EUH203 can therefore be omitted).

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Portland cement	(EC-No.) 266-043-4	> 20	Skin Sens. 1, H317 Eye Dam. 1, H318 Skin Irrit. 2, H315 STOT SE 3, H335
calcium hydroxide	(CAS-No.) 1305-62-0 (EC-No.) 215-137-3 (REACH-no) 01-2119475151-45	> 1 - < 3	Eye Dam. 1, H318 Skin Irrit. 2, H315 STOT SE 3, H335

Comments : Chromium (VI) compounds < 2 ppm

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink.

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

Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Serious damage to eyes.

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 : Non flammable.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : None.
Hazardous decomposition products in case of fire : None.

5.3. Advice for firefighters

Precautionary measures fire : No specific measures are necessary.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material damage.

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6.1.1. For non-emergency personnel

Protective equipment : Precautions for safe handling. See Heading 7.
Emergency procedures : Avoid contact with skin and eyes.

6.1.2. For emergency responders

Emergency procedures : No specific measures are necessary.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Mechanically recover the product. Minimise generation of dust. Collect spillage. Do not use compressed air for cleaning.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : See Heading 8.
Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wear protective gloves. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from moisture. Store in a dry place. The product contains chromate reducer, whereby the content of water-soluble chromium (VI) is less than 0.0002%.
With proper storage (dry) and consumption within the specified storage time, a sensitizing effect of the cement / binder by contact with skin cannot occur (H317 or EUH203 can therefore be omitted).
Incompatible materials : Aluminium.
Storage area : dry.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Portland cement		
United Kingdom	Local name	Portland cement
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ 4 mg/m ³
calcium hydroxide (1305-62-0)		
EU	Local name	Calcium dihydroxide
EU	IOELV TWA (mg/m ³)	1 mg/m ³ (Respirable fraction)
EU	IOELV STEL (mg/m ³)	4 mg/m ³ (Respirable fraction)
United Kingdom	Local name	Calcium hydroxide
United Kingdom	WEL TWA (mg/m ³)	5 mg/m ³ 1 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	4 mg/m ³

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Safety glasses. Dust formation: dust mask. Gloves.

Hand protection:

Protective gloves. The following materials are suitable for protective gloves:
Nitrile impregnated cotton gloves (layer thickness of about 0,15 mm).

Eye protection:

Safety glasses

Skin and body protection:

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Wear suitable protective clothing

Respiratory protection:

If the occupational exposure limit is exceeded:



Environmental exposure controls:

Avoid release to the environment.

Other information:

Use care during processing to minimize generation of dust. Avoid creating or spreading dust.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: Grey. white.
Odour	: odourless.
Odour threshold	: No data available
pH	: 11.5 Aqueous solution
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: > 1250 °C
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Density	: 2.75 – 3.2 g/cm ³
Solubility	: Water: 0.1 – 1.5 g/l @ 20°C
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: None.
Oxidising properties	: None.
Explosive limits	: Not applicable

9.2. Other information

VOC content	: < 3 %
Bulk density	: 900 – 1300 kg/m ³

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with water.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Acids. ammonium salts. Aluminium.

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10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

calcium hydroxide (1305-62-0)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2500 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 6.04 mg/l (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 15 day(s))

Skin corrosion/irritation : Causes skin irritation.

pH: 11.5 Aqueous solution

Serious eye damage/irritation : Causes serious eye damage.

pH: 11.5 Aqueous solution

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Irritation: severely irritant to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Portland cement	
LC50 fish 1	> 1000 mg/l (96 h, Pisces)

calcium hydroxide (1305-62-0)	
LC50 fish 1	50.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	49.1 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
EC50 72h algae (1)	184.57 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

ARDEX S 21	
Persistence and degradability	Not applicable. Inorganic Particulate Substances.
BOD (% of ThOD)	Not applicable

Portland cement	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

calcium hydroxide (1305-62-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

ARDEX S 21	
Bioaccumulative potential	No bioaccumulation.

Portland cement	
Bioaccumulative potential	Bioaccumulation: not applicable.

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calcium hydroxide (1305-62-0)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

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Ecology - soil	None.

Portland cement	
Ecology - soil	No (test)data on mobility of the substance available.

calcium hydroxide (1305-62-0)	
Ecology - soil	Adsorbs into the soil.

12.5. Results of PBT and vPvB assessment

ARDEX S 21	
PBT: not relevant – no registration required	
vPvB: not relevant – no registration required	

Component	
Portland cement ()	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
calcium hydroxide (1305-62-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 17 01 01 - concrete 10 13 14 - waste concrete and concrete sludge For residues 01 04 07* - wastes containing dangerous substances from physical and chemical processing of non-metalliferous minerals

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

ADR	IMDG	IATA
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Not applicable	Not applicable
No supplementary information available		

14.6. Special precautions for user

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : < 3 %

Other information, restriction and prohibition regulations : 1. Cement and cement-containing mixtures shall not be placed on the market, or used, if they contain, when hydrated, more than 2 mg/kg (0,0002 %) soluble chromium VI of the total dry weight of the cement.

2. If reducing agents are used, then without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of cement or cement-containing mixtures is visibly, legibly and indelibly marked with information on the packing date, as well as on the storage conditions and the storage period appropriate to maintaining the activity of the reducing agent and to keeping the content of soluble chromium VI below the limit indicated in paragraph 1.

3. By way of derogation, paragraphs 1 and 2 shall not apply to the placing on the market for, and use in, controlled closed and totally automated processes in which cement and cement-containing mixtures are handled solely by machines and in which there is no possibility of contact with the skin.

4. The standard adopted by the European Committee for Standardization (CEN) for testing the water-soluble chromium (VI) content of cement and cement-containing mixtures shall be used as the test method for demonstrating conformity with paragraph 1.

5. Leather articles coming into contact with the skin shall not be placed on the market where they contain chromium VI in concentrations equal to or greater than 3 mg/kg (0,0003 % by weight) of the total dry weight of the leather.

6. Articles containing leather parts coming into contact with the skin shall not be placed on the market where any of those leather parts contains chromium VI in concentrations equal to or greater than 3 mg/kg (0,0003 % by weight) of the total dry weight of that leather part.

7. Paragraphs 5 and 6 shall not apply to the placing on the market of second-hand articles which were in end-use in the Union before 1 May 2015.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.