Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Product name **MARMORINO NATURALE FINE**

UFI : **DX00-H04M-D00A-X6Y7**

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

Intended use **Lime-based water-based decorative paint. Professional and home use.**

Uses advised against Uses other than those indicated

1.3. Details of the supplier of the safety data sheet

Name **OIKOS S.P.A. A SOCIO UNICO**
Full address **Via Cherubini 2**
District and Country **47043 Gatteo Mare (FC)**
Italia
Tel. 0547 681412
Fax 0547 681430

e-mail address of the competent person responsible for the Safety Data Sheet **certificazioniprodotti@oikos-group.it**

1.4. Emergency telephone number

For urgent inquiries refer to **NHS National Health Service 111**

OIKOS S.P.A. a socio unico Company emergency number: 0547 681412
Technical support - Monday to Friday from 8.00-13.00; 13:30 to 16:30

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H318 Causes serious eye damage.
H315 Causes skin irritation.
EUH208 Contains: Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one[EC no. 247-500-7] and

SECTION 2. Hazards identification ... / >>

2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
May produce an allergic reaction.

Precautionary statements:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P302+P352	IF ON SKIN: wash with plenty of water / . . .
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER / doctor / . . .
P501	Dispose of contents / container in accordance with local regulation.

Contains: Calcium dihydroxide

VOC (Directive 2004/42/EC) :
Matt coatings for interior walls and ceilings.
VOC given in g/litre of product in a ready-to-use condition : 14,00
Limit value: 30,00

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
Calcium dihydroxide		
CAS 1305-62-0	10 ≤ x < 15	**Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335**
EC 215-137-3		
INDEX		
REACH Reg. 01-2119475151-45		
Ethane-1,2-diol		
CAS 107-21-1	0,5 ≤ x < 1,5	**Acute Tox. 4 H302, STOT RE 2 H373**
EC 203-473-3		**STA Oral: 500 mg/kg**
INDEX 603-027-00-1		
REACH Reg. 01-2119456816-28		
2-butoxyethanol		
CAS 111-76-2	0,329 ≤ x < 0,335	**Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Irrit. 2 H315**
EC 203-905-0		**LD50 Oral: 1200 mg/l/4h, STA Inhalation mists/powders: 1,5 mg/l**
INDEX 603-014-00-0		
REACH Reg. 01-2119475108-36		
2-methoxy-1-methylethyl acetate		
CAS 108-65-6	0,049 ≤ x < 0,055	**Flam. Liq. 3 H226**
EC 203-603-9		
INDEX 607-195-00-7		
REACH Reg. 01-2119475791-29		
1-methoxypropan-2-ol		
CAS 107-98-2	0,024 ≤ x < 0,03	**Flam. Liq. 3 H226, STOT SE 3 H336**
EC 203-539-1		
INDEX 603-064-00-3		
REACH Reg. 01-2119457435-35		

SECTION 3. Composition/information on ingredients ... / >>

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one[EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

CAS	*55965-84-9*	0,00035 ≤ x < 0,0013	**Acute Tox. 1 H330, Acute Tox. 2 H310, Acute Tox. 3 H301, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=100, Aquatic Chronic 1 H410 M=100**
EC	*611-341-5*		**Skin Corr. 1C H314: ≥ 0,6%, Skin Irrit. 2 H315: ≥ 0,06%, Skin Sens. 1 H317: ≥ 0,0015%, Eye Irrit. 2 H319: ≥ 0,6%**
INDEX	*613-167-00-5*		**LD50 Oral: >64 mg/kg bw, STA Dermal: 50,001 mg/kg, STA Inhalation vapours: 0,05 mg/l**
REACH Reg.	*01-2120764691-48*		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

SECTION 6. Accidental release measures ... / >>

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2021

SECTION 8. Exposure controls/personal protection ... / >>

2-methoxy-1-methylethyl acetate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	270	50	270	50	
MAK	DEU	270	50	270	50	
VLA	ESP	275	50	550	100	SKIN
VLEP	FRA	275	50	550	100	SKIN
VLEP	ITA	275	50	550	100	SKIN
NDS/NDSCh	POL	260		520		SKIN
WEL	GBR	274	50	548	100	SKIN
OEL	EU	275	50	550	100	SKIN

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,0635	mg/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/kg
Normal value for water, intermittent release	635	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,29	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				1,67 mg/kg/d				
Inhalation			10	33 mg/m3			10	275 mg/m3
Skin				54,8 mg/kg/d				153,5 mg/kg/d

2-butoxyethanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	49	10	98	20		
MAK	DEU	49	10	98	20	SKIN	Hinweis
VLA	ESP	98	20	245	50	SKIN	
VLEP	FRA	49	10	246	50	SKIN	
VLEP	ITA	98	20	246	50	SKIN	
NDS/NDSCh	POL	98		200		SKIN	
WEL	GBR	123	25	246	50	SKIN	
OEL	EU	98	20	246	50	SKIN	

Predicted no-effect concentration - PNEC

Normal value in fresh water	8,8	mg/l
Normal value in marine water	26,4	mg/l
Normal value for fresh water sediment	34,6	mg/kg
Normal value for marine water sediment	3,46	mg/kg
Normal value for water, intermittent release	0,88	mg/l
Normal value of STP microorganisms	463	mg/l
Normal value for the terrestrial compartment	2,33	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		26,7 mg/kg bw/d		6,3 mg/kg bw/d				
Inhalation	147 mg/m3	426 mg/m3	NPI	59 mg/m3	246 mg/m3	1091 mg/m3	NPI	98 mg/m3
Skin		89 mg/kg bw/d	NPI	75 mg/kg bw/d		89 mg/kg bw/d	NPI	125 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

Ethane-1,2-diol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	26	10	52	20	SKIN
MAK	DEU	26	10	52	20	SKIN
VLA	ESP	52	20	104	40	SKIN
VLEP	FRA	52	20	104	40	SKIN
VLEP	ITA	52	20	104	40	SKIN
NDS/NDSCh	POL	15		50		SKIN
WEL	GBR	52	20	104	40	SKIN
OEL	EU	52	20	104	40	SKIN
TLV-ACGIH			25		50	
TLV-ACGIH				10		INHAL

Predicted no-effect concentration - PNEC

Normal value in fresh water	10	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	37	mg/kg/d
Normal value for marine water sediment	3,7	mg/kg/d
Normal value for water, intermittent release	10	mg/l
Normal value of STP microorganisms	199,5	mg/l
Normal value for the terrestrial compartment	1,53	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			7 mg/m3				35 mg/m3	
Skin				53 mg/kg bw/d			106	106 mg/kg bw/d

1-methoxypropan-2-ol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	370	100	740	200	
MAK	DEU	370	100	740	200	
VLA	ESP	375	100	568	150	SKIN
VLEP	FRA	188	50	375	100	SKIN
VLEP	ITA	375	100	568	150	SKIN
NDS/NDSCh	POL	180		360		SKIN
WEL	GBR	375	100	560	150	SKIN
OEL	EU	375	100	568	150	SKIN

Predicted no-effect concentration - PNEC

Normal value in fresh water	10	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	41,6	mg/kg
Normal value for marine water sediment	4,17	mg/kg
Normal value for water, intermittent release	100	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	2,47	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral						3,3 mg/kg/d		
Inhalation				43,9 mg/m3			553,5 mg/m3	369 mg/m3
Skin				18,1 mg/kg/d				50,6 mg/kg/d

SECTION 8. Exposure controls/personal protection ... / >>

Calcium dihydroxide

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	DEU	1		2		INHAL
VLA	ESP	1		4		
VLEP	FRA	1		4		
VLEP	ITA	1		4		RESP
NDS/NDSCh	POL	2		6		INHAL
NDS/NDSCh	POL	1		4		RESP
WEL	GBR	5				INHAL
WEL	GBR	1		4		RESP
OEL	EU	1		4		RESP
TLV-ACGIH		5				

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,49	mg/l
Normal value in marine water	0,32	mg/l
Normal value for water, intermittent release	0,49	mg/l
Normal value of STP microorganisms	3	mg/l
Normal value for the terrestrial compartment	1080	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation	4 mg/m3		1 mg/m3		4 mg/m3		1 mg/m3	

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one[EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Predicted no-effect concentration - PNEC

Normal value in fresh water	3,39	µg/l
Normal value in marine water	3,39	µg/l
Normal value for fresh water sediment	27	µg/kg
Normal value for marine water sediment	27	µg/kg
Normal value of STP microorganisms	230	µg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		110 µg/kg bw/d		90 µg/kg bw/d				
Inhalation	40 µg/m3	NPI	20 µg/m3	NPI	40 µg/m3	NPI	20 µg/m3	NPI
Skin		NPI	NPI	NPI		NPI	NPI	NPI

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.
HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

SECTION 8. Exposure controls/personal protection ... / >>

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties		Value	Information
Appearance		pasty liquid	
Colour		White and the colour chart shades	
Odour		Hydraulic binder	
Melting point / freezing point		not available	
Initial boiling point	>	100 °C	
Flammability		not flammable	
Lower explosive limit		not applicable	
Upper explosive limit		not applicable	
Flash point	>	60 °C	
Auto-ignition temperature		not applicable	
pH		12-13	
Kinematic viscosity		not available	
Dynamic viscosity		tixotropico	
Solubility		Mixable in water	
Partition coefficient: n-octanol/water		not available	
Vapour pressure		not available	
Density and/or relative density		1,5	
Relative vapour density		not available	
Particle characteristics		not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2004/42/EC) :	0,88 % - 13,17		g/litre
VOC (volatile carbon)	0,10 % - 1,44		g/litre
Explosive properties	not applicable		
Oxidising properties	not applicable		

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

2-methoxy-1-methylethyl acetate
Stable in normal conditions of use and storage.
With the air it may slowly develop peroxides that explode with an increase in temperature.

2-butoxyethanol
Decomposes under the effect of heat.
Ethane-1,2-diol
In the air absorbs moisture.Decomposes at temperatures above 200°C/392°F.

SECTION 10. Stability and reactivity ... / >>

1-methoxypropan-2-ol
Dissolves various plastic materials.Stable in normal conditions of use and storage.
Absorbs and disolves in water and in organic solvents. With air it may slowly form explosive peroxides.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

2-methoxy-1-methylethyl acetate
May react violently with: oxidising substances,strong acids,alkaline metals.
2-butoxyethanol
May react dangerously with: aluminium,oxidising agents.Forms peroxides with: air.
Ethane-1,2-diol
Risk of explosion on contact with: perchloric acid.May react dangerously with: chlorosulphuric acid,sodium hydroxide,sulphuric acid,phosphorus pentasulphide,chromium (III) oxide,chromyl chloride,potassium perchlorate,potassium dichromate,sodium peroxide,aluminium.Forms explosive mixtures with: air.
1-methoxypropan-2-ol
May react dangerously with: strong oxidising agents,strong acids.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

2-butoxyethanol
Avoid exposure to: sources of heat,naked flames.
Ethane-1,2-diol
Avoid exposure to: sources of heat,naked flames.
1-methoxypropan-2-ol
Avoid exposure to: air.

10.5. Incompatible materials

2-methoxy-1-methylethyl acetate
Incompatible with: oxidising substances,strong acids,alkaline metals.
1-methoxypropan-2-ol
Incompatible with: oxidising substances,strong acids,alkaline metals.

10.6. Hazardous decomposition products

2-butoxyethanol
May develop: hydrogen.
Ethane-1,2-diol
May develop: hydroxyacetaldehyde,glyoxal,acetaldehyde,methane,carbon monoxide,hydrogen.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

Metabolism, toxicokinetics, mechanism of action and other information

2-methoxy-1-methylethyl acetate
The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Calcium dihydroxide
ABSORPTION
The primary effect of calcium diidide on health is local irritation caused by pH variation. Therefore, absorption is not a relevant parameter for the assessment of the effects of the substance.

Information on likely routes of exposure

2-methoxy-1-methylethyl acetate
WORKERS: inhalation; contact with the skin.

SECTION 11. Toxicological information ... / >>

Ethane-1,2-diol
WORKERS: inhalation; contact with the skin.
POPULATION: inhalation of ambient air; contact with the skin of products containing the substance.

1-methoxypropan-2-ol
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air; contact with the skin of products containing the substance.

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

2-methoxy-1-methylethyl acetate
Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

Ethane-1,2-diol
Ingestion initially stimulates the central nervous system; later replaced by a phase of depression. There may be kidney damage, with anuria and uremia. Over-exposure symptoms are: vomiting, drowsiness, difficulty in breathing, convulsions. The lethal dose for humans is approx. 1.4 ml/kg.

1-methoxypropan-2-ol
The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product. Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported.

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

2-methoxy-1-methylethyl acetate

LD50 (Oral):	> 5000 mg/kg

2-butoxyethanol

LD50 (Oral):	1200 mg/kg Guinea pig
LC50 (Inhalation vapours):	2,2 mg/l/4h Rat

Ethane-1,2-diol

LD50 (Dermal):	3500 mg/kg Rat
LD50 (Oral):	> 7712 mg/kg Rat
LC50 (Inhalation vapours):	2,5 mg/l/4h

1-methoxypropan-2-ol

LD50 (Dermal):	> 2000 mg/kg Rabbit
LD50 (Oral):	4016 mg/kg Rat

Calcium dihydroxide

LD50 (Dermal):	> 2500 mg/kg Rabbit (OCSE 402)
LD50 (Oral):	> 2000 mg/kg Rat (OECD 425)

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one[EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

LD50 (Dermal):	1008 mg/kg bw (rat)
STA (Dermal):	50,001 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	> 64 mg/kg bw 64-561 (rat)
LC50 (Inhalation vapours):	> 171 mg/m3 171-2360 (rat)

SKIN CORROSION / IRRITATION

Causes skin irritation

SECTION 11. Toxicological information ... / >>

Calcium dihydroxide
Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

Calcium dihydroxide
Causes severe eye injury

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.
Contains:
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one[EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Calcium dihydroxide
Does not meet the classification criteria for this danger class

Respiratory sensitization

Information not available

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Calcium dihydroxide
Reverse Bacterial Mutation Essay (Ames Test, OECD 471): Negative
Testing chromosomal aberrations on mammal cells: negative
Given that calcium is an omnipresene and essential element and that any variation of the lime-induced pH in watery means has no relevance, calcium dihydroxide is ovially devoidant of any genotoxic potential. Classification by function of genotoxicity is not justified.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Ethane-1,2-diol
Available studies have shown no carcinogenic potential. In a carcinogenicity study lasting two years, carried out by the US National Toxicology Program (NTP), in which ethylene glycol was administered in the feed, "no evidence of carcinogenic activity" in male and female B6C3F1 mice was observed (NTP, 1993).

Calcium dihydroxide
Calcium (administered in the form of lactate) is not carcinogenic (experimental result, rat). The effect on pH on the product of calcium diid dioxide is free of any carcinogenic potential. classification on the basis of carcinogenicity is not justified.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Calcium dihydroxide
Calcium (administered in the form of Ca carbonate) is not toxic for reproduction (experimental result, mouse). The effect on pH does not give rise to any reproductive risk. Human epidemiological data confirm that calcium diid dioxide is free of any potential toxicity. In both animal and clinical trials on different calcium salts, no effect has been identified on reproductive and developmental toxicity. v. also the Scientific Committee of Human Food (Anonymous, 2006). Therefore, calcium diidide is not toxic for reproduction and/or development.
Classification on the basis of reproductive toxicity according to Regulation 1272/2008 is not necessary.

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

SECTION 11. Toxicological information ... / >>

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Calcium dihydroxide
It can irritate the airways

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Calcium dihydroxide
The toxicity of calcium through the oral exposure pathway is demonstrated by the increase in maximum tolerable intake levels (UL) for adults determined by the Scientific Committee of Human Food (SCF), where UL-2500 mg/die, equal to 38 mg/kg of weight/die, equal to 38 mg/kg of weight/die (individual weighing 70 kg) for calcium.
The toxicity of Ca(OH)2 through contact with the skin is not considered relevant by virtue of the expected insignificant absorption through the skin and the fact that local irritation is the primary effect for health (pH variation).
The toxicity of Ca(OH)2 by inhalation (local effect, mucous irritation), taking into account an average time weighed for an 8-hour shift, was determined by the Scientific Committee for Occupational Exposure Limits (SCOEL) in 1 mg/m3 of breathable dust.
Therefore, the classification of Ca(OH)2 on the basis of toxicity as a result of prolonged exposure is not necessarily

Target organs

Information not available

Route of exposure

Information not available

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

Calcium dihydroxide
Does not meet the classification criteria for this danger class

Calcium diidhydroxide is classified as irritating to the skin and airways, and carries the risk of serious eye injury. The limit of occupational exposure for the prevention of sensory irritation at the local level and the reduction of lung function parameters as effects is OEL (8 hours) - 1 mg/m3 of breathable dust.

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

Calcium dihydroxide
LC50 (96h) on sea fish: 457 mg/l
LC50 (96h) on sea invertebrates: 158 mg/l
NOEC (72 hours) on freshwater algae: 48 mg/l
TOXICITY ON MICROORGANISMS, ES BACTERIA
At high concentration, through temperature and pH rise, calcium diidhydxide is used for disinfection of sewer sludge.
NOEC (14 days) for sea invertebrates: 32 mg/l
EC10/LC10 or NOEC on soil macro-organisms: 2000 mg/kg soil dw
EC10/LC10 or NOEC on soil microorganisms: 12000 mg/kg soil dw
NOEC (21 days) on terrestrial plants: 1080 mg/kg
GENERAL EFFECT
Acute effect of pH. Although this substance is useful for correcting water acidity, excess over 1 g/l can be harmful to aquatic organisms. A value of pH> 12 will decrease rapidly and as a result of dilution and carbonation.

2-methoxy-1-methylethyl acetate

LC50 - for Fish	> 100 mg/l/96h 100-180

2-butoxyethanol

LC50 - for Fish	1464 mg/l/96h
EC50 - for Crustacea	1800 mg/l/48h
EC50 - for Algae / Aquatic Plants	1840 mg/l/72h
EC10 for Algae / Aquatic Plants	679 mg/l/72h
Chronic NOEC for Fish	100 mg/l 21 days
Chronic NOEC for Crustacea	100 mg/l 21 days
Chronic NOEC for Algae / Aquatic Plants	286 mg/l 72 h

Ethane-1,2-diol

LC50 - for Fish	72,86 mg/l/96h
EC50 - for Crustacea	100 mg/l/48h
Chronic NOEC for Fish	32000 mg/l 7 days
Chronic NOEC for Crustacea	1000 mg/l 23 days
Chronic NOEC for Algae / Aquatic Plants	100 mg/l 72 h

1-methoxypropan-2-ol

LC50 - for Fish	6,812 mg/l/96h

Calcium dihydroxide

LC50 - for Fish	50,6 mg/l/96h freshwater fish
EC50 - for Crustacea	49,1 mg/l/48h invertebrate
EC50 - for Algae / Aquatic Plants	184,57 mg/l/72h alga

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one[EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

LC50 - for Fish	> 190 µg/l 190-330
EC50 - for Crustacea	> 7 µg/l 7-160
EC50 - for Algae / Aquatic Plants	> 6,3 µg/l 6,3-27,3
Chronic NOEC for Fish	46,4 µg/l 35 days
Chronic NOEC for Crustacea	> 111 µg/l 11.1-1050

12.2. Persistence and degradability

2-methoxy-1-methylethyl acetate
Rapidly degradable

2-butoxyethanol

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

SECTION 12. Ecological information ... / >>

Ethane-1,2-diol
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

1-methoxypropan-2-ol
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one[EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)
Rapidly degradable

12.3. Bioaccumulative potential

2-methoxy-1-methylethyl acetate
Partition coefficient: n-octanol/water 1,2

2-butoxyethanol
Partition coefficient: n-octanol/water 0,81

Ethane-1,2-diol
Partition coefficient: n-octanol/water -1,36

12.4. Mobility in soil

Calcium dihydroxide
Calcium diidhydroxide is a moderately soluble substance and therefore has poor mobility in most soils.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number or ID number

not applicable

14.2. UN proper shipping name

not applicable

14.3. Transport hazard class(es)

not applicable

SECTION 14. Transport information ... / >>

14.4. Packing group

not applicable

14.5. Environmental hazards

not applicable

14.6. Special precautions for user

not applicable

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product
Point 3 - 40
Contained substance
Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

VOC (Directive 2004/42/EC) :
Matt coatings for interior walls and ceilings.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)
WGK 1: Low hazard to waters

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances
Calcium dihydroxide

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3

SECTION 16. Other information ... / >>

STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H226	Flammable liquid and vapour.
H330	Fatal if inhaled.
H310	Fatal in contact with skin.
H301	Toxic if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)

SECTION 16. Other information ... / >>

14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 08 / 09 / 11 / 12 / 15 / 16.