

Knauf UK & Ireland GmbH

Version No: 4.1

Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Issue Date: **08/02/2024** Print Date: **26/04/2024** L.REACH.GB.EN.E

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

1.1. Product Identifier

Product name	Standard Wallboard	
Chemical Name	Not Applicable	
Synonyms	Not Available	
Chemical formula	Not Applicable	
Other means of identification	Not Available	

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

Relevant identified uses	For use as cladding component in majority of partitions and lining systems. Use according to manufacturer's directions.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the manufacturer or supplier of the safety data sheet

Registered company name	Knauf UK & Ireland GmbH
Address	Kemsley Fields Business Park Kent ME9 8SR Great Britain
Telephone	0800 521 050
Fax	Not Available
Website	www.knauf.com
Email	cservice@knauf.com

1.4. Emergency telephone number

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Association / Organisation	Knauf UK & Ireland
Emergency telephone numbers	0800 521 050 - 9am - 5pm
Other emergency telephone numbers	111 - NHS Emergency

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI	
2020/1567 ^[1]	

2.2. Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Hazard statement(s)

Not Applicable

Supplementary statement(s)

EUH210 Safety data sheet available on request.

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

Material contains gypsum.

2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

1. CAS No 2.EC No 3.Index No 4.REACH No	% [weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M- Factor	Nanoform Particle Characteristics
1. 13397-24-5 2.Not Available 3.Not Available 4.Not Available	>60	<u>gypsum</u>	Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3; H319, H335 ^[1]	Not Available	Not Available
1. 9005-25-8 2.232-679-6 3.Not Available 4.Not Available	<1	starch	Not Classified ^[1]	Not Available	Not Available
Not Available	balance	Ingredients determined not to be hazardous	Not Applicable	Not Applicable	Not Available
Legend:			ssification drawn from GB-CLP Regulation, UK SI 2019 EU IOELVs available; [e] Substance identified as having		

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	 If dust from product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. Generally not applicable.
Skin Contact	 If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. Generally not applicable.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay. Generally not applicable.

Ingestion	 If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice. Generally not applicable.
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4.2 Most important symptoms and effects, both acute and delayed

See Section 11

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

Treat symptomatically.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

5.3. Advice for firefighters

	Alert Fire Brigade and tell them location and nature of hazard.
	 Wear breathing apparatus plus protective gloves in the event of a fire.
	Prevent, by any means available, spillage from entering drains or water courses.
	Use fire fighting procedures suitable for surrounding area.
Fire Fighting	DO NOT approach containers suspected to be hot.
	Cool fire exposed containers with water spray from a protected location.
	If safe to do so, remove containers from path of fire.
	Equipment should be thoroughly decontaminated after use.
	Slight hazard when exposed to heat, flame and oxidisers.
Fire/Explosion Hazard	 Articles and manufactured articles may constitute a fire hazard where polymers form their outer layers or where combustible packaging remains in place. Certain substances, found throughout their construction, may degrade or become volatile when heated to high temperatures. This may create a secondary hazard. Non combustible. Not considered a significant fire risk, however containers may burn. Decomposes on heating and produces: carbon dioxide (CO2)
	sulfur oxides (SOx)
	other pyrolysis products typical of burning organic material.
	May emit poisonous fumes.
	May emit corrosive fumes.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	 Clean up all spills immediately. Secure load if safe to do so. Bundle/collect recoverable product. Collect remaining material in containers with covers for disposal.
Major Spills	 Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue (see Section 13 for specific agent).

Collect solid residues and seal in labelled drums for disposal.
 Wash area and prevent runoff into drains.
After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using
 If contamination of drains or waterways occurs, advise emergency services.
Minor hazard.
Clear area of personnel.
 Alert Fire Brigade and tell them location and nature of hazard.
Control personal contact with the substance, by using protective equipment as required.
 Prevent spillage from entering drains or water ways.
 Contain spill with sand, earth or vermiculite.
Collect recoverable product into labelled containers for recycling.
Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
 Wash area and prevent runoff into drains or waterways.
If contamination of drains or waterways occurs, advise emergency services.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	 Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to contact humans, exposed food or food utensils. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Fire and explosion protection	See section 5
Other information	 Store away from incompatible materials.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	Generally packaging as originally supplied with the article or manufactured item is sufficient to protect against physical hazards. If repackaging is required ensure the article is intact and does not show signs of wear. As far as is practicably possible, reuse the original packaging or something providing a similar level of protection to both the article and the handler. Glass container is suitable for laboratory quantities
Storage incompatibility	 Avoid strong acids, bases. Avoid reaction with oxidising agents
Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)	Not Available
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	Not Available

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
gypsum	Inhalation 21.17 mg/m ³ (Systemic, Chronic) Inhalation 5 082 mg/m ³ (Systemic, Acute) Inhalation 5.29 mg/m ³ (Systemic, Chronic) * Oral 1.52 mg/kg bw/day (Systemic, Chronic) * Inhalation 3 811 mg/m ³ (Systemic, Acute) * Oral 11.4 mg/kg bw/day (Systemic, Acute) *	100 mg/L (STP)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs).	gypsum	Gypsum: inhalable dust	10 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	gypsum	Gypsum: respirable	4 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	starch	Starch: total inhalable	10 mg/m3	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs).	starch	Starch: respirable	4 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
starch	30 mg/m3	330 mg/m3		2,000 mg/m3
Ingredient	Original IDLH		Revised IDLH	
gypsum	Not Available		Not Available	
starch	Not Available		Not Available	

MATERIAL DATA

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Articles or manufactured items, in their original condition, go normal use.	enerally don't require engineering controls during	g handling or in		
	Exceptions may arise following extensive use and subsequent wear, during recycling or disposal operations where substances,				
	found in the article, may be released to the environment.				
	Engineering controls are used to remove a hazard or place		•		
	engineering controls can be highly effective in protecting we provide this high level of protection.	orkers and will typically be independent of worke	r interactions to		
	The basic types of engineering controls are:				
	Process controls which involve changing the way a job activ	vity or process is done to reduce the risk.			
	Enclosure and/or isolation of emission source which keeps	a selected hazard "physically" away from the wo	orker and ventilatio		
	that strategically "adds" and "removes" air in the work envir	onment. Ventilation can remove or dilute an air c	contaminant if		
	designed properly. The design of a ventilation system must		ontaminant in use.		
	Employers may need to use multiple types of controls to prevent employee overexposure.				
	Least exhaust ventilation usually required. If risk of averageours exists, wear approved requiretor. Correct fit is essential to				
	Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to				
	ensure adequate protection.				
	ensure adequate protection.				
	ensure adequate protection. An approved self contained breathing apparatus (SCBA) m	ay be required in some situations.			
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag	e area. Air contaminants generated in the workp			
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ve	e area. Air contaminants generated in the workp			
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	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ve contaminant. Type of Contaminant:	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air).	Air Speed: 0.25-0.5 m/s (5 100 f/min.)		
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ve contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air). tainer filling, low speed conveyer transfers,	Air Speed: 0.25-0.5 m/s (50 100 f/min.)		
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ve contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank aerosols, fumes from pouring operations, intermittent con	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air). tainer filling, low speed conveyer transfers, at low velocity into zone of active generation)	Air Speed: 0.25-0.5 m/s (5i 100 f/min.) 0.5-1 m/s (100-200 f/min.)		
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ve contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank aerosols, fumes from pouring operations, intermittent con welding, spray drift, plating acid fumes, pickling (released	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air). tainer filling, low speed conveyer transfers, at low velocity into zone of active generation) , conveyer loading, crusher dusts, gas	Air Speed: 0.25-0.5 m/s (5i 100 f/min.) 0.5-1 m/s (100-200 f/min.)		
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ve contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank aerosols, fumes from pouring operations, intermittent con welding, spray drift, plating acid fumes, pickling (released direct spray, spray painting in shallow booths, drum filling	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air). tainer filling, low speed conveyer transfers, at low velocity into zone of active generation) , conveyer loading, crusher dusts, gas	Air Speed: 0.25-0.5 m/s (50 100 f/min.) 0.5-1 m/s (100-200 f/min.) 1-2.5 m/s (200-500 f/min.)		
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ver- contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank aerosols, fumes from pouring operations, intermittent con welding, spray drift, plating acid fumes, pickling (released direct spray, spray painting in shallow booths, drum filling discharge (active generation into zone of rapid air motion)	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air). tainer filling, low speed conveyer transfers, at low velocity into zone of active generation) , conveyer loading, crusher dusts, gas	Air Speed: 0.25-0.5 m/s (56 100 f/min.) 0.5-1 m/s (100-200 f/min.) 1-2.5 m/s (200-		
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ver- contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank aerosols, fumes from pouring operations, intermittent con welding, spray drift, plating acid fumes, pickling (released direct spray, spray painting in shallow booths, drum filling discharge (active generation into zone of rapid air motion) grinding, abrasive blasting, tumbling, high speed wheel gen	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air). tainer filling, low speed conveyer transfers, at low velocity into zone of active generation) , conveyer loading, crusher dusts, gas	Air Speed: 0.25-0.5 m/s (50 100 f/min.) 0.5-1 m/s (100-200 f/min.) 1-2.5 m/s (200-500 f/min.) 2.5-10 m/s (500		
	An approved self contained breathing apparatus (SCBA) m Provide adequate ventilation in warehouse or closed storag "escape" velocities which, in turn, determine the "capture ver- contaminant. Type of Contaminant: solvent, vapours, degreasing etc., evaporating from tank of aerosols, fumes from pouring operations, intermittent con- welding, spray drift, plating acid fumes, pickling (released direct spray, spray painting in shallow booths, drum filling discharge (active generation into zone of rapid air motion) grinding, abrasive blasting, tumbling, high speed wheel ge into zone of very high rapid air motion).	e area. Air contaminants generated in the workp elocities" of fresh circulating air required to effect (in still air). tainer filling, low speed conveyer transfers, at low velocity into zone of active generation) , conveyer loading, crusher dusts, gas	Air Speed: 0.25-0.5 m/s (50 100 f/min.) 0.5-1 m/s (100-200 f/min.) 1-2.5 m/s (200-500 f/min.) 2.5-10 m/s (500		

	2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity		
	3: Intermittent, low production.	3: High production, heavy use		
	 4: Large hood or large air mass in motion 4: Small hood-local control only Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used. Safety glasses with side shields. Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]. Eye protection not normally required due to the physical form of the product. 			
8.2.2. Individual protection measures, such as personal protective equipment				
Eye and face protection				
Skin protection	See Hand protection below			
Hands/feet protection	 Wear safety footwear or safety gumboots, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. 			
Body protection	See Other protection below			
Other protection	Overalls. P.V.C apron. Barrier cream. Skin cleansing cream. Eye wash unit.			

Ansell Glove Selection

Glove — In order of recommendation
AlphaTec® 15-554
AlphaTec® Solvex® 37-185
AlphaTec® 38-612
AlphaTec® 58-008
AlphaTec® 58-530B
AlphaTec® 58-530W
AlphaTec® 58-735
AlphaTec® 79-700
AlphaTec® Solvex® 37-675
DermaShield™ 73-711

The suggested gloves for use should be confirmed with the glove supplier.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^{^ -} Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Respiratory protection not normally required due to the physical form of the product.

Class P2 particulate filters are used for protection against mechanically and thermally generated particulates or both.

 $\mathsf{P2}$ is a respiratory filter rating under various international standards, Filters at least 94% of airborne particles

Suitable for:

• Relatively small particles generated by mechanical processes eg. grinding, cutting, sanding, drilling, sawing.

- Sub-micron thermally generated particles e.g. welding fumes, fertilizer and bushfire smoke.

Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Plasterboard with an ivory paper face.			
Physical state	Manufactured	Relative density (Water = 1)	Not Available	
Odour	Not Available	Partition coefficient n- octanol / water	Not Available	
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable	
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available	
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Applicable	
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable	
Flash point (°C)	Not Applicable	Taste	Not Available	
Evaporation rate	Not Available	Explosive properties	Not Available	
Flammability	Not Applicable	Oxidising properties	Not Available	
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable	
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available	
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available	
Solubility in water	Not Available	pH as a solution (1%)	Not Available	
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available	
Nanoform Solubility	Not Available	Nanoform Particle Characteristics	Not Available	
Particle Size	Not Available			

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Inhaled Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of

	gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving
	the recruitment and activation of many cell types, mainly derived from the vascular system.
	Accidental ingestion of the material may be damaging to the health of the individual.
Ingestion	Sulfate salts are poorly absorbed from the gastro-intestinal tract but because of osmotic activity are able to draw water from the lumen to produce diarrhoea (purging). Sulfate ion usually has little toxicological potential.
Skin Contact	Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. Four students received severe hand burns whilst making moulds of their hands with dental plaster substituted for Plaster of Paris. The dental plaster known as "Stone" was a special form of calcium sulfate hemihydrate containing alpha-hemihydrate crystals that provide high compression strength to the moulds. Beta-hemihydrate (normal Plaster of Paris) does not cause skin burns in similar circumstances. Open cuts, abraded or irritated skin should not be exposed to this material Solution of material in moisture on the skin, or perspiration, may increase irritant effects Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	 Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving
	organs or biochemical systems. Limited evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a significant number of individuals at a greater frequency than would be expected from the response of a normal population. Pulmonary sensitisation, resulting in hyperactive airway dysfunction and pulmonary allergy may be accompanied by fatigue, malaise and aching. Significant symptoms of exposure may persist for extended periods, even after exposure ceases. Symptoms can be activated by a variety of nonspecific environmental stimuli such as automobile exhaust, perfumes and passive smoking. There exists limited evidence that shows that skin contact with the material is capable elither of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals. Chronic boric acid poisoning is characterized by mild gastroinestinal irritation, loss of appetite, disturbe digestion, nausea, possibly vomiting and a hard blotchy rash. Dryness of skin, reddening of tongue, loss of hair, conjunctivitis, and kidney injury have also been reported. (Occupational Diseases) Long term exposure to boric acid may be of more concern, causes kidney damage and eventually kidney failure. Although it does not appear to be carcinogenic, studies in dogs have reported testicular atrophy after exposure to 32 m/kg bw/day for 90 days. This level is far lower than the LDS0. Boric acid in high doses shows significant developmental toxicity and teratogenicity in rabbit, rat, and mouse foetuses as well as cardiovascultar detects, skeletal variations, mild kidney lesions. The mechanism of action by which boric acid causes testicular toxicity has been investigated and it has been proposed that decreased intro-testicular testosterone levels. The fact that testicular damage was reversible and less extensive in younger axinals still in development may be expected to be more sensitive to anti-androgenic effects han adults. Inhibition of permision has be

	Standard	Wallboard
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	persons			
~	ΤΟΧΙΟΙΤΥ	IRRITATION		
Standard Wallboard	Not Available	Not Available		
	ΤΟΧΙΟΙΤΥ	IRRITATION		
gypsum	Inhalation (Rat) LC50: >3.26 mg/l4h ^[1]	Not Available		
	Oral (Rat) LD50: >1581 mg/kg ^[1]			
starch	ΤΟΧΙΟΙΤΥ	IRRITATION		
	Not Available	Skin (human): 0.3 mg/3d-l mild		
Legend:	, 3	bstances - Acute toxicity 2. Value obtained from manufacturer's SDS. CS - Register of Toxic Effect of chemical Substances		
GYPSUM	allergic condition known as reactive airways dysfunct highly irritating compound. Main criteria for diagnosin individual, with sudden onset of persistent asthma-lik irritant. Other criteria for diagnosis of RADS include a bronchial hyperreactivity on methacholine challenge eosinophilia. RADS (or asthma) following an irritating and duration of exposure to the irritating substance.	ven years after exposure to the material ends. This may be due to a non- tion syndrome (RADS) which can occur after exposure to high levels of g RADS include the absence of previous airways disease in a non-atopic e symptoms within minutes to hours of a documented exposure to the a reversible airflow pattern on lung function tests, moderate to severe testing, and the lack of minimal lymphocytic inflammation, without i inhalation is an infrequent disorder with rates related to the concentration On the other hand, industrial bronchitis is a disorder that occurs as a resul- ubstance (often particles) and is completely reversible after exposure eathing, cough and mucus production.		

No significant acute toxicological data identified in literature search.

Gypsum (calcium sulfate dihydrate) is a skin, eye, mucous membrane, and respiratory system irritant. Early studies of gypsum miners did not relate pneumoconiosis with chronic exposure to gypsum. Other studies in humans (as well as animals) showed no lung fibrosis produced by natural dusts of calcium sulfate except in the presence of silica. However, a series of studies reported chronic nonspecific respiratory diseases in gypsum industry workers in Gacki, Poland.

Unlike other fibers, gypsum is very soluble in the body; its half-life in the lungs has been estimated as minutes. In four healthy men receiving calcium supplementation with calcium sulfate (CaSO4·1/2H2O) (200 or 220 mg) for 22 days, an average absorption of 28.3% was reported.

Several feeding studies in pigs on the bioavailability of calcium in calcium supplements, including gypsum, have been conducted. The bioavailability of calcium in gypsum was similar to that for calcitic limestone, oyster shell flour, marble dust, and aragonite, ranging from 85 to 102%. In mice, the i.p. and intragastric LD50 values were 6200 and 4704 mg/kg, respectively, for phosphogypsum (98% CaSO4·H2O). For Plaster of Paris, the values were 4415 and 5824, respectively. In rats, an intragastric LD50 of 9934 mg/kg was reported for phosphogypsum

Repeat dose toxicity: In a study of 241 underground male workers employed in four gypsum mines in Nottinghamshire and Sussex for a year (November 1976-December 1977), results of chest X-rays, lung function tests, and respiratory systems suggested an association of the observed lung shadows with the higher quartz content in dust rather than to gypsum; the small round opacities in the lungs were characteristic of silica exposure.

Prophylactic examinations of workers in a gypsum extraction and production plant (dust concentration exceeded TLV 2.5- to 10fold) reported no risk of pneumoconiosis due to gypsum exposure, while another study of gypsum manufacturing plant workers reported that chronic occupational exposure to gypsum dust had resulted in pulmonary ventilatory defect of the restrictive form. Three cases of idiopathic interstitial pneumonia with multiple bullae throughout the lungs were seen in Japanese schoolteachers (lifetime occupation) exposed to chalk; 2/3 of the chalk was made from gypsum and small amounts of silica and other minerals. In rats exposed to an aerosol of anhydrous calcium sulfate fibers (15 mg/m3) or a combination of milled and fibrous calcium sulfate (60 mg/m3) six hours per day, five days per week for three weeks, gypsum dust was quickly cleared from the lungs of via dissolution and mechanisms of particle clearance.

In guinea pigs given intraperitoneal (i.p.) injections of gypsum (doses not provided), gypsum was absorbed followed by the dissolution of gypsum in surrounding tissues. In another study, after i.p. injection of gypsum (2 cm3 of a 5 or 10% suspension in saline) into guinea pigs, which were sacrificed at intervals up to 180 days, most of the dust was found distributed in the peritoneum of the anterior abdominal wall. Gypsum dust produced irregular and clustered nodules, which decreased in size over time.

Direct administration of WTC PM2.5 [mostly composed of calcium-based compounds, including calcium sulfate (gypsum) and calcium carbonate (calcite)] (10, 32, or 100 µg) into the airways of mice produced mild to moderate lung inflammation and airway hyperresponsiveness at the high dose. [It was noted that WTC PM2.5 is composed of many chemical species and that their interactions may be related with development of airway hyperresponsiveness.] In female SPF Wistar rats intratracheally (i.t.) instilled with anhydrite dust (35 mg) and sacrificed three months later, an increase in total lipid or hydroxyproline content in the lungs was not observed compared to controls.

In inhalation (nose-only) experiments in which male F344 rats were exposed to calcium sulfate fiber aerosols (100 mg/m3) for six hours per day, five days per week for three weeks, there were no effects on the number of macrophages per alveolus, bronchoalveolar lavage fluid (BALF) protein concentration, or BALF g-glutamyl transpeptidase activity (g-GT). Following three weeks of recovery, nonprotein thiol levels (NPSH), mainly glutathione, were increased in animals. In follow-up experiments, rats were exposed to an aerosol of anhydrous calcium sulfate fibers (15 mg/m3) or a combination of milled and fibrous calcium sulfate (60 mg/m3) for the same duration. Calcium levels in the lungs were similar to those of controls; however, gypsum fibers were detected in the lungs of treated animals. Significant increases in NSPH levels in BALF were observed in rats killed immediately after exposure at both doses and in recovery group animals at the higher dose. At 15 mg/m3, almost all NPSH was lost in macrophages from all treated animals (including those in recovery), but a significant decrease in extracellular g-GT activity

	Intratacheal administration of man-made calcium sulfate fiber (2.0 mg) once per week for five weeks resulted in no deaths or significant body weight changes in female Syrian harsters compared to controls. Inflammation (specifically, chronic alveolitis with macrophage and neutrophil aggregation) was observed in the lung. In guinea pigs, inhalation of calcined gypsum wats (1.6 x 10 particles/mL) for 44 hours per week in 5.5 days for two years, followed with or without a recovery period of up to 22 months, produced only minor effects in the lungs. There were 12 of 21 deaths over the entire experimental period. These were due to pneumonia or other pulmonary lesions, however, no significant gross signs of pulmonary disease or nodular or diffuse pneumocinosis became significant. How months, pigmentation continued in most animals but not atelectasis. Low-grade chronic inflammation, occurring in the first two months, also disappeared. Mercury emissions controls on coal-fired power plants have increased the likelihood of the presence of mercury in synthetic gypsum formed in wet flue gas desulfurisation (FGD) systems and the finished wallboard plant, the raw FGD gypsum, the product stucco (beta form of CaSO4-1742RO), and the finished dry wallboard each contained about 1 up 4fg dry weight. Tetal mercury loss from the original FGD gypsum. In a study at a commercial wallboard plant, the raw FGD gypsum, the product stucco (beta form of CaSO4-1742RO), and the finished dry wallboard each contained about 1 up 4fg dry weight. Total mercury loss from the experimental tuberculosis in guinea pigs; calcined gypsum the product stucco (beta form of CaSO4-1742RO), and the finished dry wallboard park indered the development of fitnorsis. Natural anhydrite, however, increased the fibrogenic effect of quarts in lung tissue. This protective effect on quarts toxidy was also seen in guinea pigs; alcined gypsum dust had a stimulatory effect on experimental tuberculosis in guinea pigs. Cytorocity: In Syrian hamster embryo cells, gypsum (up to					
STARCH	This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be					
Acute Toxicity	×	Carcinogenicity	×			
Skin Irritation/Corrosion	×	Reproductivity	×			
Serious Eye		Reproductivity				
Damage/Irritation	×	STOT - Single Exposure	×			

11.2 Information on other hazards	

Damage/Irritation Respiratory or Skin

sensitisation Mutagenicity

11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

×

×

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

 Standard Wallboard
 Endpoint
 Test Duration (hr)
 Species
 Value
 Source

Legend:

×

×

👽 – Data available to make classification

X – Data either not available or does not fill the criteria for classification

STOT - Repeated Exposure

Aspiration Hazard

	Not Available	Not Available	Not Available		Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	0.25h	Fish	75mg/l	4
gypsum	EC50	72h	Algae or other aquatic plants	>79mg/l	2
	EC50	96h	Algae or other aquatic plants	3200mg/L	4
	LC50	96h	Fish	>79mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
starch	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
gypsum	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
gypsum	LOW (LogKOW = -2.2002)

12.4. Mobility in soil

Ingredient	Mobility
gypsum	LOW (Log KOC = 6.124)

12.5. Results of PBT and vPvB assessment

	P	В	т	
Relevant available data	Not Available	Not Available	Not Av	ailable
PBT	×	×	×	
vPvB	×	×	×	
PBT Criteria fulfilled? No				
vPvB				No

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	 Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Recycle containers if possible, or dispose of in an authorised landfill.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required Marine Pollutant NO

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number or ID number	Not Applicable			
14.2. UN proper shipping name	Not Applicable			
14.3. Transport hazard class(es)	ClassNot ApplicableSubsidiary HazardNot Applicable			
14.4. Packing group	Not Applicable			
14.5. Environmental hazard	Not Applicable			
	Hazard identification	(Kemler)	Not Applicable	
14.6. Special precautions for user	Classification code		Not Applicable	
	Hazard Label		Not Applicable	-
	Special provisions		Not Applicable	
	Limited quantity		Not Applicable	
	Tunnel Restriction Code		Not Applicable	

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable		
14.2. UN proper shipping name	Not Applicable		
	ICAO/IATA Class	Not Applicable	
4.3. Transport hazard class(es)	ICAO / IATA Subsidiary Hazard	Not Applicable	
01033(03)	ERG Code	Not Applicable	
4.4. Packing group	Not Applicable		
14.5. Environmental hazard	Not Applicable		
	Special provisions		Not Applicable
	Cargo Only Packing Instructions		Not Applicable
	Cargo Only Maximum Qty / Pack		Not Applicable
14.6. Special precautions for user	Passenger and Cargo Packing Instructions		Not Applicable
	Passenger and Cargo Maximum Qty / Pack		Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions		Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack		Not Applicable

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	Not Applicable	
14.2. UN proper shipping name	Not Applicable	Not Applicable	
14.3. Transport hazard class(es)	IMDG ClassNot ApplicableIMDG Subsidiary HazardNot Applicable		
14.4. Packing group	Not Applicable		
14.5 Environmental hazard	Not Applicable		
14.6. Special precautions for user	EMS Number Special provisions Limited Quantities	Not Applicable Not Applicable	

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable		
14.2. UN proper shipping name	Not Applicable		
14.3. Transport hazard class(es)	Not Applicable Not Applicable		
14.4. Packing group	Not Applicable		
14.5. Environmental hazard	Not Applicable		
	Classification code	Not Applicable	
	Special provisions	Not Applicable	
14.6. Special precautions for user	Limited quantity	Not Applicable	
	Equipment required	Not Applicable	
	Fire cones number	Not Applicable	

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
gypsum	Not Available
starch	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
gypsum	Not Available
starch	Not Available

SECTION 15 Regulatory information

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

gypsum is found on the following regulatory lists

UK Workplace Exposure Limits (WELs).

starch is found on the following regulatory lists

UK Workplace Exposure Limits (WELs).

Additional Regulatory Information

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category	Not Available

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (gypsum)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes

National Inventory	Status
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	08/02/2024
Initial Date	29/01/2024

Full text Risk and Hazard codes

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

SDS Version Summary

Version	Date of Update	Sections Updated
3.1	05/02/2024	Toxicological information - Acute Health (eye), Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Toxicological information - Chronic Health, Hazards identification - Classification, Ecological Information - Environmental, Firefighting measures - Fire Fighter (fire/explosion hazard), Firefighting measures - Fire Fighter (fire incompatibility), First Aid measures - First Aid (eye), Composition / information on ingredients - Ingredients
4.1	08/02/2024	Hazards identification - Classification

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

Definitions and abbreviations

- PC TWA: Permissible Concentration-Time Weighted Average
- PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit.
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level

- PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIOC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure