# SAFETY DATA SHEET



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

1.1. Product identifier

Trade name or ZIRMUL 361 MORTAR

designation of the mixture

**Registration number** 

**Synonyms** None **Brand Code** 9475

**Issue date** 04-May-2022

**Version number** 01

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

**Identified uses** For Industrial or Professional Use Only

Uses advised against Avoid dry cutting, blasting, or dust generation.

1.3. Details of the supplier of the safety data sheet

**Supplier** 

HarbisonWalker International **Company name** 

**Address** 1305 Cherrington Parkway, Suite 100

Moon Township, PA 15108, USA

**United States** 

**Division** 

**Telephone** General Phone: 412-375-6743

> CHEMTREC EMERGENCY 1-800-424-9300

US/CAN ONLY

e-mail sds@thinkHWI.com

Contact person **HWI USA** 

1.4. Emergency telephone General Phone: 412-375-6600

number

## **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

**Hazard summary** Not classified for health hazards. However, occupational exposure to the mixture or substance(s)

may cause adverse health effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

**Hazard pictograms** None. Signal word None.

**Hazard statements** The mixture does not meet the criteria for classification.

**Precautionary statements** 

**Prevention** Observe good industrial hygiene practices.

Wash hands after handling. Response

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Supplemental label

Users should be informed of the potential presence of respirable dust and respirable crystalline information silica as well as their potential hazards. Overexposure to the respirable dust of crystalline silica

(quartz or cristobalite, less than or equal to 5 microns in size) may lead to silicosis in humans, which is a progressive and irreversible lung disease. Appropriate training in the proper use and

handling of this material should be provided as required under applicable regulations.

2.3. Other hazards Not a PBT or vPvB substance or mixture.

Material name: ZIRMUL 361 MORTAR

# **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

The components are not hazardous or are below required disclosure limits.

#### List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance. vPvB: very persistent and very bioaccumulative substance.

Crystalline silica may be present at low concentrations; most of this is encapsulated in the coarse aggregate or as part of the clays or sands.

Exposure may cause temporary irritation, redness, or discomfort.

#### **SECTION 4: First aid measures**

**General information** Not available.

4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both

acute and delayed

acute and delayed

4.3. Indication of any immediate medical attention

Treat symptomatically.

and special treatment needed

# **SECTION 5: Firefighting measures**

**General fire hazards** Not available.

5.1. Extinguishing media

Suitable extinguishing

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing

media

media

Not available.

5.2. Special hazards arising

from the substance or

mixture

Not available.

5.3. Advice for firefighters

Special protective equipment for firefighters

Not available.

Special fire fighting

procedures

Not available.

# **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency

personnel

Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental

precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

6.4. Reference to other

sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

# **SECTION 7: Handling and storage**

7.1. Precautions for safe

handling

Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure.

Material name: ZIRMUL 361 MORTAR

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store away from incompatible materials (see Section 10 of the

SDS).

7.3. Specific end use(s)

Not available.

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

# Occupational exposure limits

Austria. MAK List, OEL Ordinan Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	MAK	5 mg/m3	Respirable fraction.
		5 mg/m3	Respirable fume.
		10 mg/m3	Inhalable fraction.
	STEL	20 mg/m3	Inhalable fraction.
		10 mg/m3	Respirable fume.
		10 mg/m3	Respirable fraction.
ircon (CAS 14940-68-2)	MAK	5 mg/m3	Inhalable fraction.
Belgium. Exposure Limit Value	S.		
Components	Туре	Value	Form
Numinium Oxide Non-Fibrous) (CAS 344-28-1)	TWA	1 mg/m3	Respirable fraction.
Zircon (CAS 14940-68-2)	STEL	10 mg/m3	
	TWA	5 mg/m3	
Components Aluminium Oxide Non-Fibrous) (CAS	Type  TWA	Value 3,5 mg/m3	Respirable fraction.
1344-28-1)			
		10 mg/m3	Dust.
		1,5 mg/m3	Respirable fraction.
(yanite (CAS 1302-76-7)	TWA	2 mg/m3	
Croatia. Dangerous Substance	Exposure Limit Values in the	Workplace (ELVs), Annexes	1 and 2, Narodne Novine
.3/09 Components	Туре	Value	Form
- Numinium Oxide Non-Fibrous) (CAS 344-28-1)	MAC	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
Zircon (CAS 14940-68-2)	MAC	5 mg/m3	
	STEL	10 mg/m3	
Cyprus. OELs. Control of factor mended.	y atmosphere and dangerous	s substances in factories reg	ulation, PI 311/73, as
Components	Туре	Value	
ircon (CAS 14940-68-2)	TWA	5 mg/m3	
Czech Republic. OELs. Governn Components	nent Decree 361 Type	Value	Form
Aluminium Oxide	TWA	0,1 mg/m3	Respirable dust.

Denmark. Exposure Limit Values Components	Туре	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TLV	5 mg/m3	Total
		2 mg/m3	Respirable.
Zircon (CAS 14940-68-2)	TLV	5 mg/m3	
Estonia. OELs. Occupational Expo September 2001)	sure Limits of Hazardous S	ubstances. (Annex of Regula	ation No. 293 of 18
Components	Туре	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m3	Fine dust, respiratory fraction
		10 mg/m3	Total dust.
(CAS 1302-76-7)	TWA	2 mg/m3	
Finland. Workplace Exposure Lim Components	its Type	Value	
Kyanite (CAS 1302-76-7)	TWA	2 mg/m3	
Zircon (CAS 14940-68-2)	TWA	1 mg/m3	
France. Threshold Limit Values (V Components	/LEP) for Occupational Expo Type	osure to Chemicals in France Value	e, INRS ED 984
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	VME	10 mg/m3	
•			
<b>Regulatory status:</b> Indicative	limit (VL)		
Germany. DFG MAK List (advisory Compounds in the Work Area (DF	OELs). Commission for the	_	
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components	y OELs). Commission for the G) Type	Value	Form
Regulatory status: Indicative Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	OELs). Commission for the	_	Form Inhalable dust.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components Aluminium Oxide (Non-Fibrous) (CAS	y OELs). Commission for the G) Type	Value	Form
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) Germany. TRGS 900, Limit Values	y OELs). Commission for the GO Type  TWA  Two in the Ambient Air at the W	Value 4 mg/m3  1,5 mg/m3  Vorkplace	Form Inhalable dust. Respirable dust.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) Germany. TRGS 900, Limit Values	y OELs). Commission for the GO Type  TWA	<b>Value</b> 4 mg/m3  1,5 mg/m3	Form Inhalable dust.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS	y OELs). Commission for the GO Type  TWA  Two in the Ambient Air at the W	Value 4 mg/m3  1,5 mg/m3  Vorkplace	Form Inhalable dust. Respirable dust.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS	y OELs). Commission for the GO Type  TWA  Twa Ambient Air at the No Type	Value 4 mg/m3  1,5 mg/m3  Vorkplace Value	Form Inhalable dust. Respirable dust. Form
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	y OELs). Commission for the GO Type  TWA  Twa Ambient Air at the No Type	Value 4 mg/m3  1,5 mg/m3  Vorkplace Value  10 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199	Type TWA  Tin the Ambient Air at the National AGW	Value 4 mg/m3  1,5 mg/m3  Vorkplace Value 10 mg/m3  1,25 mg/m3 1 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components Aluminium Oxide (Non-Fibrous) (CAS	Type TWA  Tin the Ambient Air at the National AGW	Value 4 mg/m3  1,5 mg/m3  Vorkplace Value 10 mg/m3  1,25 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide (Non-Fibrous) (CAS	Type TWA  Type TWA  Type  AGW  AGW  P9, as amended)	Value 4 mg/m3  1,5 mg/m3  Vorkplace Value 10 mg/m3  1,25 mg/m3 1 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide (Non-Fibrous) (CAS	Type TWA  Type TWA  Type  AGW  AGW  P9, as amended) Type	Value 4 mg/m3  1,5 mg/m3  Value  10 mg/m3  1,25 mg/m3 1 mg/m3  Value	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction. Form
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	Type TWA  Type TWA  Type  AGW  AGW  P9, as amended) Type	Value 4 mg/m3  1,5 mg/m3  Value 10 mg/m3  1,25 mg/m3 1 mg/m3  Value 5 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction. Inhalable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	Type TWA  Type  TWA  Type  AGW  AGW  P9, as amended) Type  TWA	Value 4 mg/m3  1,5 mg/m3  Value 10 mg/m3  1,25 mg/m3 1 mg/m3  Value 5 mg/m3  10 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction. Inhalable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide	Type TWA  Type AGW  AGW  OP, as amended) Type TWA  STEL TWA	Value 4 mg/m3  1,5 mg/m3  Value 10 mg/m3  1,25 mg/m3 1 mg/m3  Value 5 mg/m3  10 mg/m3 10 mg/m3 5 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction. Inhalable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)	Type TWA  Type AGW  AGW  OP, as amended) Type TWA  STEL TWA	Value 4 mg/m3  1,5 mg/m3  Value 10 mg/m3  1,25 mg/m3 1 mg/m3  Value 5 mg/m3  10 mg/m3 10 mg/m3 5 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction. Inhalable fraction.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Hungary. OELs. Joint Decree on Components  Aluminium Oxide (Non-Fibrous) (CAS 14940-68-2)	Type TWA  S in the Ambient Air at the V Type  AGW  AGW  P9, as amended) Type  TWA  STEL TWA  Chemical Safety of Workplace	Value 4 mg/m3  1,5 mg/m3  Value 10 mg/m3  1,25 mg/m3 1 mg/m3  Value 5 mg/m3  10 mg/m3 10 mg/m3 5 mg/m3	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction. Form Inhalable Respirable.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Germany. TRGS 900, Limit Values Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Greece. OELs (Decree No. 90/199 Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Liminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)	Type TWA  Type  TWA  Type  AGW  AGW  P9, as amended) Type  TWA  STEL  TWA  Chemical Safety of Workplace  Type	Value 4 mg/m3  1,5 mg/m3  Value 10 mg/m3  1,25 mg/m3 1 mg/m3 Value 5 mg/m3  10 mg/m3 10 mg/m3 5 mg/m3  res  Value	Form Inhalable dust. Respirable dust. Form Inhalable fraction. Respirable fraction. Inhalable fraction. Form Inhalable Respirable. Form

Components	Туре	Value	
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	10 mg/m3	
(yanite (CAS 1302-76-7)	TWA	2 mg/m3	
Zircon (CAS 14940-68-2)	TWA	5 mg/m3	
Treland. Occupational Exposure	Limits	J.	
Components	Туре	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.
Zircon (CAS 14940-68-2)	STEL	10 mg/m3	
	TWA	5 mg/m3	
Italy. Occupational Exposure Li			_
Components	Туре	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
yanite (CAS 1302-76-7)	TWA	1 mg/m3	Respirable fraction.
Zircon (CAS 14940-68-2)	STEL	10 mg/m3	·
,	TWA	5 mg/m3	
Latvia. OELs. Occupational exp Components	osure limit values of chemica Type	ıl substances in work enviro Value	nment Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	6 mg/m3	Decomposition aerosol
		4 mg/m3	
(yanite (CAS 1302-76-7)	TWA	2 mg/m3	
ithuania. OELs. Limit Values f	<del>-</del>	eral Requirements	
Components	Туре	Value	Form
Aluminium Oxide Non-Fibrous) (CAS .344-28-1)	TWA	5 mg/m3	Inhalable fraction.
		2 mg/m3	Respirable fraction.
(Yanite (CAS 1302-76-7)	TWA	1 mg/m3	
Zircon (CAS 14940-68-2)	TWA	6 mg/m3	
Norway. Administrative Norms			
Components	Туре	Value	
Aluminium Oxide Non-Fibrous) (CAS .344-28-1)	TLV	10 mg/m3	
Zircon (CAS 14940-68-2)	TLV	5 mg/m3	
Ordinance of the Minister of La and intensities of harmful healt	th factors in the work enviro	nment, Journal of Laws 2014	4, item 817
Components	Туре	Value	Form
Aluminium Oxide Non-Fibrous) (CAS 1344-28-1)	TWA	2,5 mg/m3	Inhalable fraction.
		1,2 mg/m3	Respirable fraction.
		1,2 1119/1113	Respirable fraction.
Zircon (CAS 14940-68-2)	STEL	10 mg/m3	Respirable fraction.

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5 mg/m3

Components	Туре	gents (NP 1796) Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Kyanite (CAS 1302-76-7)	TWA	1 mg/m3	Respirable fraction.
Zircon (CAS 14940-68-2)	STEL	10 mg/m3	respirable fractioni
	TWA	5 mg/m3	
Romania. OELs. Protection of w		<u>-</u>	_
Components	Type	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	STEL	5 mg/m3	Aerosol
•	TWA	2 mg/m3	Aerosol
Zircon (CAS 14940-68-2)	STEL	10 mg/m3	
	TWA	5 mg/m3	
Slovakia. OELs. Regulation No. Components	300/2007 concerning protecti Type	on of health in work with ch Value	nemical agents Form
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m3	Inhalable fraction.
13 1 1 20 1 )		1,5 mg/m3	Respirable fraction.
		0,1 mg/m3	
Zircon (CAS 14940-68-2)	TWA	1 mg/m3	
Slovenia. OELs. Regulations co working (Official Gazette of the		s against risks due to exposi	ure to chemicals while
Components	Туре	Value	Form
Aluminium Oxide (Non-Fibrous) (CAS	TWA	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.
1344-28-1)	TWA	1,25 mg/m3 1 mg/m3	Respirable fraction. Inhalable fraction.
1344-28-1) Zircon (CAS 14940-68-2) Spain. Occupational Exposure L		· -	·
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS	imits	1 mg/m3	•
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	Type TWA	1 mg/m3  Value  10 mg/m3	·
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	Limits Type	1 mg/m3  Value  10 mg/m3	·
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme	Type  TWA  STEL TWA	1 mg/m3  Value  10 mg/m3  10 mg/m3  5 mg/m3	Inhalable fraction.
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS	Type  TWA  STEL  TWA  ent Authority (AV), Occupation	1 mg/m3  Value  10 mg/m3  10 mg/m3  5 mg/m3  nal Exposure Limit Values (A	Inhalable fraction.  FS 2015:7)
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS	Type TWA  STEL TWA  ent Authority (AV), Occupation	1 mg/m3  Value  10 mg/m3  10 mg/m3  5 mg/m3  hal Exposure Limit Values (A Value	Inhalable fraction.  FS 2015:7) Form
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	Type TWA  STEL TWA  ent Authority (AV), Occupation	1 mg/m3  Value  10 mg/m3  10 mg/m3  5 mg/m3  nal Exposure Limit Values (A Value)  5 mg/m3	Inhalable fraction.  FS 2015:7) Form  Total dust.
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Kyanite (CAS 1302-76-7)  Switzerland. SUVA Grenzwerte	Type TWA  STEL TWA  ent Authority (AV), Occupation Type TWA  TWA  TWA  TWA	1 mg/m3  Value  10 mg/m3  10 mg/m3  5 mg/m3  hal Exposure Limit Values (A Value)  5 mg/m3  2 mg/m3  1 mg/m3	FS 2015:7) Form  Total dust.  Respirable dust. Total dust.
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Kyanite (CAS 1302-76-7)  Switzerland. SUVA Grenzwerte	Type  TWA  STEL  TWA  ent Authority (AV), Occupation Type  TWA  TWA	1 mg/m3  Value  10 mg/m3  10 mg/m3  5 mg/m3  hal Exposure Limit Values (A Value)  5 mg/m3  2 mg/m3	FS 2015:7) Form  Total dust.  Respirable dust.
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Kyanite (CAS 1302-76-7)  Switzerland. SUVA Grenzwerte Components  Aluminium Oxide (Non-Fibrous) (CAS	Type TWA  STEL TWA  ent Authority (AV), Occupation Type TWA  TWA  TWA  TWA	1 mg/m3  Value  10 mg/m3  10 mg/m3  5 mg/m3  hal Exposure Limit Values (A Value)  5 mg/m3  2 mg/m3  1 mg/m3	FS 2015:7) Form  Total dust.  Respirable dust. Total dust.
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Kyanite (CAS 1302-76-7)  Switzerland. SUVA Grenzwerte Components  Aluminium Oxide (Non-Fibrous) (CAS	Type TWA  STEL TWA  ent Authority (AV), Occupation Type TWA  TWA  TWA  am Arbeitsplatz Type	Value  10 mg/m3  10 mg/m3  5 mg/m3  1al Exposure Limit Values (A Value)  5 mg/m3  1 mg/m3  1 mg/m3  Value	FS 2015:7) Form Total dust. Respirable dust. Total dust. Form Respirable dust and/o
Zircon (CAS 14940-68-2)  Spain. Occupational Exposure L Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Zircon (CAS 14940-68-2)  Sweden. OELs. Work Environme Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)  Kyanite (CAS 1302-76-7)  Switzerland. SUVA Grenzwerte Components  Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	Type TWA  STEL TWA  ent Authority (AV), Occupation Type TWA  TWA  TWA  am Arbeitsplatz Type  STEL	Value  10 mg/m3  10 mg/m3  10 mg/m3  5 mg/m3  hal Exposure Limit Values (A Value)  5 mg/m3  1 mg/m3  Value  24 mg/m3	FS 2015:7) Form  Total dust.  Respirable dust. Total dust.  Form  Respirable dust and/o fume.

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UK. EH40 Workplace Exposure Limits (WELs)				
Components	Туре	Value	Form	
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	TWA	4 mg/m3	Respirable dust.	
		10 mg/m3	Inhalable dust.	
Zircon (CAS 14940-68-2)	STEL	10 mg/m3		
	TWA	5 mg/m3		

#### **Biological limit values**

Switzerland RAT-Werte (Riological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling Time
Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1)	60 µg/g	Aluminium	Creatinine in urine	*

<sup>\* -</sup> For sampling details, please see the source document.

**Recommended monitoring** procedures

Follow standard monitoring procedures.

**Derived no effect levels** (DNELs)

Not available.

**Predicted no effect** concentrations (PNECs) Not available.

#### **Exposure guidelines**

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Zirconium silicates (zircon sands) contain trace amounts (106-120 pCi/g) of naturally occurring radioactive uranium and thorium. Overexposure by inhalation to respirable dust containing uranium and thorium may cause lung cancer. Eve contact with the dust may cause eye irritation. Measurements made by Dupont during the use of a similar mineral sand indicated the observance of the 5 mg/m3 OSHA PEL for respirable dust and/or the PEL for quartz ensures the user is below the exposure limits established for uranium and thorium. No LD50 or LC50 can be found for zircon sand.

#### 8.2. Exposure controls

#### **Appropriate engineering** controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Individual protection measures, such as personal protective equipment

**General information** Personal protection equipment should be chosen according to the CEN standards and in discussion

with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection Wear appropriate chemical resistant gloves.

- Other Wear suitable protective clothing.

Respiratory protection Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels

exceeding the exposure limits.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.







#### **Hvaiene measures**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

#### **Environmental exposure** controls

Environmental manager must be informed of all major releases.

## **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

#### **Appearance**

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**Physical state** Solid. **Form** Solid.

Colour Not available. Odour Not available. **Odour threshold** Not available. рH Not available. Not available. Melting point/freezing point Initial boiling point and Not available.

boiling range

Not available. Flash point Not available. **Evaporation rate** Not available. Flammability (solid, gas) Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

Not available.

Flammability limit -

upper (%)

Not available.

Not available. Vapour pressure Vapour density Not available. Not available. Relative density

Solubility(ies)

Solubility (water) Not available. **Partition coefficient** Not available.

(n-octanol/water) **Auto-ignition temperature Decomposition temperature Viscosity** 

Not available. Not available. Not available. Not explosive.

**Explosive properties** Oxidising properties Not oxidising.

9.2. Other information No relevant additional information available.

# **SECTION 10: Stability and reactivity**

10.1. Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Contact with incompatible materials.

10.5. Incompatible materials Acids. Chlorine.

Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not

be specific to industrial application exposure.

10.6. Hazardous

decomposition products

No hazardous decomposition products are known.

# **SECTION 11: Toxicological information**

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

**Inhalation** Prolonged inhalation may be harmful.

Skin contact No adverse effects due to skin contact are expected. Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of

occupational exposure.

Symptoms Exposure may cause temporary irritation, redness, or discomfort.

#### 11.1. Information on toxicological effects

**Acute toxicity** Not known.

Skin corrosion/irritation Due to partial or complete lack of data the classification is not possible. Serious eye damage/eye Due to partial or complete lack of data the classification is not possible.

irritation

Respiratory sensitisation Skin sensitisation Germ cell mutagenicity Carcinogenicity Due to partial or complete lack of data the classification is not possible. Due to partial or complete lack of data the classification is not possible. Due to partial or complete lack of data the classification is not possible.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Due to partial or complete lack of data the classification is not possible.

# Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity
Specific target organ toxicity

- single exposure

Due to partial or complete lack of data the classification is not possible. Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity

- repeated exposure

Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard** Due to partial or complete lack of data the classification is not possible.

Mixture versus substance

information

No information available.

**Other information** This product has no known adverse effect on human health.

# **SECTION 12: Ecological information**

**12.1. Toxicity**Based on available data, the classification criteria are not met for hazardous to the aquatic

environment

12.2. Persistence and

degradability

No data is available on the degradability of any ingredients in the mixture.

12.3. Bioaccumulative

potential

No data available.

Partition coefficient

n-octanol/water (log Kow)

Not available.

**Bioconcentration factor (BCF)** Not available. **12.4. Mobility in soil** No data available.

12.5. Results of PBT and

vPvB assessment

Not a PBT or vPvB substance or mixture. Not available.

**12.6. Other adverse effects**No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## **SECTION 13: Disposal considerations**

# 13.1. Waste treatment methods

Residual wasteNot available.Contaminated packagingNot available.EU waste codeNot available.

## **SECTION 14: Transport information**

#### **ADR**

14.1. - 14.6.: Not regulated as dangerous goods.

RIE

14.1. - 14.6.: Not regulated as dangerous goods.

# ADN

14.1. - 14.6.: Not regulated as dangerous goods.

#### **IATA**

14.1. - 14.6.: Not regulated as dangerous goods.

#### **IMDG**

14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC

Code

## **SECTION 15: Regulatory information**

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

# **EU regulations**

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not applicable.

Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA Not listed.

#### **Authorisations**

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended Not listed.

#### Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

# Other EU regulations

## Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP

Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC)

No 1907/2006, as amended.

**National regulations** Follow national regulation on the protection of workers from the risks of exposure to carcinogens

and mutagens at work, in accordance with Directive 2004/37/EC.

15.2. Chemical safety

assessment

No Chemical Safety Assessment has been carried out.

#### **SECTION 16: Other information**

List of abbreviationsNot available.ReferencesNot available.Information on evaluationNot available.

method leading to the classification of mixture

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Full text of any H-statements not written out in full under

Sections 2 to 15

None.

**Revision information** Product and Company Identification: Product and Company Identification

Composition / Information on Ingredients: Component Summary

Training information

Not available.

**Disclaimer** 

This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid

contractual relationship.

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