MATERIAL SAFETY DATA SHEET

Nr: KCh/GC/CWG/3

CEMENTS - GÓRKAL 70, GÓRKAL 70A, GÓRKAL 70F, GÓRKAL 70S, GÓRKAL 80, GÓRFLOW

Revision date:
18.01.2024.
Supersedes version:
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Acc. to REACH
Regulation (EC)

No. 1907/2006

Górka Cement Sp. z o.o.

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

1.1. Product identifier

Name of substance: high aluminate cements GÓRKAL 70, GÓRKAL 70A, GÓRKAL 70F, GÓRKAL 70S, GÓRKAL 80, GÓRFLOW

EINECS: 266-045-5 (calcium aluminates); 5-691-6 (alumina oxide)
CAS: 65997-16-2 (calcium aluminates); 1344-28-1 (alumina oxide)

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

High aluminate cements GÓRKAL 70, GÓRKAL 70A, GÓRKAL 70F,

GÓRKAL 70S, GÓRKAL 80, GÓRFLOW

Hydraulic binding agent. When used in the right quantity and mixed with aggregate and water, it creates concrete or mortar.

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Górka Cement Sp. z o.o.

Address:

ul. Lipcowa 58

32-540 Trzebinia

Poland

Telephone: 032 758 10 01 E-mail: msds@gorka.

E-mail: msds@gorka.com.pl
Website: www.gorka.com.pl

1.4. Emergency telephone number

National Poison Information Centre (KCIT) in Poland

/48 42/ 6314724

Service is available within working hours. Information is given in Polish.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No. 1272/2008: **not classified** (based on test data, literature survey and read across)

2.2. Label elements

According to Regulation (EC) No. 1272/2008 [CLP/GHS]: labelling is not

necessary as the substance is not hazardous

2.3. Other hazards

Cement does not meet the criteria for PBT or vPvB in accordance with Annexe XIII of REACH Regulation (EC) No. 1907/2006. It is not a substance which is persistent, bioaccumulative and toxic (PBT), it is also not very persistent and very bioaccumulative (vPvB).

Do not disrupt the functioning of the endocrine system.

After mixing with water an alkaline solution is formed which can cause temporary irritation.

Dust from aluminous cement may cause respiratory irritation.

SECTION 3: Composition/information on ingredients

3.1. Mixture

Name	EINECS	CAS	Percentage	Nr REACH
			[%]	
alumina	215-691-	1344-28-	0-30	01-2119529248-35-0012
oxide	6	1		01-2119529248-35-0020
				01-2119529248-35-0114



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				01-2119529248-35-0095 01-2119529248-35-0197 01-2119529248-35-0000 01-2119529248-35
calcium aluminates	266-045- 5	65997- 16-2	70-100	not classified

Does not contain:

- soluble chromium VI the chromium content (VI) controlled in accordance with the Polish standard PN EN 196-10 (below 2 ppm). Chrome reducing agents are not used.
- respirable crystalline silica.

SECTION 4: First aid measures

4.1. Description of first aid measures

General notes

No personal protective equipment is needed for first aid responders. First aid workers should avoid contact with wet cement.

Following contact with eyes

Do not rub eyes in order to avoid possible corneal damage by mechanical stress.

Remove contact lenses if any. Incline head to injured eye, open the eyelids widely and flush eye(s) immediately by thoroughly rinsing with plenty of clean water for at least 20 minutes to remove all particles. Avoid flushing particles into the uninjured eye. If possible, use isotonic water (0.9% NaCl). Contact a specialist of occupational medicine or an eye specialist.

Following skin contact

For dry cement, remove and rinse abundantly with water. For wet/damp cement, wash skin with plenty of water.

Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them. Seek medical treatment in all cases of irritation or burns.

Following inhalation

Move the person to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops or if discomfort, coughing or other symptoms persist.

Following ingestion

Do not induce vomiting. If the person is conscious, wash out mouth with water and give plenty of water to drink. Get immediate medical attention or contact a poison centre.

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

Eyes:

eye contact with aluminous cement (dry or wet) may cause mechanical irritation.

Skin:

no specific effect.

6.4.

Reference to other

sections

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		Inhalation:
		repeated inhalation of aluminous cement dust over a long period of time increases the risk of developing lung diseases, like in the case of any other
		dust.
4.3.	Indication of any	There are no special requirements for immediate medical attention.
1.0.	immediate medical	When visiting a physician, this MSDS should be presented.
	attention and special	
	treatment needed	
SEC	TION 5: Firefighting mo	easures
5.1.	Extinguishing media	Not required – substance is not flammable .
5.2.	Special hazards arising	Cement is non-combustible and non-explosive and will not facilitate or
	from the substance or	sustain the combustion of other materials.
	mixture	
5.3.	Advice for firefighters	Cement poses no fire-related hazards. There is no requirement for special
		protective equipment for firefighters.
SEC.	TION 6: Accidental rele	
6.1.		
0.1.	Personal precautions,	Wear protective equipment as described under Section 8 and follow the advice for safe handling and use given under Section 7.
	protective equipment and emergency	advice for sale handling and use given under Section 7.
	procedures	
	procedures	
6.1.1	For non-emergency	Wear protective equipment as described under Section 8 and follow the
	personnel	advice for safe handling and use given under Section 7.
6.1.2.	For emergency	Emergency procedures are not required. However, respiratory protection is
	responders	needed in situations with high dust levels. When working with wet cement,
		hands should be protected.
6.2.	Environmental	Do not wash cement down sewage and drainage systems or into surface and
	precautions	ground water.
6.3.	Methods and material	Collect spilled material and use it.
	for containment and	
	cleaning up	Use dry clean-up methods such as vacuum clean-up or vacuum extraction
		(industrial portable units equipped with high efficiency particulate filters (HEPA filter) or equivalent techniques) which do not cause airborne dispersion. Never
		use compressed air.
		300 00p. 30004 4iii
		Ensure that workers wear appropriate personal protective equipment and
		prevent dust from spreading.
		Avoid inhalation of dust. Place spilled material in a container for future use.
		Wet cement
		Collect the wet cement and place in a container. Wait until the material dries

and binds before storage.

See sections 8 and 13 for more details.



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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Measures to prevent fire: not applicable.

<u>Measures to prevent aerosol and dust generation:</u> use dry clean-up methods such as vacuum clean-up or vacuum extraction. Packaging needs to be treated with care. Clean-up instructions are given in point 6.3.

Measures to protect the environment: no specific measures.

<u>Information on general occupational hygiene:</u> when working with cement workers should not eat, drink or smoke. Contact with skin or lips should be avoided. After working with cement or with materials containing cement, workers should wash.

Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.

7.2. Conditions for safe storage, including any incompatibilities

Cement should be stored in waterproof and dry conditions; clean and protected from contamination.

Engulfment hazard: cement can build-up or adhere to the walls of a confined space, the cement build-up can then release or fall unexpectedly. To prevent engulfment or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage containers or vessels that store or contain cement, without ensuring adequate safety measures.

Bags should be stacked in way which guarantees stability.

7.3. Specific end use(s)

No additional information for the specific end uses.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

a/personal protection						
Туре	of dust	Value (8 h) [mg/m³]	Legal reference			
Poland						
Total dust – other industrial gases – including respirate silica below 2 %.	- also gases	10	Rozporządzenia Ministra Pracy i Polityki Społecznej z dnia 29 listopada 2002 w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy (Dz. U. nr 217 poz. 1833 z późniejszymi zmianami)			
Germany						
Allgemeiner	Einatembare	10	Technische Regeln			
Staubgrenzwert	Fraktion		für Gefahrstoff			
	Alveolengängige	3	TRGS 900			



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	Fraktion		
France			
General dust	OELV total	10	Article R.4222-10 of
	inhalable dust		Occupational Code
	OELV alveolar	5	
	fraction		

- 8.2. Exposure controls
- 8.2.1. Appropriate engineering controls

Measures to reduce generation of dust and to avoid dust propagating in the environment such as dedusting, exhaust ventilation and dry clean-up methods which do not cause airborne dispersion.

8.2.2. Individual protection measures such as personal protection equipment

Eye/face protection

Wear approved glasses or safety goggles according to EN 166 standard when handling dry or wet cement to prevent contact with eyes.

Skin protection

Use impervious, abrasion and alkali resistant gloves, boots, closed long-sleeved protective clothing as well as skin care products to protect the skin from prolonged contact with wet cement.

Respiratory protection

When a person is potentially exposed to dust levels above exposure limits, use appropriate respiratory protection. It should be adapted to the dust level and conform to the relevant EN standards (i.e. EN 149 EN 140, EN14387, EN 1827) or national standards.

Thermal hazards

Do not exist.

8.2.3. Environmental exposure controls

According to available technology and regulations on dust emission.

See engineering control measures to avoid dust propagating in the

See engineering control measures to avoid dust propagating in the environment – point 6.3.

Take measures to ensure that cement or cement dust does not reach water (drains, sewage systems, ground or surface water).

SECTION 9: Physical and chemical properties

(b)

- 9.1. Information on basic physical and chemical properties
- (a) Appearance: white colour; it is a granular inorganic solid material
 - Odour: Odourless
- (c) Odour threshold: no odour threshold, odourless
- (d) pH: (T = 20°C in water, water/cement ratio 9:1): ≈11,0



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(e)	Melting point: > 1 580 °C
(f)	Initial boiling point and boiling range: Not applicable as under normal atmospheric conditions melting point >1 580°C
(g)	Flash point: Not applicable as is not a liquid
(h)	Evaporation rate: Not applicable as is not a liquid
(i)	Flammability (solid, gas): Not applicable as is a solid which is non combustible and does not cause or contribute to fire through friction
(j)	Upper/lower flammability or explosive limits: Not applicable as is not a flammable gas
(k)	Vapour pressure: Not applicable as melting point > 1580 °C
(I)	Vapour density: Not applicable as melting point > 1580 °C
(m)	Relative density: 3,1 g/cm³; Apparent density (ES): 1,3 g/cm³
(n)	Solubility(ies) in water (T = $20 ^{\circ}$ C): low (0.1-1.5 g/l)
(o)	Partition coefficient: n-octanol/water: Not applicable (inorganic substance)
(p)	Auto-ignition temperature: Not applicable (no pyrophoricity – no organo-metallic, organo- malloid or organo-phosphine bindings or of their derivatives, and no other pyrophoric constituent in the composition)
(q)	Decomposition temperature: Not applicable
(r)	Viscosity: Not applicable as not a liquid
(s)	Explosive properties: Not applicable as not explosive or
(3)	pyrotechnic as it is not in itself capable by chemical reaction of producing gas at such temperature and pressure and at such a speed as to cause damage to the surroundings. It is not capable of a self-sustaining exothermic chemical reaction.
(t)	Oxidising properties: Not applicable as does not cause or

contribute to the combustion of other materials.

9.2.	Other information	Not applicable.
SEC	TION 10: Stability and	reactivity
10.1	Reactivity	When mixed with water, cement hardens into a stable mass that is not reactive in normal environments.
10.2	Chemical stability	Cement is stable as long as it is properly stored (see Section 7). It should be kept in a dry place. Contact with acids and ammonium salts should be avoided. Wet cement is alkaline and incompatible with acids and with ammonium salts.
10.3	Possibility of hazardous reactions	Does not cause hazardous reactions.
10.4	Conditions to avoid	Damp conditions during storage may cause lump formation and loss of product quality.
10.5	Incompatible materials	Acids, ammonium salts.
10.6	Hazardous	Cement does not decompose into any hazardous products.
	decomposition products	

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Hazard class	Cat.	Effect
Acute toxicity - dermal	-	In aqueous media the soluble fraction of the product is mainly composed of aluminium hydroxide, depending on pH, and calcium hydroxide. Based on literature and since the product has no systemic toxicity at the maximum dose by oral route, it is reasonably assumed that the dermal route is of no concern for acute systemic toxicity.
Acute toxicity-inhalation	-	In aqueous media the soluble fraction of the product is mainly composed of aluminium hydroxide, depending on pH, and calcium hydroxide. Based on literature and since the product has no systemic toxicity at the maximum dose by oral route, it is reasonably assumed that the dermal route is of no concern for acute systemic toxicity.
Acute toxicity - oral	-	LD 50 > 2000 mg/kg. Based on test data (OECD 423) on a similar substance, the classification criteria are not met.
Skin corrosion/ irritation	-	Based on test data (OECD 404) on a similar substance, the classification criteria are not met.
Serious eye damage/irritation	-	Based on test data (OECD 405) on a similar substance, the classification criteria are not met.
Skin sensitisation	-	Based on test data (OECD 406) on a similar substance, the classification criteria are not met
Respiratory sensitisation	-	Data lacking on ACC. By read across with aluminium hydroxide, the product is not considered a sensitising substance to the respiratory system.
Germ cell mutagenicity	-	Data lacking on ACC and on aluminium hydroxide. By read across with cement and cement types, the product is not considered mutagenic.
Carcinogenicity	-	Data lacking on ACC and on aluminium hydroxide. By read across with cement and cement types, the product is not considered carcinogenic.

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Reproductive toxicity;	-	No evidence from human experience. By read across with aluminium hydroxide, the product is not considered reprotoxic.
STOT-single exposure	-	Aluminous cement dust may irritate the throat and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposures in excess of occupational exposure limits. Overall, the pattern of evidence clearly indicates that occupational exposure to cement dust has produced deficits in respiratory function. However, evidence available at the present time is insufficient to establish with any confidence the doseresponse relationship for these effects.
STOT- repeated exposure	-	Studies which have been made on various animal species (rats, rabbits, chickens, pigs) where concentrations of up to 5% of aluminous cement was administered into their diet – they have shown that it does not cause adverse effect on their life and its length. The mean calculated daily dose was approximately 130 mg/kg of body weight.
Aspiration hazard	-	Not applicable.

Medical conditions aggravated by exposure:

Aluminous cement dust may aggravate existing respiratory system diseases and/or medical conditions such as emphysema or asthma and/or existing skin and/or eye conditions.

11.2. Information about other threats

There is no information about endocrine disruptors.

SECT	ION 12: Ecological inf	ormation
12.1.	Toxicity	The only chemical compound present in water is aluminium hydroxide. By read across with aluminium hydroxide, the product is not hazardous to the environment.
12.2.	Persistence and degradability	Not relevant as cement is an inorganic material. After hydration it presents no toxicity risks.
12.3.	Bioaccumulative potential	Not relevant as cement is an inorganic material. After hydration it presents no toxicity risks.
12.4.	Mobility in soil	Not relevant as cement is an inorganic material. After hydration it presents no toxicity risks.
12.5.	Results of PBT and vivo assessment	Not relevant as cement is an inorganic material. After hydration it presents no toxicity risks.
12.6.	Endocrine disrupting properties	No data available
12.7.	Other adverse effects	N/A

SECTION 13: Disposal considerations



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13.1. Waste treatment methods

Do not store next to irrigation systems or ground waters.

Product - unused dry residue

Collect while keeping it dry. Use "dry" cleaning methods, such as vacuuming and vacuum extracting (portable industrial units equipped with highly-efficient particle filters (HEPA filters)) or equivalent methods which do not disperse substances in the air. Do not use compressed air.

Label containers. Possible use without exceeding the standards relating to dust. Storage after hardening with water acc. to point <u>Product – after mixing</u> with water.

Product - semi-fluid

Allow the product to bind, avoid discharging it to the sewerage system, drainage system, reservoirs and watercourses.

Storage acc. to point Product – after mixing with water.

Product - after mixing with water, bonded

Store the bonded product as concrete rubble. Concrete waste is not dangerous in relation to reactivity.

SECT	SECTION 14: Transport information		
14.1.	UN number or ID number	N/A	
14.2.	UN proper shipping name	N/A	
14.3.	Transport hazard class(es)	N/A	
14.4.	Packing group	N/A	
14.5.	Environmental hazards	N/A	
14.6.	Special precautions for user	N/A	
14.7.	Maritime transport in bulk in accordance with IMO instruments	N/A	

SECTION 15: Regulatory information

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

Cements GÓRKAL 40, GÓRKAL 40M, GÓRKAL 50 are **exempt from registration** (Art. 2.7 (b) and Annex V.10 of REACH).

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency

Commission Regulation (EC) No. 987/2008 of 8 October 2008 amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annexes IV and V

Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures



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15.2.	Chemical safety assessment	No chemical safety assessment has been carried out.			
SECT	ION 16: Other inform	ation			
16.1.	Indication of changes	The Safety Data Sheet has been reviewed and the data therein were revised and laid out according the requirements of the relevant regulations.			
16.2.	Abbreviations and	PBT Persistent, bioaccumulative and toxic			
	acronyms	vPvB Very persistent, very bioaccumulative			
		DNEL Derived no-effect level			
		PNEC Predicted no-effect concentration			
		SDS Safety Data sheet			
		STOT Specific Target Organ Toxicity			
		EINECS European Inventory of Existing Commercial chemical Substances			
		CAS Chemical Abstracts Service (CAS number)			
		HEPA Type of high efficiency air filter			
		REACH Registration, Evaluation and Authorisation of Chemicals (REACH			
		Regulation)			
16.3	Training advice	The employer must ensure that workers have read, understood and apply the requirements of this SDS.			
16.4.	Literature references	Cement and Concrete Chemistry – Wiesław Kurdowski			
	and sources of data	2. Lea's Chemistry of Cement and Concrete – Peter C. Hewlett.			
		3. Calcium Aluminate Cements - Proceedings of the Centenary Confere			
		2008 - Charles Fentiman, Raman Mangabhai, Karen Scrivener.			
		4. A.M. Neville – Properties of Concrete			
		5. C.M. George – Industrial Aluminous Cements			
16.5.	Disclaimer	The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product including the use of the product in combination with any other product or any other process, is the responsibility of the user. It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his/her own activities.			

END