

ZC-2
速凝剂

Material Safety Data Sheet

SECTION I – PRODUCT IDENTIFICATION AND USE

Product	ZC-2 Cement Set Accelerator
Application	Set accelerator for most type of cement products, concretes and ready-mix for shotcreting
Manufacturer	New Shao Cement Plant, China
Supplier	Leedem Mine Services

SECTION II – CHEMICAL INGREDIENT INFORMATION

This product is an admixture containing basic accelerators in an inert extender. The concentrations of its major active ingredients SiO_2 (CAS# 7631-86-9), Al_2O_3 and CaO are approximately 13%, 35% and 26% respectively.

SECTION III – PHYSICAL & CHEMICAL DATA

Physical state	Solid
Odor/appearance	Light gray powder, odorless.
Melting point	Unknown
Boiling point	N/A
Evaporation rate	N/A
Vapor pressure	N/A
Vapor density	N/A
pH value	11.5 – 11.9
Specific gravity	2.25
Coeff. water / oil dist.	N/A

SECTION IV – FIRE AND EXPLOSION DATA

Flammability	Product is inflammable	
Means of extinction	N/A	
Flashpoint	N/A	
Upper/lower flame limit	N/A	
Combustion	Product is not combustible	
Auto-ignition temperature	N/A	
Explosion data	Sensitivity to Impact	None
	Sensitivity to Static Discharge	None

SECTION V – REACTIVITY DATA

Chemical stability	Stable
Incompatibility with other substances	Inorganic acids
Reactivity, and under what conditions	Reacts with inorganic acids, releasing tiny amount of hydrogen gas.

SECTION VI – TOXICOLOGICAL PROPERTIES

Route of entry	Skin Contact	Yes
	Skin Absorption	Yes
	Eye Contact	Yes
	Inhalation	Yes
	Ingestion	Yes
Effects of acute exposure to product	Irritation of eyes and upper respiratory tract Caustic burns to skin and eyes can occur if contact is prolonged and with large quantity.	
Effects of chronic exposure to product	Dust can cause inflammation of eyes and nasal passages. Prolonged contact under moist conditions can cause burns.	
Exposure limits	As for the product to which ZC- 2 set accelerator is added, 10 mg total dust/M ³ for a work shift of maximum 10 hours per day, or average 40 hours per week is typical.	
Irritancy of product	Dust can irritate eyes and upper respiratory tract. Skin irritation can occur under moist or wet conditions.	
Sensation to product	Hypersensitive reactions may cause allergic dermatitis.	
Carcinogenicity	NTP	No
	ARC monographs	No
	OSHA Regulated	No
Teratogenicity	N/A	
Reproductive toxicity	N/A	
Mutagenicity	N/A	
Synergistic products	Not known	

SECTION VII – PROTECTIVE EQUIPMENT GUIDELINES**Personal protective equipment**

Where the creation of dust is unavoidable, use conventional NOSH approved or equivalent respiratory protection equipment based on consideration of airborne and duration of exposure.

Hand

Gloves impervious to moisture are necessary.

Eye

Use appropriate eye protection to minimize contact with dust from dry product or with wet product after mixing with water.

Engineering control

Use adequate ventilation. Avoid dust to accumulate in work place.

Other

Good personal hygiene is always advisable. Wear full protective clothing, footwear and hat for specific applications, such as prolonged exposure and / or at high dust concentrations. Clean clothes that have become dusty before reusing. Wash hands before eating and drinking etc... The recommendation provided in this document only serves as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protection

equipment is made.

SECTION VIII – HEALTH EFFECTS AND FIRST AID MEASURES

Eye	Flush with running water for at least 15 minutes. Obtain medical attention.
Skin	Wash affected area with soap and water. For caustic burns, consult a doctor immediately.
Ingestion	Drink large amount of water. Do not induce vomiting. Seek immediate medical attention.
Gross inhalation of dust	Remove victim to fresh air. Give oxygen with artificial respiration as needed. Obtain medical attention, observation and support as required.
General	It should be noted that the effects from exposure to this product depend on several factors including frequency and duration of use; quantity used; effectiveness of control measures; protective equipment applied and method of application. It is impractical to have an instructive document which could encompass all possible scenarios. It is anticipated that users will assess the risk and apply control methods appropriate to the actual cases.

SECTION IX – STORAGE, SHIPPING & DISPOSAL

Leak and spill procedure	Clean up personnel should use respiratory protection and wear suitable protective clothing. Avoid direct skin contact. If material is not contaminated, collect for reuse or disposal. Use dust less procedures.
Waste disposal	Dispose contaminated material as non-metallic with dust less procedures. Apply proper processes for contaminants according to local applicable regulations and rules. Thoroughly flush the contaminated area with water.
Handling procedures and equipment	Keep dust as low as possible. Use adequate ventilation and dust collection facilities if available. Avoid contacts with wet product during use.
Storage requirement	Keep in dry, cool and ventilated storage. Keep containers closed. Isolate from acid, moisture and oxidizing materials.
Specific shipping information	Use strong containers or packages. Prevent from moisture.

SECTION X – PREPARATION OF MSDS

Prepared and translated by	Leedem Mine Services
Last update	Jan, 2014

Note: The information in this Material Safety Data Sheet associates only to the specific material designated herein and does not apply to uses in combination with any other materials or for any other processes. The information given is based on technical data that we believe to be reliable. Because conditions of applications vary and are beyond our control, it is the responsibility of the users to verify safety data for combinations with other materials, or for uses in other processes. Always follow local safety regulations applicable on the erection site