

# MSDS INFORMATION

## Rapid Set Mortar

### SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name :	Rapid Set Mortar
CAS # :	Not Applicable.
Product Use :	Preparation of mortar, Binder
MSDS Information :	This MSDS was approved in 02/03/20 and replaces any previous versions.
Product Code :	Not Applicable.
Product Model Name :	SH-400
Chemical Family :	Calcium compounds. Calcium silicate compounds, calcium carbonate and other calcium compounds containing iron and aluminum make up the majority of this product.
Chemical name and Synonyms :	Rapid Set, Mortar Cement, Specialty Cement, Rapid Set Mortar.
Formula :	This product consists of finely ground Portland cement clinker, limestone and gypsum.
Supplier/Manufacturer :	ITOS CO., LTD. 5F, Seokam Bldg., 25 Teheran-ro, Yeoksam-dong, Gangnam-gu, Seoul 06132 KOREA TEL : 82-10-3600-9535 EMAIL : contact@itos-materials.com WEB : www.itos-materials.com
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### SECTION 2: HAZARD IDENTIFICATION

GHS Classification :	Not harmful. Mix type with water
Signal Word :	Warning
Hazardous :	Irritant

Hazard Symbol :



Skin :

Alkali burns, a form of skin ulceration, may result from contact with freshly mixed concrete.

Contact with strongly alkaline solutions such as concrete can initially cause nerve damage. Chemical burns may occur without the person being aware because they do not feel any pain.

Contact with wet cement mixes such as wet concrete can cause skin disease. Irritant contact dermatitis is caused by the combination of the wetness, alkalinity and abrasiveness of the ready-mixed concrete.

Allergic contact dermatitis may be caused by individual sensitivity to chromium compounds in cement.

Eyes :

Wet concrete in contact with eyes can cause irritation, inflammation or serious alkali burns, which may lead to blindness.

Ingestion :

Wet concrete is not likely to create dust, but respirable dust may be released by the surface treatment and cutting or drilling of hardened concrete. If inhaled in excessive quantities over a prolonged period or extended period, respirable dust can constitute a long-term health hazard.

Dusts containing Respirable Crystalline Silica\* (quartz) present a greater hazard. Long-term exposure to respirable dust can lead to respiratory system damage and disease. Respirable crystalline silica has been associated with the lung disease silicosis.

The quartz content of the product will vary and is related to the type of aggregate used in the production of the concrete. Advice on the quartz content and other chemical information is available from the supplying unit.

Any references to respirable silica in this document only apply if hardened concrete is cut, drilled, milled or planed.

### SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

CHEMICAL NAME	IUPAC	CAS NO.	CONTENT (%)
PORTLAND CEMENT	HYDRAULIC CEMENT	65997-15-1	20 ~ 25
SILICON OXIDE	SiO <sub>2</sub>	14808-60-7	40 ~ 60
CALCIUM SOLFO-ALUMINATE	CALCIUM SOLFO-ALUMINATE	12004-14-7	13 ~ 25
CALCIUM SULFATE	CaSO <sub>4</sub>	14798-04-0	5 ~ 10
CALCIUM HYDROXIDE	Ca(OH) <sub>2</sub>	1305-62-0	1 ~ 2
C1( Additive )	<b>TRADE SECRET</b>		
C2( Additive )			

Ready-mixed concrete is a mixture of

- A cementitious material which may be cement or a mixture of cement with an addition (e.g. fly ash, ground granulated blast furnace slag or silica fume).
- Fine and coarse aggregate.
- Water
- Admixtures or additives may be added to modify the properties of the fresh or hardened concrete. Pigments may be added to color the product.

## SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

Ingestion :	If swallowed, induce vomiting following clearing mouth. For large ingestion obtain medical attention immediately.
Inhalation :	Avoid inhalation of fumes by wearing protective mask. Should inhalation occur, expose patient to fresh air immediately
Skin Contact :	Avoid prolonged skin contact. Wash off with water and dry thoroughly.
Eye Contact :	Flush eyes immediately with water for at least 15 minutes. Do not rub the eyes when contaminated. Seek medical attention if irritation persists.

## SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Flash Point :	> 1300°C
Ingestion :	LOWER : Not determined (nonvolatile material) UPPER : Not determined (nonvolatile material)
Extinguishing Media :	Does not constitute a fire hazard. If involved in a fire dry powder, foam, water mist or carbon dioxide extinguishers are suitable.
Extinguishing Media :	Don't spray pool fires directly; a solid stream of water directed into hot burning liquid can cause dust.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Environmental Precautions :	Prevent product from entering drains, Should not be released into the environment.
Methods for Cleaning :	Clean up with inert absorbent material and dispose of as hazardous waste. After cleaning, flush away traces with water.

## SECTION 7: ACCIDENTAL RELEASE MEASURES

Handling :	Avoid skin and eye contact. Wet mortar can cause serious alkali burns if in direct contact with skin or eyes. Contact with concrete may also cause skin disease by the combination of the wetness, alkalinity and abrasiveness of the ready-mixed mortar. Allergic contact dermatitis may be caused by individual sensitivity to chromium compounds which may occur in cement.  Do not sit or kneel on wet, un-hardened concrete without wearing the correct personal protective equipment.  Where mortar enters boots or gloves, or saturates clothing, the article should be removed immediately and washed before further use.
Storage :	Ready-mixed mortar is normally used upon receipt. However, the hardening process of ready-mixed concrete can be delayed by the use of additions and/ or admixtures, extending the period during which the precautions given in this data sheet should continue to be taken and during which time access by unauthorized persons should be prevented.
Waste Disposal :	Can waste without treatment.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

Take Measures to Prevent :

- Direct skin or eye contact with fresh concrete. It is also important not to kneel or sit on the fresh concrete as harmful contact can occur through saturated clothing.
- Inhalation of dust created by the surface treatment and cutting of hardened concrete which may contain quartz. If inhaled in excessive quantities over an extended period, respirable dust containing quartz can constitute a long-term health hazard.

Take Measures to Prevent :

<b>Total Dust</b>	W.E.L.	10mg/m <sup>3</sup>	8 Hrs	T.W.A.
<b>Respirable Dust</b>	W.E.L.	4mg/m <sup>3</sup>	8 Hrs	T.W.A.
<b>Respirable Quartz</b>	W.E.L.	0.1mg/m <sup>3</sup>	8 Hrs	T.W.A.

\*\* W.E.L. = Workplace Exposure Limit | T.W.A. = Time Weighted Average

Control Measures :

Dust caused by cutting or drilling hardened concrete should be controlled by containment, suppression and extraction/ filtration where possible.

Inhalation :

Do not breathe dust.

Respiratory Protection:

Respiratory protection is not usually required when working with wet concrete, If work creates dust (e.g. when cutting or drilling hardened concrete), and engineering controls do not keep dust levels below the levels shown in the table above, then suitable respiratory protection should be used to protect against inhalation of dust, and to ensure exposure is below the Workplace Exposure Levels given in the table.

Hand Protection :

Impermeable gloves should be worn.

Eye Protection :

Eye protection should be worn to prevent the product entering the eyes (including dust).

Skin Protection :

Overalls and/or long-sleeved jackets and full length trousers should be worn to protect skin from contact with wet concrete. Outer clothing should be waterproof if contact with wet concrete is likely. Wear impermeable boots to protect feet. Safety wellington boots should be worn If working with wet concrete, with waterproof trousers pulled over them to help prevent concrete entering the boots. If concrete saturates clothing, or enters gloves or boots, remove the articles immediately and wash before wearing again.

In addition to the above, the use of skin barrier cream and aftercare products is also recommended.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance :	Gray Powder
pH :	12 ± 0.5
Flammability :	Not Applicable
Authorization Temperature :	No Data Available
Explosive Properties :	Not Applicable
Oxidizing Properties :	Not Applicable
Vapor Pressure :	Not Data

Appearance :	Gray Powder
Vapor Density (air=1) :	Not Data
Melting / Softening Range :	Not Data
Water Solubility :	Mixed
Specific Gravity at 25°C :	3.1 ± 0.05

## **SECTION 10: STABILITY AND REACTIVITY**

Conditions to Avoid :	None
Materials to Avoid :	None
Hazardous Decomposition Products :	None

## **SECTION 11: TOXICOLOGICAL INFORMATION**

Inhalation :	If inhaled over a prolonged or extended period, respirable dust from drilling or cutting hardened concrete can lead to respiratory system damage and disease.
Skin Contact :	Skin contact with wet concrete could result in serious alkali burns. Contact with concrete may also cause skin disease by the combination of the wetness, alkalinity and abrasiveness of the ready-mixed concrete. Allergic contact dermatitis may be caused by individual sensitivity to chromium compounds which may occur in cement.
Eye Contact :	Wet concrete in contact with eyes can cause irritation, inflammation or serious alkali burns, which may lead to blindness.
Ingestion :	Ingestion is very unlikely. Ingestion of large amounts may cause irritation of the stomach and intestines. Seek medical attention.

## **SECTION 12: ECOLOGICAL INFORMATION**

Environmental Assessment :	When used and disposed of as intended, no adverse environmental effects are foreseen, and concrete should not pose a significant ecological hazard.
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## **SECTION 13: DISPOSAL INFORMATION**

Waste Product:	Hardened concrete is classed as non-hazardous and 'inert' but should be disposed of in accordance with local and national legal requirements. Hardened concrete can be readily recycled.
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## SECTION 14: TRANSPORT INFORMATION

Special Carriage Requirements : None – not classified as dangerous for transport.

## SECTION 15: REGULATORY INFORMATION

Occupational Safety and Health Act in Korea :
 

- Harmful Agents Subject to Workers Requiring Health Examination (Diagnostic cycle : 24 Months)
- Harmful Agents Subject to Work Environment Monitoring (Measurement cycle : 6 Months)
- Threshold Limit Values (TLVs) chemicals

Chemicals Control Act in Korea : Not applicable

Safety Control of Dangerous Substances Act in Korea : Not applicable

Wastes Control Act in Korea : Not applicable

### Other regulations in KOREA and Abroad regulations

#### (Korean Regulation)

Persistent Organic Pollutants (POPs) Control Act Not applicable

#### (USA Regulation)

U.S.A. management information (OSHA regulation) Not applicable

U.S.A. management information(CERCLA regulation) Not applicable

U.S.A. management information(EPCRA 302 regulation) Not applicable

U.S.A. management information(EPCRA 304 regulation) Not applicable

U.S.A. management information(EPCRA 313 regulation) Not applicable

U.S.A. management information(Rotterdam Convention on Substances ) Not applicable

U.S.A. management information(Stockholm Convention on Substances ) Not applicable

U.S.A. management information(Mont- real Protocol on Substances ) Not applicable

#### (EU Regulation)

EU Classification (CLASSIFICATION) Not applicable

EU Classification (Risk Phrases) Not applicable

EU Classification (Safety Phrases) Not applicable

**SECTION 16: OTHER INFORMATION**

Training Advice :

Wear and use of PPE

Recommended Uses and Applications:

Industrial and construction applications.

Notice :

Take this form when seeking medical attention as a result of accidents with this product. All information, recommendation, and systems appearing in this literature concerning the use of products are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the suitability for his own use of the product described herein.

For further information :

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