TCC GROUP HOLDINGS Ready-Mixed Concrete - Safety Data Sheet

1. Item and manufacturer information

Item name: Ready-mixed concrete

Other names: Fresh concrete

Recommended uses and restrictions on use: Ready-mixed concrete is widely used

in construction and civil engineering.

Manufacturer or Supplier Name: Taiwan Cement Corporation

Address: No. 113, Section 2, Zhongshan North Road, Taipei City

Tel : (02) 25317099 Fax: (02) 25316650

Emergency contact number: (02) 25317099 Business Department

2. Hazard Identification Information

Article Hazard Classification: Materials not classified as hazardous by the Council
of Labor Affairs.
Label content : Danger
Symbols :
Warning: Danger, corrosive.
Hazard Warning Message: Causes skin irritation, may cause an allergic skin
reaction, causes serious eye damage, may cause respiratory
irritation.
Hazard prevention measures: Wear gloves, goggles and dust masks when using
this substance
Other hazards: None.

3. Ingredients/Composition Information

This product is a mixture containing the following ingredients:

Ingredient Name	content	CAS Number
Aggregate	~70%	None
Portland Cement/Slag/Fly Ash	<30%	65996-69-2
water	<20%	7732-18-5
Chemical Admixtures	0.5%~2%	None

4. First aid measures

First aid methods for different exposure routes:

- Eye contact: Hold eyelids open and rinse continuously with running water for at least 15 minutes or stop as directed by a physician.
- suck Inhalation: Due to product form / nature of use, not expected to be an aspiration hazard. However, if contact with dry product occurs, move away from the contaminated area. If not breathing, give artificial respiration.
- Skin contact: Remove contaminated clothing and rinse skin and hair with plenty of water. Continue rinsing as directed by your physician.
- Food Intake : Contact a physician immediately to see if vomiting can be induced .

Most important symptoms and hazardous effects: irritation to eyes, skin and respiratory system.

Protection of first aid personnel: No protection is required to perform first aid.

Note to physician: Rinse with plenty of water.

5. Fire Fighting Measures

Applicable fire extinguishing agent: Select appropriate fire extinguishing agent according to the nature of the surrounding fire.

Special hazards that may be encountered during fire fighting: This product is non-flammable, but may produce toxic gases at high temperatures .

Special Fire Fighting Procedures: None.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and complete protective equipment.

Hazardous chemical code: None.

6. Leakage treatment methods

Personal precautions: Wear personal protective equipment (dust-proof glasses, dust-proof mask, rubber or latex gloves).

Environmental Precautions: Avoid entry into drains or bodies of water.

Cleaning methods: Contain the leak, avoid dust , and collect it in appropriate containers for recycling or disposal.

7. Safe handling and storage methods

Disposal:

For concrete : Handling (cutting, drilling, etc.) will generate respirable dust containing crystalline silica.

For ready-mixed concrete : Avoid prolonged direct contact as it may cause alkaline burns.

Storage: Not suitable for storage in premixed state.

8. Exposure precautions

Engineering Controls: None.

Control parameters:

• Average permissible concentration for eight hours/average permissible concentration for short periods of time/maximum permissible concentration: no data.

• Biological indicators: No data.

Personal protection:

- Eyes: dust goggles - Hands: PVC or rubber gloves - Body: work clothes, apron -Respiratory: dust mask

Hygiene measures: 1. Wash hands thoroughly after handling this item. 2. Keep the workplace clean.

9. Physical and chemical properties

Appearance: Grey liquid	Odor: None
Olfactory threshold: -	pH value: 12 ~13
Melting point: >1200°C	Boiling point / boiling range: -
Flash Point: Not Applicable	Decomposition temperature: -
Volatility rate : No data	Flammability (solid, gas): Not
	applicable : Not flammable
Vapor pressure : No data available	Vapor density : No data available
Density: 2.35	Solubility: slightly soluble
Autoignition temperature : No data	Explosion limit: -

10. Stability and reactivity

Stability: Stable under normal storage conditions .

Possible hazardous reactions: Will not polymerize .

Conditions to Avoid : Avoid contact with incompatible materials.

Incompatible materials: oxidizing agents, acids (such as hydrofluoric acid), alcohols, chlorides .

Hazardous Decomposition Products : None.

Possible hazardous reactions under special conditions: Toxic gases may be released at high temperatures.

11. Toxicological information

Possible routes of exposure: Skin, eyes.

Symptoms:

- Skin: Contact with powder or ready-mixed concrete may cause redness, rash and dermatitis
- Eyes: Contact with moisture from ready-mixed concrete may cause severe irritation or alkaline burns

Acute toxicity: Ingestion may cause irritation to the mouth, throat and digestive tract .

Chronic or long-term toxicity: None.

12. Ecological information

Biological Toxicity: May be harmful to the aquatic environment due to its alkaline nature. It is non-toxic after curing.

Persistence and Degradability: The product is long lasting with low biodegradability.

Bioaccumulation: No evidence of bioaccumulation .

Other Adverse Effects: Avoid entry into drainage system .

13. Disposal methods

Waste disposal method: Can be recycled and reused, handled in accordance with local regulations.

14. Delivery of Information

UN Number : -

UN Shipping Name : -

Transport Hazard Classification :-

Packaging category : -

Marine Pollutants :-

Special delivery methods and precautions : -

15. Regulatory Information

Applicable regulations: None.

16. Other Information

References	1. Public works construction specifications	
	2. Building regulations	
	3. The Bureau of Standards, Metrology and Inspection (CNS)	
Table maker	Name: TCC GROUP HOLDINGS-Sustainability Research and	
unit	Development Center	
	Address: No. 220, Section 2, Nanshan Road, Taoyuan City 338	
	Tel: 03-3120185	
	Table maker Title: Supervisor Name: Zhengxin Zhang	
Tabulation date 114.05.07		
Preparation Note The symbol "-" in the above information means that no relevant		

Preparation Note The symbol "-" in the above information means that no relevant information is currently available.

The above information and various data and materials are for reference only. Users should determine their usability according to application requirements, especially mixtures. Mixing different materials may cause different hazards. In addition, according to the relevant provisions of the Dangerous and Hazardous Materials Communication Rules, provide workers with necessary safety and health precautions.

Safety Data Sheet (SDS) TCC Group Holdings

1. Product Labeling

Product Name: Ultra High Performance Concrete

Manufacturer or Supplier Name: TCC GROUP HOLDINGS

Manufacturer or Supplier Address: No. 113, Section 2, Zhongshan North Road, Taipei City, Taiwan

Manufacturer or Supplier Telephone: +886-2-2531-7099

Emergency Contact Number: +886-2-2531-7099 (Labor Safety and Health Management Office); Language: English

2. Hazard Identification (CNS15030)

Health Hazards:

- Acute Toxicity Category 4 *Warning*: Harmful if swallowed, in contact with skin, or if inhaled.
- Skin Corrosion/Irritation Category 2 Warning: Causes skin irritation.
- Serious Eye Damage/Eye Irritation Category 1 Danger, Category 2A Warning: Causes serious eye irritation or damage.



Most Important Hazard Effects

Environmental Effects: As an alkaline substance, improper disposal may cause environmental pollution and alter soil pH levels.

Physical and Chemical Hazards: None.

Special Hazards: None.

Hazard Classification: Not classified as a hazardous substance under the regulations of the Council of Labor Affairs.

3. Ingredient identification information:

Mixture:		
Chinese and English Name of Hazardous Ingredients	Concentration or Concentration Range(Component %)	CAS Number
Cement	30-50%	65997-15-1
Silica Fume	5-15%	69012-64-2
Slag	5-15%	65996-69-2
Quartz Sand	40-50%	14808-60-7

4. First Aid Measures

First Aid Methods for Different Exposure Routes:

- Inhalation:
 - 1. Move the patient to an area with fresh air.
 - 2. Provide oxygen if the patient has difficulty breathing.
 - 3. If symptoms persist, seek medical attention immediately.

Skin Contact:

- 1. Remove contaminated clothing, shoes, watches, etc., and thoroughly clean before reuse.
- 2. Wash the affected area with water and soap.
- 3. If symptoms persist, seek medical attention immediately.

• Eye Contact:

- 1. Avoid the patient rubbing or tightly closing their eyes.
- 2. Carefully pull open the upper and lower eyelids and rinse the contaminated eyes with gently flowing water for 15-20 minutes or longer.
- 3. If irritation persists after rinsing, continue rinsing.
- 4. Cover the eyes with gauze and seek medical attention immediately.

Ingestion:

- 1. Consult a doctor to determine if vomiting should be induced.
- 2. If the patient vomits spontaneously, have them lean forward to reduce the risk of inhalation.
- 3. Immediately take the patient to a medical facility for examination and treatment.

Most Important Symptoms and Hazardous Effects: Eye pain, coughing, skin itching, etc.

Protection for first responders: None.

Indications for physicians: None.

5. Fire-fighting Measures

Applicable fire extinguishers: Cement is a non-combustible material.

Special hazards that may be encountered during fire-fighting: None.

Special fire-fighting procedures: None.

Special protective equipment for fire-fighting personnel: None.

6. Spill Handling Methods

Precautions for individuals: Avoid direct contact during cleanup.

Environmental precautions: Do not dispose of directly or flush residues into drains or drainage systems.

Cleanup methods: Use general tools to collect and recycle.

7. Safe Disposal and Storage Methods

Disposal: Cement is a stable material and does not pose a danger during storage.

Storage: If exposed to moisture or water vapor for extended periods, cement will harden. Therefore, it should be stored in dry, waterproof, and sealed bags or containers, and kept in a cool, dry place.

8. Exposure Prevention Measures

Engineering controls: No data available.

Control parameters:

• 8-hour time-weighted average permissible concentration / short-term time-weighted average

permissible concentration / maximum permissible concentration: No data available.

• Biological indicators: No data available.

Personal protective equipment:



- Respiratory protection: A dust mask should be worn when exposed to cement dust for extended periods.
- Hand protection: Rubber gloves should be worn during handling.
- Eye protection: Protective glasses should be worn when exposed to dust.
- Skin and body protection: Avoid direct contact with cement dust; safety shoes should be worn.

Hygiene measures: None.

9. Physical and Chemical Properties

State: Solid.	Form: Powdered substance.
Color: Gray/White.	Odor: None.
рН:12~13.	Melting point range: >1000°C.
Evaporation rate: None.	Boiling point range: None.
Decomposition temperature: No data available.	Flash point: None.
Autoignition temperature: None.	Explosion limits: None.
Vapor pressure: None.	Vapor density: None.
Density: 1.5~2.0 g/cm ³ °	Solubility: Slightly soluble in water.

10. Stability and Reactivity

Stability: A stable substance (keep dry).

Hazardous reactions under special conditions: No data available.

Conditions to avoid: Avoid contact with moisture or humidity.

Substances to avoid: None.

Hazardous decomposition products: None.

11. Toxicity Information

Acute toxicity: None.

Local effects: None.

Sensitization: Irritating.

Chronic or long-term toxicity: None.

Special effects: None.

12. Ecological Information

Ecotoxicity: As an alkaline substance, it should not be disposed of casually, as it may cause environmental pollution and alter the pH of water or soil.

Persistence and degradability: Not relevant (hardened cement does not pose a toxicity risk).

Bioaccumulation potential: Not relevant (hardened cement does not pose a toxicity risk).

Mobility in soil: Not relevant (hardened cement does not pose a toxicity risk).

PBT and vPvB assessment: Not relevant (hardened cement does not pose a toxicity risk).

Other adverse effects: Not applicable.

13. Waste Disposal Methods

Waste disposal methods: Cure with water or recycle.

14. Transport Information

International transport regulations: No special regulations, but generally transported in sealed containers or paper bags to avoid moisture absorption and contact with water.

UN number: No data available.

Domestic transport regulations: No special regulations, but generally transported in sealed containers or paper bags to avoid moisture absorption and contact with water.

Special transport methods and precautions: None.

15. Regulatory Information

Applicable regulations: None.

16. Other Information

Tabulation unitsTaiwan Cement Corporation Sustainability Research and Development CenterAddress: No. 148, Section 1, Chang'an Road, Luzhu District, Taoyuan City 338Phone: +886-3-3217855	
Preparation date	2025/05/08

Safety Data Sheet (SDS) TCC Group Holdings

1. Product Labeling

Product Name: Portland Limestone Cement

Product type: Binary blended cement - IL type Portland limestone cement

Manufacturer or Supplier Name: Taiwan Cement Corporation

Manufacturer or Supplier Address: No. 113, Section 2, Zhongshan North Road, Taipei City, Taiwan

Manufacturer or Supplier Telephone: +886-2-2531-7099

Emergency Contact Number: +886-2-2531-7099 (Labor Safety and Health Management Office); Language: English

2. Hazard Identification (CNS15030)

Health Hazards:

Most Important Hazard Effects

- Acute Toxicity Category 4 Warning: Harmful if swallowed, in contact with skin, or if inhaled.
- Skin Corrosion/Irritation Category 2 Warning: Causes skin irritation.
- Serious Eye Damage/Eye Irritation Category 1 Danger, Category 2A Warning: Causes serious eye irritation or damage.

Environmental Effects: As an alkaline substance, improper disposal may cause environmental pollution and alter soil pH levels.

Physical and Chemical Hazards: None.

Special Hazards: None.

Hazard Classification: Not classified as a hazardous substance under the regulations of the Council of Labor Affairs.

3. Ingredient identification information:

Mixture:		
Chinese and English Name of Hazardous Ingredients	Concentration or Concentration Range(Component %)	CAS Number
Clinker	77-90%	65997-15-1
Gypsum	4-8%	13397-24-5
Limestone	6-15%	1317-65-3

4. First Aid Measures

First Aid Methods for Different Exposure Routes:

Inhalation:

- 1. Move the patient to an area with fresh air.
- 2. Provide oxygen if the patient has difficulty breathing.
- 3. If symptoms persist, seek medical attention immediately.

Skin Contact:

1. Remove contaminated clothing, shoes, watches, etc., and thoroughly clean before reuse.

2. Wash the affected area with water and soap.

- 3. If symptoms persist, seek medical attention immediately.
- Eye Contact:
 - 1. Avoid the patient rubbing or tightly closing their eyes.
 - 2. Carefully pull open the upper and lower eyelids and rinse the contaminated eyes with gently flowing water for 15-20 minutes or longer.
 - 3. If irritation persists after rinsing, continue rinsing.
 - 4. Cover the eyes with gauze and seek medical attention immediately.
- Ingestion:
 - 1. Consult a doctor to determine if vomiting should be induced.
 - 2. If the patient vomits spontaneously, have them lean forward to reduce the risk of inhalation.
 - 3. Immediately take the patient to a medical facility for examination and treatment.

Most Important Symptoms and Hazardous Effects: Eye pain, coughing, skin itching, etc.

Protection for first responders: None.

Indications for physicians: None.

5. Fire-fighting Measures

Applicable fire extinguishers: Cement is a non-combustible material.

Special hazards that may be encountered during fire-fighting: None.

Special fire-fighting procedures: None.

Special protective equipment for fire-fighting personnel: None.

6. Spill Handling Methods

Precautions for individuals: Avoid direct contact during cleanup.

Environmental precautions: Do not dispose of directly or flush residues into drains or drainage systems.

Cleanup methods: Use general tools to collect and recycle.

7. Safe Disposal and Storage Methods

Disposal: Cement is a stable material and does not pose a danger during storage.

Storage: If exposed to moisture or water vapor for extended periods, cement will harden. Therefore, it should be stored in dry, waterproof, and sealed bags or containers, and kept in a cool, dry place.

8. Exposure Prevention Measures

Engineering controls: No data available.

Control parameters:

• 8-hour time-weighted average permissible concentration / short-term time-weighted average

permissible concentration / maximum permissible concentration: No data available.

• Biological indicators: No data available.

Personal protective equipment:

• Respiratory protection: A dust mask should be worn when exposed to cement dust for extended periods.



• Hand protection: Rubber gloves should be worn during handling.

- Eye protection: Protective glasses should be worn when exposed to dust.
- Skin and body protection: Avoid direct contact with cement dust; safety shoes should be worn.

Hygiene measures: None.

9. Physical and Chemical Properties

State: Solid.	Form: Powdered substance.
Color: Gray.	Odor: None.
pH: Approximately 12.5.	Melting point range: >1000°C.
Evaporation rate: None.	Boiling point range: None.
Decomposition temperature: No data available.	Flash point: None.
Autoignition temperature: None.	Explosion limits: None.
Vapor pressure: None.	Vapor density: None.
Density: 2.7~3.2 g/cm ³ °	Solubility: Slightly soluble in water.

10. Stability and Reactivity

Stability: A stable substance (keep dry).

Hazardous reactions under special conditions: No data available.

Conditions to avoid: Avoid contact with moisture or humidity.

Substances to avoid: None.

Hazardous decomposition products: None.

11. Toxicity Information

Acute toxicity: None.

Local effects: None.

Sensitization: Irritating.

Chronic or long-term toxicity: None.

Special effects: None.

12. Ecological Information

Ecotoxicity: As an alkaline substance, it should not be disposed of casually, as it may cause environmental pollution and alter the pH of water or soil.

Persistence and degradability: Not relevant (hardened cement does not pose a toxicity risk).

Bioaccumulation potential: Not relevant (hardened cement does not pose a toxicity risk).

Mobility in soil: Not relevant (hardened cement does not pose a toxicity risk).

PBT and vPvB assessment: Not relevant (hardened cement does not pose a toxicity risk).

Other adverse effects: Not applicable.

13. Waste Disposal Methods

Waste disposal methods: Cure with water or recycle.

14. Transport Information

International transport regulations: No special regulations, but generally transported in sealed

containers or paper bags to avoid moisture absorption and contact with water.

UN number: No data available.

Domestic transport regulations: No special regulations, but generally transported in sealed containers or paper bags to avoid moisture absorption and contact with water.

Special transport methods and precautions: None.

15. Regulatory Information

Applicable regulations: None.

16. Other Information

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Tabulation units	Address: No. 148, Section 1, Chang'an Road, Luzhu District, Taoyuan City 338 Phone: +886-3-3217855
Prepared by	Huang Pin-Chun
Preparation date	2025/05/08
Remark	

Safety Data Sheet (SDS) TCC Group Holdings



Product Name: Ready-Mixed Concrete

Manufacturer or Supplier Name: TCC GROUP HOLDINGS

Manufacturer or Supplier Address: No. 113, Section 2, Zhongshan North Road, Taipei City, Taiwan

Manufacturer or Supplier Telephone: +886-2-2531-7099

Emergency Contact Number: +886-2-2531-7099 (Labor Safety and Health Management Office); Language: English

2. Hazard Identification (CNS15030)

Health Hazards:

Most Important Hazard Effects

- Acute Toxicity Category 4 Warning: Harmful if swallowed, in contact with skin, or if inhaled.
- Skin Corrosion/Irritation Category 2 Warning: Causes skin irritation.
- Serious Eye Damage/Eye Irritation Category 1 Danger, Category 2A Warning: Causes serious eye irritation or damage.



Environmental Effects: As an alkaline substance, improper disposal may cause environmental pollution and alter soil pH levels.

Physical and Chemical Hazards: None.

Special Hazards: None.

Hazard Classification: Not classified as a hazardous substance under the regulations of the Council of Labor Affairs.

3. Ingredient identification information:

Mixture:		
Chinese and English Name of Hazardous Ingredients	Concentration or Concentration Range(Component %)	CAS Number
Aggregate	~70%	not
Portland Cement/Slag/Fly Ash	<30%	1302-93-8
water	<30%	65996-69-2
Chemical Admixtures	<20%	7732-18-5
Aggregate	0.5%~2%	not

4. First Aid Measures

First Aid Methods for Different Exposure Routes:

Inhalation:

1. Move the patient to an area with fresh air.

- 2. Provide oxygen if the patient has difficulty breathing.
- 3. If symptoms persist, seek medical attention immediately.

Skin Contact:

- 1. Remove contaminated clothing, shoes, watches, etc., and thoroughly clean before reuse.
- 2. Wash the affected area with water and soap.
- 3. If symptoms persist, seek medical attention immediately.
- Eye Contact:
 - 1. Avoid the patient rubbing or tightly closing their eyes.
 - 2. Carefully pull open the upper and lower eyelids and rinse the contaminated eyes with gently flowing water for 15-20 minutes or longer.
 - 3. If irritation persists after rinsing, continue rinsing.
 - 4. Cover the eyes with gauze and seek medical attention immediately.
- Ingestion:
 - 1. Consult a doctor to determine if vomiting should be induced.
 - 2. If the patient vomits spontaneously, have them lean forward to reduce the risk of inhalation.
 - 3. Immediately take the patient to a medical facility for examination and treatment.

Most Important Symptoms and Hazardous Effects: Eye pain, coughing, skin itching, etc.

Protection for first responders: None.

Indications for physicians: None.

5. Fire-fighting Measures

Applicable fire extinguishers: Cement is a non-combustible material.

Special hazards that may be encountered during fire-fighting: None.

Special fire-fighting procedures: None.

Special protective equipment for fire-fighting personnel: None.

6. Spill Handling Methods

Precautions for individuals: Avoid direct contact during cleanup.

Environmental precautions: Do not dispose of directly or flush residues into drains or drainage systems.

Cleanup methods: Use general tools to collect and recycle.

7. Safe Disposal and Storage Methods

Disposal:

For concrete : Handling (cutting, drilling, etc.) will generate respirable dust containing crystalline silica.

For ready-mixed concrete : Avoid prolonged direct contact as it may cause alkaline burns.

Storage: Not suitable for storage in premixed state.

8. Exposure Prevention Measures

Engineering controls: No data available.

Control parameters:

• 8-hour time-weighted average permissible concentration / short-term time-weighted average permissible concentration / maximum permissible concentration: No data available.

• Biological indicators: No data available.

Personal protective equipment:

• Respiratory protection: A dust mask should be worn when exposed to cement dust for extended periods.



- · Hand protection: Rubber gloves should be worn during handling.
- Eye protection: Protective glasses should be worn when exposed to dust.
- Skin and body protection: Avoid direct contact with cement dust; safety shoes should be worn.

Hygiene measures: None.

9. Physical and chemical properties

Appearance: Grey liquid	Odor: None
Olfactory threshold: -	pH value: 12 ~13
Melting point: >1200°C	Boiling point / boiling range: -
Flash Point: Not Applicable	Decomposition temperature: -
Volatility rate : No data	Flammability (solid, gas): Not applicable : Not flammable
Vapor pressure : No data available	Vapor density : No data available
Density: 2.35	Solubility: slightly soluble
Autoignition temperature : No data	Explosion limit: -

10. Stability and Reactivity

Stability: Stable under normal storage conditions .

Possible hazardous reactions: Will not polymerize .

Conditions to Avoid : Avoid contact with incompatible materials.

Incompatible materials: oxidizing agents, acids (such as hydrofluoric acid), alcohols, chlorides .

Hazardous Decomposition Products : None.

Possible hazardous reactions under special conditions: Toxic gases may be released at high temperatures.

11. Toxicity Information

Possible routes of exposure: Skin, eyes.

Symptoms:

• Skin: Contact with powder or ready-mixed concrete may cause redness, rash and dermatitis

• Eyes: Contact with moisture from ready-mixed concrete may cause severe irritation or alkaline burns

Acute toxicity: Ingestion may cause irritation to the mouth, throat and digestive tract .

Chronic or long-term toxicity: None.

12. Ecological Information

Biological Toxicity: May be harmful to the aquatic environment due to its alkaline nature. It is non-toxic after curing.

Persistence and Degradability: The product is long lasting with low biodegradability.

Bioaccumulation: No evidence of bioaccumulation .

Other Adverse Effects: Avoid entry into drainage system .

13. Waste Disposal Methods

Waste disposal method: Can be recycled and reused, handled in accordance with local regulations.

14. Transport Information

UN Number : -

UN Shipping Name : -

Transport Hazard Classification :-

Packaging category : -

Marine Pollutants :-

Special delivery methods and precautions : -

15. Regulatory Information

Applicable Regulations: None.

16. Other information

References	 Public works construction specifications Building regulations The Bureau of Standards, Metrology and Inspection (CNS)
Tabulator unit	Name: TCC GROUP HOLDINGS-Sustainability Research and Development Center
	Address: No. 220, Section 2, Nanshan Road, Taoyuan City 338 Tel: 03-3120185
	Table maker Title: Supervisor Name: Zhengxin Zhang
Tabulation date 114.05.07	

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