

## Safety Data Sheet

**ART-ZJL****1. Chemical Product and Company Identification**

Chemical name	Tunnel Grouting Material		
Trade name:	ART-ZJL		
Application:	Crown Grouting with Formwork for Tunnel Lining		
Manufacturer:	Jiangsu Arit New Materials Co., Ltd		
Address:	22 Huixin Road, Nanjing , China	Zip code:	211505
Email:	abbyzheng@arit.com		
Fax Number:	86-25-57678989		
Emergency phone number:	86-25-57675555		

**2. Composition/information on ingredients**

Component	CAS No.	Content (%)
Cement (Chromium Reduction)	65997-15-1	≥50 - <70
Quartz (SiO <sub>2</sub> )	14808-60-7	≥20 - <30

**3. Hazards Identification**

Hazard Category: This product is inorganic powder. It is non-flammable, non-explosive and non-toxic.

Invasion way: Skin and eyes contact, inhalation and mistake ingestion.

Health effect: May cause eye irritation. No stimulation to skin. May cause stimulation to oral cavity and stomach after mistake intake. No carcinogenicity.

Environment effect: Slight harm to fish and other animals.

Other hazards: None.

**4. First Aid Measures**

Skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician.

Eye contact: Rinse immediately with plenty of water or normal saline. Seek immediate

medical help if feel itching and painful.

Ingestion: Drink enough warm water and vomit. Consult a physician.

Inhalation: Move to fresh air environment if odor allergies.

## **5. Fire-fighting Measures**

Hazardous characteristics: None.

Harmful burning waste: Non-combustible

Extinguishing media: Foam, dry powder, carbon dioxide extinguishers or water sprays.

## **6. Accidental Release Measures**

Personal precautions: Use personal protective equipment. Avoid breathing dust..

Environmental precautions: Try to prevent the material from entering drains or water courses.

Waste disposal: Pick up and arrange disposal without creating dust.Keep in suitable, closed containers for disposal.

## **7. Handling and Storage:**

Handling note: Avoid contact with skin or eyes. Wear personal protective equipment.

Storage note: Stored in a cool and dry place, keep away from sunshine, rain, fire and heat.

## **8. Exposure Controls/Personal Protection**

The maximum allowable concentration: Unlimited.

Monitoring method: No standard.

Engineering control: Ensure adequate ventilation.

Respiratory protection: If this concentration is exceeded, selfcontained breathing apparatus must be used.

Eye protection: Safety eyewear is recommended.

Body protection: Workwear is recommended.

Hand protection: Protective gloves are recommended.

Other protection: No eating and drinking in work area in order to avoid the mistake.

## **9. Physical and Chemical Properties:**

Appearance: Powder

Color: Gray

Odor: Odorless

Odor Threshold: No data

pH : No data

Melting Point/Range/Freezing Point: No data  
Boiling Point/Range: No data  
Flash Point: Not applicable  
Evaporation Rate: No data  
Flammability: No data  
Upper Explosive Limit: No data  
Lower Explosive Limit: No data  
Vapor Pressure: No data  
Relative Vapor Density: No data  
Density: Approximately 1.95 g/cm<sup>3</sup> (at 25°C (77°F))  
Bulk Density: Approximately 1,300 kg/m<sup>3</sup>  
Solubility in Water: No data  
Solubility in Other Solvents: No data  
Partition Coefficient: n-Octanol/Water  
Autoignition Temperature: No data  
Decomposition Temperature: No data  
Viscosity:  
Dynamic Viscosity: No data  
Kinematic Viscosity: Not applicable  
Explosive Properties: No data  
Molecular Weight: No data

## **10. Stability and Reactivity**

Chemical Stability: The product is chemically stable.  
Conditions to avoid: None.  
Incompatibility with other materials: None.  
Hazardous polymerization: None.  
Decomposition product: None.

## **11. Toxicological Information:**

Acute toxicity: None.  
Subacute and chronic toxicity: No information available.  
Irritation: Have a stimulating effect to eyes, and a mild stimulating effect to mouth and stomach if mistake intake.  
Sensitization: None.  
Mutagenicity: None.  
Teratogenicity: None.

Carcinogenicity: None.

Special note: None.

**12. Ecological Information:**

Ecotoxicity: No information available.

Biodegradability: Partially biodegradable.

Non-biodegradable: No information available.

Bioconcentration or bioaccumulation: No information available.

**13. Disposal Considerations:**

Nature of waste: non-hazardous waste, non-industrial solid waste.

Waste Disposal Method: proper burial place or treatment according to local environmental requirements.

**14. Transport Information:**

Dangerous Goods Code	Not available	Shipping classification	Not available
UN Number	Not available	Packing	Bags
Package Markings	Non-dangerous powder	Transport Caveats	None

**15. Regulatory Information**

This product is not classified as dangerous goods according to transport international regulations (IMDG, IATA, ADR/RID).

It is not limited by the hazardous chemical materials according to safety management regulations.

**16. Additional Information**

Revision date	Feb 10th, 2024	Supervisor	Nanjing University of Technology
Guidance Department	R & D Center	Version	Second Edition