

## Safety Data Sheet

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

Chemical name	Early strength-enhancing nano seeds admixture		
Trade name:	ART-CSH		
Application:	Early strength-enhancing for Concrete		
Manufacturer:	Jiangsu Arit New Materials Co., Ltd		
Address:	22 Huixin Road, Nanjing , China	Zip code:	211505
Email:	zhengxinabby@gmail.com		
Fax Number:	86-25-57678989		
Emergency phone number:	86-25-57675555		

**2. Composition/information on ingredients**

Component	CAS No.	Content
Water	7732-18-5	85.00~95.00%
Calcium silicate	1344-95-2	5.00~15.00%
Ethylene glycol	25322-68-3	0.01~0.5%

**3. Hazards Identification**

Hazard Category: This product is mixture of organic polymers and compounds. 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 wash off with soap and flowing water.

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: The solid composition burns to form carbon dioxide. After dissolution, the aqueous solution is non-combustible.

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

## **6. Accidental Release Measures**

Release measures: Cut off the leakage sources. Prevent the released material from entering confined space such as sewers, flood discharge trench and so on.

Little leakage: Soak up with absorbent material, such as clay, sand, vermiculite or other inert materials. The diluted leakage can be discharged to the wastewater treatment system.

Mass leakage: If the leakage is not contaminated, collect the spills with a clean container for reuse. Construct a barrier or dig pits to hold waste leakage, then pump to tank or special collector, and transport to the waste disposal sites.

Elimination method: Collect the leakage, and wash the leakage with water.

Waste disposal: According to local environmental requirements.

## **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, self-contained 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:**

Form: Liquid

Color: Milky-white suspension

Odor: faint

pH: 12±0.5

Melting point: Insignificance

Boiling point: Insignificance

Relative density (Water=1): 1.02±0.02

Solubility: Soluble in water

Explosive limit/%(V/V): Insignificance

Flash point: Insignificance

## **10. Stability and Reactivity**

Chemical Stability: Good chemical stability. But if placed in high-temperature summer environment, bacterial contamination, bad smell and appearance deterioration is hard to avoid.

Conditions to avoid: High temperature or frozen environment.

Incompatibility with other materials: Rust, oily substances.

Hazardous polymerization: None.

Decomposition product: None.

## **11. Toxicological Information:**

Acute toxicity: None,  $LD_{50} > 20$  g/kg

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	In Ibc
Package Markings:	Non-dangerous Liquid	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	Jun 19th, 2024	Supervisor	Nanjing University of Technology
Guidance Department	R & D Center	Version	Second Edition