



TECHNICAL DATA SHEET (TDS)

Sodium Naphthalene Formaldehyde (SNF) 5%

GREEN AGROCHEM Industrial Chemicals - Concrete Admixture Technical Document

Product Code	GAC-IC-TDS-Sodium-Naphthalene-Formaldehyde-SNF-5-Percent	Revision Date	2026-05-02
CAS No.	36290-04-7	Version	TDS-GAC-IC-2026
Product Type	High-range water-reducing agent / concrete superplasticizer	Document Type	Technical Data Sheet

1. Product Identification

Product Name	Sodium Naphthalene Formaldehyde (SNF) 5%
Trade / Technical Name	Sodium Naphthalene Formaldehyde (SNF) 5% Sodium Sulfate Grade
Product Code	GAC-IC-TDS-Sodium-Naphthalene-Formaldehyde-SNF-5-Percent
CAS No.	36290-04-7
Chemical Formula / Type	Polymer / condensation product
Synonyms	PNS; NSF; Poly Naphthalene Sulfonate
HS Code	3824401000
CB Number	CB8129327
Supplier	GREEN AGROCHEM CO., LIMITED
Address	South West Station Road, Fengtai District, Beijing, China
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2. Product Description

Sodium Naphthalene Formaldehyde (SNF) is a highly effective anionic surfactant and dispersant based on sodium salts of alkyl naphthalene sulfonic acid formaldehyde condensate. This SNF 5% grade is supplied as a free-flowing brown to dark brown powder with low sodium sulfate content, suitable for high-performance concrete, cement dispersion and oil well cementing applications.

3. Main Specifications

Parameter	Specification
Appearance	Brown to dark brown powder
Solids Content	91% min
Net Starch Fluidity	220 mm min
Sodium Sulfate (Na ₂ SO ₄)	5% max
Chloride (Cl ⁻) Content	0.4% max
pH Value	7 - 9
Surface Tension	(71 +/- 1) x 10 ⁻³ N/m

4. Key Features and Industrial Performance

- High Water Reduction and Strength: Reduces the water-to-cement ratio and helps improve early and ultimate compressive strength by reducing internal capillary voids.
- Superior Workability: Improves flowability and workability while reducing segregation and pumping/mixing energy requirements.
- Cost Optimization: Allows reduction of cement and water usage without sacrificing designed concrete performance when used correctly.
- Durability and Safety: No adverse effect on shrinkage under recommended use and non-corrosive to internal steel reinforcement.
- Industrial Versatility: Also suitable as cement dispersant, oil well cementing aid, filler and leather tanning auxiliary.

5. Standard Test Performance Data

Test Item	Acceptance Criteria	Typical / Actual Result
Water Reduction	14% min	17%
Water Penetration Ratio	90% max	80%
Air Content	3% max	2%
Compressive Strength (1 Day)	140% min	165%
Compressive Strength (3 Days)	130% min	155%
Compressive Strength (7 Days)	125% min	135%
Compressive Strength (28 Days)	120% min	130%

Test Item	Acceptance Criteria	Typical / Actual Result
Shrinkage Ratio (28 Days)	135% max	87%

6. Applications

- High-range water reducer for concrete.
- Concrete superplasticizer for ready-mix, precast and construction chemical formulations.
- Cement dispersant and oil well cementing admixture.

7. Application and Usage Guidelines

- Recommended dosage range: 0.5% - 1.0% by weight of cementitious materials.
- Typical baseline dosage: 0.75%.
- Can be added directly to dry mix or pre-dissolved into water depending on site conditions.

8. Packaging

- 25kg woven bags, kraft bags or jumbo bags with inner liner.
- Customized packaging can be supplied according to customer requirements.

9. Storage and Shelf Life

- Store in a cool, dry and ventilated warehouse.
- Keep packaging sealed and protect from moisture.

Shelf Life	12 months under recommended storage conditions.
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10. Handling and Safety Note

- Avoid dust generation and unnecessary inhalation of powder during handling.
- Wear safety glasses, gloves and dust mask where dusty conditions occur.
- This TDS is for technical guidance only. Refer to the corresponding SDS/MSDS for full safety, transport and disposal information.

11. Disclaimer

The information in this Technical Data Sheet is based on available product data and is provided for reference to support product selection and application testing. It does not constitute a warranty or a final specification for every application. Users should conduct their own trials and confirm compliance with local regulations and project requirements before use.

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