

TECHNICAL DATA SHEET

Sodium Thiocyanate (NaSCN)

CAS No: 540-72-7

Formula: Custom manufactured to customer-specified concentration

Available Grades:

As a custom manufacturer, Catalynt produces sodium thiocyanate across the full concentration range below, made to your target specification rather than a single fixed grade.

Grade	Dilute Solution	Standard Solution	Concentrated Solution	Dry / Crystalline
Assay Range	0–15%	15–30%	30–50%	98–100%
Appearance	Clear, colorless liquid	Clear, colorless liquid	Clear, colorless to pale straw liquid	White crystalline solid, deliquescent
pH	6–8	6–8	6–8	N/A as supplied†
Specific Gravity (~20°C)	~1.00–1.10 (est.)*	~1.10–1.20 (est.)*	1.20–1.30 (1.28–1.30 verified at 50%)	Solid density ≈ 1.73 g/cm ³ (true density, not a solution SG)
Notes	Diluted to customer target %. Best for low-volume/specialty use where freight cost per unit of active is secondary to precise dosing.	Mid-concentration solution grade. Common fit for smaller admixture, plating, or ag-formulation accounts on pail/drum programs.	50% is Catalynt's standard reference grade (assay 50% ± 1.0%). This is the practical ceiling for a stable, pumpable aqueous solution at ambient temperature.	Not a liquid product, supplied as crystal. Hygroscopic; requires moisture-protective packaging and storage. Basis for any custom concentration made to order by dissolution.
Grade	Dilute Solution	Standard Solution	Concentrated Solution	Dry / Crystalline

*Specific gravity for the 0–15% and 15–30% bands is estimated from standard aqueous-solution behavior (anchored to 0% = water and the verified 50% reference grade of 1.28–1.30). These are planning estimates, not certified values — confirm exact SG against current lot QC data before publishing in a binding customer specification. †Dry crystal has no meaningful "as supplied" pH; pH applies once dissolved.

Base Impurity Specification

The following limits are verified at the 50% reference grade. For custom concentrations, impurity levels scale proportionally with assay — confirm exact figures per lot/grade with QC.

Parameter	Reference Limit	Notes
Chloride (%)	≤ 0.01	Scales with assay; verify per custom grade
Sulfate (%)	≤ 0.01	Scales with assay; verify per custom grade
Heavy Metals (%)	≤ 0.0005	Basis: as supplied at reference 50% grade
Iron (ppm)	≤ 1	Basis: as supplied at reference 50% grade
Water Insoluble (ppm)	≤ 50	Basis: as supplied at reference 50% grade

Why a Range, Not a Single Grade:

- Aqueous solubility of NaSCN is approximately 58% w/w at 20°C, which is why 50% is the practical ceiling for a stable, pumpable liquid — above that, the product is supplied as dry crystal instead of a higher-percent solution.
- Buyers who need a lower concentration (e.g., a pre-diluted working strength) can order it made to spec rather than diluting a 50% solution on-site.
- Buyers who need maximum purity per pound shipped (to minimize water-freight) can order dry crystalline material and dissolve on receipt.

Applications:

- Admixture & Construction: Retarder/set-control products, plasticizer/water reducers, air-entraining agents, defoamers, ready-mix concrete and precast / architectural concrete (GFRC, decorative)
- Metal Finishing & Plating: plating bath brighteners, chelating agents
- Fiber & Polymer: Polymer-process solvent/additives

Packaging Options:

2600 lb totes/IBCs, 55 gallon drums, bulk transport, and other smaller down-pack upon request.

Manufactured by:

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