CHEM GROUP

(800) 489-2306
www.chemgroupus.com

Sodium Nitrite 40–41%

PRODUCT DESCRIPTION

Sodium Nitrite 40–41% Purified Aqueous Solution is a technical-grade inorganic salt solution reclaimed and refined by CHEM Group at its Evansville, Indiana facility. The purification process yields a clear to slightly yellowish liquid with low organic contamination and controlled impurity levels.

Supplied as a ready-to-use solution, it eliminates the handling burden of dry powder — no lifting and dumping 55-pound bags, no caked material, no splashing during solutionizing. Pricing is based on net nitrite content on a dry basis, allowing straightforward cost comparison against dry sodium nitrite.

BENEFITS

Ready-to-Use Liquid Form

Meters straight into formulations — no weighing, dissolving, or solutionizing step ahead of the batch.

Safer Handling on the Floor

Removes manual bag lifting, dust exposure, and upward splashing from blend operations.

Consistent Concentration

Averaged 2024 results show 40.7 wt% nitrite with tight impurity control — dosing stays predictable lot to lot.

Distilled & Sustainable

Recovered from rayon and Plexiglas manufacturing streams, cutting hazardous-waste bag and pallet landfilling.

Lower Total Cost

Priced on net nitrite content, dry basis — with packaging disposal and labor time out of the equation.

APPLICATIONS

Dyes & Pigments

Azo dye synthesis · diazotization reactions · nitrous acid production

Corrosion Inhibition

Inhibitor formulations · closed-loop cooling systems · antifreeze additive · industrial grease additives

Chemical Synthesis

Pharmaceutical intermediates · agricultural chemical intermediates · organic synthesis

Metal & Materials Processing

Metal surface treatment · phosphatizing · detinning · heat treatment salt baths · rubber processing

Water Treatment

Wastewater odor abatement

AVAILABILITY

55	275	Bulk
GALLON DRUMS	GALLON TOTES	DELIVERIES

Samples available on request. Contact us for current lead times and volume pricing.

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PRODUCT IDENTITY

Product Name	Sodium Nitrite, Purified Aqueous Solution
CAS Number	7632-00-0
Molecular Formula	$NaNO_2$
Physical Form	Aqueous solution, yellowish
Grade	Technical — not sold for food applications
Origin	Reclaimed (rayon / Plexiglas manufacturing)
Manufacturing Location	Evansville, IN, USA

SPECIFICATIONS

PARAMETER	UOM	SPEC RANGE	TYPICAL	METHOD
Sodium Nitrite	wt %	40 – 41	40.7	Pan Solids
Total Organic Carbon	ppm	0 – 100	43	UV Persulfate
pH	–	7.5 – 12	10.6	Electrochemical
Calcium	ppm	0 – 400	17	Mquant Test Strips
Sodium Carbonate Equivalence	wt %	0 – 0.4	0.03	Titration
Specific Gravity @ 20°C	–	Report	1.305	Hydrometer
Visual	–	Pass / Fail	Pass	Organoleptic

USE NOTES

As a corrosion inhibitor, sodium nitrite acts as an anodic inhibitor, reacting with dissolved oxygen to form a protective gamma iron oxide film on ferrous surfaces. It is effective in closed-loop cooling and heating systems when formulated at appropriate concentrations — typically with borate buffers at pH 9.0–10.5.

Treatment with acid affords nitrous acid, required for diazotization in dye synthesis and related industrial reactions.

HANDLING & STORAGE

Sodium nitrite is an oxidizer — noncombustible itself, but it will accelerate the burning of combustible materials. Store in a cool, dry area away from incompatible materials including ammonium compounds, strong acids, and combustibles.

Handle in accordance with all applicable federal, state, and local regulations. Consult the current Safety Data Sheet for complete hazard, exposure, first aid, personal protective equipment, and disposal information prior to use.

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of CHEM Group and its subsidiaries. It is the responsibility of the user to comply with applicable laws and regulations and to provide for a safe workplace.

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