

Enviro-Syn<sup>®</sup> BSD-40<sup>™</sup> is a proprietary, broad-range, heavy-duty descaler that effectively dissolves strontium, barium and calcium sulfate scale including NORM (naturally occurring radioactive material). This high-performance product is designed to efficiently remove sulfate scale and has the unique ability to dissolve extremely high amounts of barium sulfate.

Sulfate scale causes formation damage reducing production, hosts bacteria, and fouls piping, tanks and process equipment all greatly reducing the profitability of operations.

## FEATURES & BENEFITS

- ✓ High dissolution rate
- ✓ Low activation temperature
- ✓ Superior barium sulfate solubility
- ✓ Ready-to-use formulation with no extra additives required
- ✓ Built-in surfactant package lifts hydrocarbon coating off scale ensuring effective dissolution

## APPLICATIONS

### DOWNHOLE SCALING:

- ✓ Near wellbore and formation damage
- ✓ Downhole tubing, equipment and pumps
- ✓ Injection and geothermal wells

### SURFACE SCALING:

- ✓ Onshore and offshore topside processing and production equipment
- ✓ Remediation of midstream pipelines and associated equipment
- ✓ Heat exchangers and pipelines
- ✓ Industrial boilers, scrubbers and dehydration units
- ✓ Water cooling systems and distribution piping
- ✓ HVAC and fire systems
- ✓ Separators, hydrocyclones, degassers

## PHYSICAL PROPERTIES

Appearance:	Colorless liquid
Specific Gravity:	1.15
Freezing Point:	-7°C (19°F)
Boiling Point:	> 110°C (230°F)
pH:	11 - 12
Solubility:	Soluble in water

## SAFETY, STORAGE & HANDLING

- ✓ Stored in sealed drums or IBC totes
- ✓ Fittings and valves should be HDPE, brass or stainless steel
- ✓ Recommended shelf life is 1 year
- ✓ Consult SDS for additional information and PPE requirements

## OUTSTANDING HSE PROFILE

- Non-corrosive to skin
- Lower pH than competitor products
- Non-regulated for ground transport (USDOT)
- North Sea Approved blend (Enviro-Syn BSD-40N<sup>™</sup>) for offshore applications

## TOTAL SOLUBILITY

Table 1. Total solubility of Enviro-Syn BSD-40E on a variety of scales.

Scale	Total Solubility (kg/m <sup>3</sup> )	Total Solubility (lb/gal)
BaSO <sub>4</sub>	41	0.34
SrSO <sub>4</sub>	57	0.48
CaSO <sub>4</sub>	65	0.54

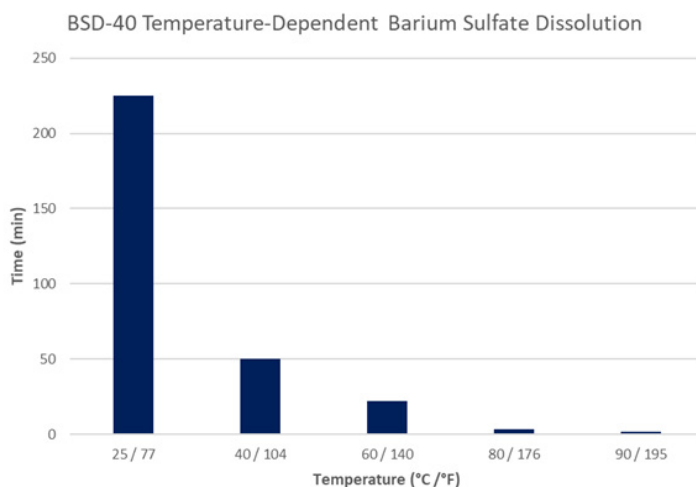


Figure 1. Temperature-dependent dissolution of 2.5 g of barium sulfate with 100 ml of Enviro-Syn BSD-40<sup>™</sup> (25 kg/m<sup>3</sup>).

## CORROSION RATES

Table 2. Corrosion rates of Enviro-Syn BSD-40 blends.

Blend	Temp (°C /°F)	Coupon	Time (hr)	Corrosion (mm/yr)	Corrosion (lb/ft <sup>2</sup> )
BSD-40	175 / 347	1018CS	8	11.082	0.016
BSD-40	175 / 347	13Cr	24	2.525	0.011
BSD-40N	90 / 195	L-80	48	0.388	0.003
BSD-40N	120 / 248	Duplex 2205	48	0.019	0.000
BSD-40N	120 / 248	L-80 13Cr	48	0.082	0.000

NOTE: Oilfield industry typically accepts a corrosion rate less than 0.050 lb/ft<sup>2</sup> at 6 hours. Coiled tubing typically accepts a corrosion rate less than 0.020 lb/ft<sup>2</sup> at 6 hours.

**Talk to us today about our revolutionary products available globally.**

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