

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Polyether Defoamer SPO-30
- English Name: Polyether Defoamer SPO-30
- CAS Number: 74499-34-6
- Formula: Blend of Polyoxyethylene-Polyoxypropylene Block Copolymer
- Molecular Weight: Variable (2000-8000 g/mol)
- Product Characteristics: High-efficiency non-ionic polyether defoamer with excellent defoaming and foam-suppressing capabilities. Rapidly penetrates foam films to break bubbles, and maintains long-term foam suppression. Compatible with most aqueous systems, non-toxic, fully biodegradable, and no secondary pollution. Stable over wide pH (4.0-10.0) and temperature (0-100°C) ranges.

2. Technical Specifications (Industrial Standard)

Item	Specification
Appearance	Colorless to pale yellow transparent liquid
Solid Content	98.0-100.0%
Viscosity (25°C)	500-2000 mPa s
Defoaming Efficiency (0.1% Aqueous Solution, 25°C)	≤ 5 seconds
Foam Suppression Time (0.1% Aqueous Solution, 25°C)	≥ 12 hours
pH Value (1% Aqueous Solution, 25°C)	5.0-8.0
Water Content	≤ 0.5%
Heavy Metals (Pb)	≤ 5 ppm
Arsenic (As)	≤ 1 ppm
Flash Point	≥ 150°C
Density (25°C)	0.95-1.05 g/cm ³
Temperature Stability	Stable at 0-100°C (defoaming efficiency retention ≥ 90%)
pH Stability	Stable at pH 4.0-10.0 (defoaming efficiency retention ≥ 90%)

3. Product Advantages

1. Efficient Defoaming: Breaks foam instantly (≤5s) and suppresses foam for 12+ hours, improving production efficiency.
2. Wide Compatibility: Works with acidic, alkaline, and neutral systems; no adverse reactions with surfactants, catalysts, or other additives.
3. Environmentally Friendly: Fully biodegradable, low heavy metal content, meets global environmental standards.

4. Stable Performance: Resists high temperature ($\leq 100^{\circ}\text{C}$) and wide pH range, suitable for harsh process conditions.
5. Cost-Effective: Low dosage (10-100 ppm); no impact on product quality or process results.

4. Application Fields

- Industrial Wastewater Treatment: Municipal sewage, printing, dyeing, papermaking, and chemical wastewater defoaming.
- Coating & Ink Industry: Water-based coatings, inks, and adhesives foam suppression during production and application.
- Food Processing: Beverage, dairy, and fermentation process defoaming (complies with food contact standards).
- Chemical Synthesis: Polymerization, esterification, and distillation process foam control.
- Other Fields: Textile printing, oilfield drilling, and detergent production defoaming.

5. Usage Methods

- Dosage: 10-100 ppm (adjust based on foam intensity and application scenario).
- Dilution: Dilute with water or process medium at 1:10-1:100 (product: medium) before use; stir evenly.
- Addition Method: Add continuously via metering pump or batch addition; add at foam generation points for optimal effect.
- Optimal Conditions: pH 4.0-10.0, temperature 0-100 $^{\circ}\text{C}$; compatible with most process additives.

6. Packaging & Storage

- Packaging Specifications:
 - 25 kg HDPE plastic drums (industrial use)
 - 200 kg HDPE plastic drums (bulk use)
 - 1000 kg IBC totes (large-scale projects)
 - Custom packaging available upon request.
- Storage Conditions: Store in cool, dry warehouse (5-35 $^{\circ}\text{C}$); keep tightly closed; avoid direct sunlight and high temperature; store separately from strong oxidizing agents.
- Shelf Life: 24 months (unopened, specified conditions); 6 months after opening.
- Transportation: Non-dangerous goods; transport by ordinary vehicles; avoid collision, leakage, and extreme temperatures.

7. Safety & Protection

- Low toxicity, mild irritation may occur in sensitive individuals.
- Wear safety glasses and nitrile gloves during large-scale handling.
- In case of skin/eye contact, rinse with plenty of water; seek medical attention if irritation persists.
- Do not ingest; if swallowed, rinse mouth with water and consult a doctor if discomfort occurs.

8. Quality Assurance

- Manufactured in accordance with ISO 9001 and ISO 14001 management systems.
- Each batch is tested with a Certificate of Analysis (COA) to meet industrial standards.
- Provide technical support: dosage adjustment, compatibility testing, and foam control scheme design.