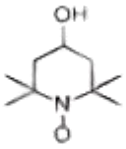
Document Number: YL-HALS-TDS-17 Issue Date: 2026/07/03

Inhibitor-701

This piperidine nitroxide polymerization inhibitor delivers strong inhibition performance at both high and low temperatures with low dosage to suppress monomer self-polymerization. It features dual aqueous/oil solubility, low volatility/decomposition during high-temperature distillation, and zero phenol content, offering low toxicity, easy removal, and no product discoloration. Ideal for storage, transport, and refining of acrylate, styrene, and other olefin monomers, plus resin synthesis. Mixing with trace phenolic inhibitors greatly improves polymerization stability.

1. Product physicochemical properties

1.1 Product basic information

Project	Content
Chemical name	4-hydroxy-2,2,6,6-tetramethylpiperidinoxyl
CAS number	2226-96-2
Molecular structure	
Formula weight	172.25

1.2 Technical parameter

Test item	Parameter
Appearance	Orange-red or orange-yellow sheet-like solid or powder
Melting range ℃	69-72
Ash %	≤0.1

Test item	Parameter
Moisture content %	≤0.5
Content %	≥99,0

1.3 Solubility (20 °C, g/100 mL solvent)

Solvent	Solubility
Cyclohexane	0.16g
Styrene	17.21g
Ethyl benzene	6.07g
Ethyl acetate	55.02g

2. Operation and safety

1. This product is a general-purpose plastic additive; it can be handled in accordance with standard chemical raw material operating procedures.

2. Avoid generating large amounts of dust; ensure the workshop is well-ventilated and kept away from open flames and high-temperature heat sources;

3. Personal protection: Wear a dust-proof mask and nitrile protective gloves;

4. For complete information on first aid, leakage, storage, and transportation, and hazards, please refer to the accompanying safety data sheet (SDS).

3. Storage and transportation

1. Store in a cool, dry, and well-ventilated warehouse; avoid direct sunlight, exposure to rain, or moisture.

2. Store separately from strong oxidizing agents, strong acids, and strong alkalis;

3. The original factory-sealed product has a shelf life of 24 months at room temperature; once opened, it should be used as soon as possible to prevent moisture absorption and clumping.