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# NAUGARD<sup>™</sup> 412S thioester

**Thioester Stabilizer** 

## Description

**NAUGARD<sup>™</sup> 412S thioester** is a low-volatility, high molecular weight, organic sulfurcontaining antioxidant developed for polyolefins and engineering thermoplastics. It is specifically recommended for high-temperature, long-term applications for polypropylene, polyethylene and engineering thermoplastics. When **NAUGARD<sup>™</sup> 412S thioester** is used in conjunction with a primary hindered phenolic antioxidant, the combination provides thermal stability that is not obtainable with conventional thioesters.

#### Features

- Excellent long-term heat stabilizer
- Low odor
- Low plate-out

**Chemical Name** Pentaerythritol tetrakis (β-laurylthiopropionate)

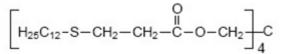
CAS-Number:

29598-76-3

#### **EINECS-Number:**

249-720-9

Formula NAUGARD<sup>™</sup> 412S thioester



SI Group Inc., 2750 Balltown Road, Schenectady, NY 12309 PH: +1 518.347.4200 www.siigroup.com

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# Typical physical properties of NAUGARD<sup>™</sup> 412S thioester

Appearance	White, crystalline powder and pellets	
Molecular weight [g/mol]	1162	
Melting Point	47°C	
Specific Gravity @ 55°C	0.93	
Bulk Density [g/cc]	0.52	

# Solubility (g/100ml solvent)

Acetone	2.5
Benzene	83
N-Hexane	20.7
Methanol	<0.01
Water	<0.01

## Thermogravimetric Analyses (10 mg @ 10°C/minutes under N<sub>2</sub>)

TGA 5%	TGA 10%	TGA 50%
	331°C	374°C

#### **Storage and Handling**

This product may be stored for at least four (4) years in sealed containers. Containers should be stored in cool, dry area. Extended storage at elevated temperatures or exposure to direct heat could decrease product shelf life. Containers should be kept sealed when not in use.

# For additional handling and toxicological information consult the SI Group Material Safety Data Sheet.

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