PowerStab™ 622 HALS UV Stabilizer

Introduction

PowerStab™ 622 is a polymeric hindered amine light stabilizer (HALS) designed for long-term UV protection in plastics and coatings. Its high molecular weight polymeric structure ensures superior performance in demanding applications. It is non-discoloring, low volatility, and offers excellent resistance to migration, with low basicity for reduced interactions with pigments and other stabilizers. PowerStab™ 622 is widely used in polyolefins, polyurethanes, and elastomers, and is approved for food contact applications in many regions.

Chemical Name

Butanedioic acid, 1,4-dimethyl ester, polymer with 4-hydroxy- 2,2,6,6-tetramethyl-1-piperidineethanol

Synonym: Dimethyl succinate polymer with
4-hydroxy-2,2,6,6-tetramethyl-1-piperidine ethanol

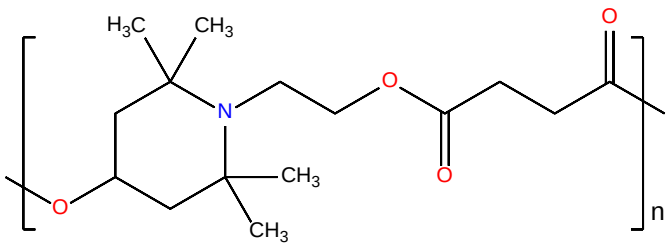
CAS Number

65447-77-0

EINECS Number

613-797-0

Chemical Structure



Chemical Formula

$(C_{15}H_{25}NO_4)_n$

Molecular Weight

3100-4000

Features & Benefits

- Excellent UV stabilization for long-term protection
- Non-discoloring performance
- Low volatility and excellent resistance to migration
- Low basicity - minimizes interaction with pigments and other additives
- Maintains product appearance without yellowing

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- Suitable for food-contact applications (EU, USA, etc.)
- Synergistic with UV absorbers and other HALS
- Long-lasting, polymer-bound stabilization effect

Physical Properties

Appearance	White to yellow granular powder
Melting Point (°C)	50-70
Specific Gravity (20°C)	1.22
Volatiles (%)	Max.0.5
Color of solution 425nm (%)	Min.98
Color of solution 500nm (%)	Min.99
Melting Point (°C)	50-70
Ash (%)	Max.0.1

Solubility

Solubility [20°C]	% w/w
Acetone	4
Chloroform	>40
Ethanol	0.08
Ethyl acetate	3
n-Hexane	<0.01
Methanol	0.05
Methylene Chloride	>40
Toluene	15
Water	<0.01

Benefits & Applications

PowerStab™ 622 is recommended for use in polyethylene (PE), polypropylene (PP), EVA, polyurethane (PU), polyacetals, polyamides, elastomers, adhesives, and sealants. It is particularly effective in films, fibers, injection-molded parts, and pigmented or carbon black-filled systems.

Typical dosage levels range from 0.05% to 1.5%, depending on the polymer type and processing conditions.

Handling & Storage

In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid continuous or repetitive breathing of

dust. Use only with adequate ventilation. Protect skin. Avoid dust formation and ignition sources.

This product may be stored up to one year in a sealed container. Containers should be stored in a cool, dry area. Extended storage at elevated temperatures or exposure to direct heat or sunlight could reduce product life. Keep containers sealed when not in use.

For more detailed information please refer to the material safety data sheet.

Packing

PowerStab™622 is supplied in 25kg net/carton.

Note

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

We specifically disclaim any other express or implied warranty of fitness for a particular purpose or merchantability.

We disclaim liability for any incidental or consequential damages.