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Irganox® 1035

Chemical Nature

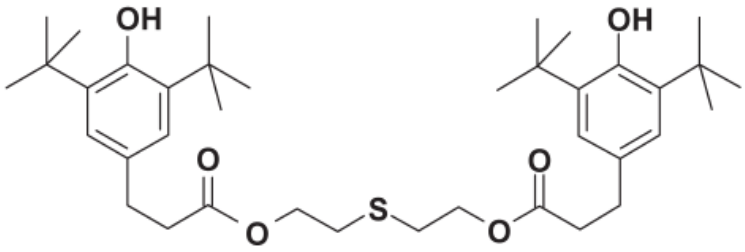
Irganox 1035 is a sulfur-containing, primary phenolic antioxidant and heat stabilizer used for processing stabilization of polyethylene wire and cable resins.

Key Features & Benefits

- Efficient processing stabilization and long term thermal stability
- Excellent system compatibility
- Excellent heat stability
- Low color
- Eliminates concern of micro-contaminants

Chemical Composition

Thiodiethylene bis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate]



Properties

Typical Properties

	Irganox 1035	Irganox 1035 FF (W&C)
Appearance	white to off-white powder	white to off-white granules
CAS number	41484-35-9	41484-35-9
Molecular weight	643 g/mol	643 g/mol
Volatiles	≤ 0.5%	≤ 0.5%
Clarity of solution	clear solution	clear solution
Color of solution at		
425 nm	≥ 93.0%	≥ 93.0%
500 nm	≥ 95.0%	≥ 95.0%
Assay	≥ 98.0%	≥ 98.0%
Melting range	64.5 – 78.0°C	64.5 – 78.0°C
Melt start	na	≥ 64.5°C
Melt end	na	≤ 78.0°C
Total insoluble	na	≤ 0.01%
Ash	na	≤ 0.1%
Particle size distribution		
for < 200 microns	na	≤ 7.0%
Flash point	140°C	140°C
Vapor pressure at 20°C	1.3 E-9 Pa	1.3 E-9 Pa
Specific gravity at 20°C	1.00 g/ml	1.00 g/ml
Density (bulk)	530 – 630 g/l	480 – 570 g/l

Solubility at 20°C (g/100 g solution)

Acetone	56
Benzene	56
Chloroform	35
Cyclohexane	56
Ethyl acetate	45
n-Hexane	5
Methanol	5
Water	< 0.01

These typical values should not be interpreted as specifications.

Applications

Irganox 1035 is a sulfur-containing, primary phenolic antioxidant and heat stabilizer used for processing stabilization of polyethylene wire and cable resins. Additionally, it is suitable for stabilization of organic polymers particularly for hot melt adhesives as well as solventborne adhesives. It effectively protects the substrate against thermo-oxidative degradation. It is non-staining, non-discoloring, low in volatility, resistant to extraction, and stable to light and heat.

Irganox 1035 is recommended for applications such as:

- Adhesive materials

Irganox 1035 can be used alone or when necessary, it can be used with other additives such as primary and/or secondary antioxidants, Vitamin E, light stabilizers, other functional stabilizers and fillers.

Recommended Concentrations

The amount of Irganox 1035 required for optimum performance should be determined in laboratory trials covering a concentration range. Concentrations up to several percent may be used depending on the substrate, processing conditions, and requirements of the end application.

Normal usage levels typically range between 0.1 – 1.0%.

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measure described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Irganox 1035.

Storage

Please refer to the “Handling and Storage of Polymer Dispersions” brochure.

Important

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