Industrial Coatings

Technical Data Sheet

Irganox® 245

We create chemistry

Product Description

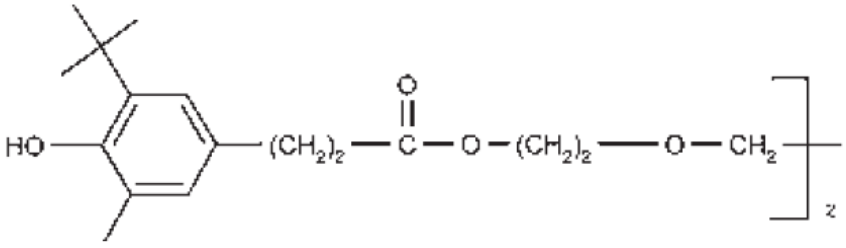
Irganox® 245 is a phenolic primary antioxidant for processing and long term thermal stabilization.

Key Features & Benefits

- High extraction resistance
- Low volatility
- Odorless
- Good color stability

Chemical Composition

Ethylene bis(oxyethylene) bis-(3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate)



Properties

Typical Properties

Appearance	white, free-flowing powder
CAS number	36443-68-2
Molecular weight	586.8 g/mol
Melting range	76 – 79°C
Flash point	> 150°C
Vapor pressure at 20°C	4 E-8 Pa
Density at 20°C	1.14 g/ml

Solubility at 25°C (g/100 g solution)

Acetone	> 50
Benzene	18
Chloroform	> 40
Ethyl acetate	37
Ethanol	10
n-Hexane	< 0.1
Methanol	12
Methylene chloride	> 40
Toluene	6
Styrene	6
Polyetherol	~ 3
Water	< 0.01

Volatility (TGA, air at 20 K/min)

Temperature at 1% weight loss	280°C
Temperature at 10% weight loss	330°C

These typical values should not be interpreted as specifications.

Applications

Irganox® 245 is a sterically hindered phenolic antioxidant that protects organic substrates against thermo-oxidative degradation during manufacturing, processing, and end use.

Irganox® 245 is effective in styrene polymers, particularly impact-modified polystyrenes, ABS, MBS, SB, and SBR-latices, as well as in POM homo- and co-polymers. It is also very useful for the stabilization of polyurethanes, polyamides, thermoplastic polyesters, PVC, and other polymers. In addition to imparting thermostability to the finished polymer, it is effective as a chain stopper during PVC polymerization.

Irganox® 245 can be used in combination with other additives such as co-stabilizers (e.g. thioesters, phosphites, phosphonites), light stabilizers, and other functional stabilizers. The effectiveness of Irganox® 245 with Irgafos® 168 is particularly noteworthy.

Irganox® 245 is recommended for applications such as:

- Hot-melt adhesives
- Sealants
- Solvent-based coatings

Recommended Concentrations

The amount of Irganox® 245 required for optimum performance should be determined in trials covering a concentration range. Concentrations up to 1.0% can be used depending upon the substrate, processing conditions, long term thermal stability requirements, and end application requirements.

0.05 – 0.1% of Irganox® 245 provides long term thermal stability to the polymer.

Safety

General

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

Material Safety Data Sheet

All safety information is provided in the Material Safety Data Sheet for Irganox® 245.

Storage

Properly stored and protected, an unopened container of Irganox® 245 should have a shelf life of at least one year.

Important

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