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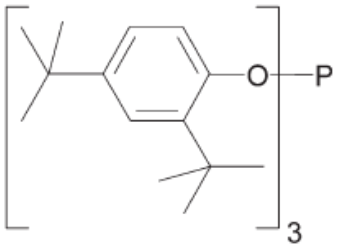
Irgafos® 168

Product Description **Irgafos® 168 is a hydrolytically stable organo-phosphite processing stabilizer.**

Key Features & Benefits

- Low volatility
- Resistant to hydrolysis
- Protects polymers prone to oxidation during processing
- Prevents discoloration

Chemical Composition **Tris(2,4-di-tert-butylphenyl)phosphite**



Properties

Typical Properties

Appearance		white, free-flowing powder
CAS number		31570-04-4
Molecular weight	g/mol	646.9
Melting range	°C	183 – 186
Specific gravity at 20°C	g/ml	1.03
Density (bulk)	g/l	480 – 570

Solubility at 20°C (g/100 g solution)

Acetone	1
Chloroform	36
Cyclohexane	16
Ethanol	0.1
Ethyl acetate	4
n-Hexane	11
Methanol	< 0.01
Dichloromethane	36
Toluene	30
Water	< 0.01

These typical values should not be interpreted as specifications.

Application

Irgafos 168 is a hydrolytically stable organo-phosphite processing stabilizer. As a secondary antioxidant, it reacts during processing with hydroperoxides formed by auto-oxidation of polymers preventing process induced degradation and extending the performance of primary antioxidants.

The application range of Irgafos 168 – synergistically combined with other BASF antioxidants – comprises polyolefins and olefin co-polymers such as polyethylene (e.g. HDPE, LLDPE), polypropylene, polybutene and ethylene vinyl acetate co-polymers as well as polycarbonates and polyamides. In addition, Irgafos 168 can be used as a secondard antioxidant to thermally stabilize polymers used in construction applications.

Irgafos 168 blends can be used in polyesters, styrene homo- and co-polymers, adhesives and natural and synthetic tackifier resins, elastomers such as BR, SEBS, SBS, and other organic substrates. In addition, they can be used in combination with light stabilizers of the Uvinul®, Tinuvin®, and Chimassorb® range.

Irgafos 168 is recommended for applications such as:

- Powder coatings
- Solvent-based coatings
- Hot-melt adhesives
- Sealant systems
- Wood flooring adhesives
- Roof coatings

Irgafos 168 is of low volatility and is particularly resistant to hydrolysis. It protects polymers that are prone to oxidation during the processing steps (compounding/pelletizing, fabrication, and recycling) from molecular weight change (by chain scission or crosslinking) and prevents discoloration.

Irgafos 168 performs best when combined with other BASF antioxidants. Blends with hindered phenols (Irganox® B-blends) are particularly effective. The hindered phenols additionally provide storage stability and provide the polymer with long term protection against thermo-oxidative degradation. Irgafos 168 in phenol-free systems with other BASF stabilizers addresses specific stabilization requirements.

Recommended Concentrations

The amount of Irgafos 168 required for optimum performance should be determined in laboratory trials covering a variety of concentration ranges. Concentrations up to several percent may be used depending on the substrate, processing conditions, and requirements of the end application.

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.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Irgafos 168.

Storage

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

Important

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