

# Irganox<sup>®</sup> 1076

## Chemical Nature

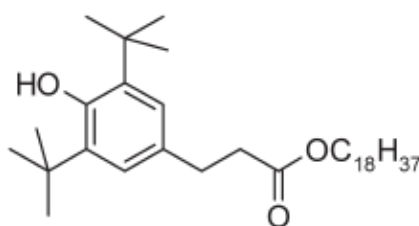
Irganox 1076 is a highly efficient, non-discoloring, sterically hindered phenolic, primary antioxidant stabilizer that protects organic substrates against thermo-oxidative degradation.

## Key Features & Benefits

- Good compatibility with most substrates
- High resistance to extraction
- Low volatility
- Odorless
- Stable to light and excellent color retention
- Manufactured using a tin-free process

## Chemical Composition

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



## Properties

### Typical Properties

Appearance		white, fine granules
CAS number		2082-79-3
Molecular weight	g/mol	531
Melting range	°C	50 – 55
Flash point	°C	273
Vapor pressure at 20°C	Pa	2.5 E-7
Specific gravity at 20°C	g/ml	1.02
Density (bulk)	g/l	360 – 400

### Solubility at 20°C (g/100 g solution)

Acetone	19
Benzene	57
Chloroform	57
Cyclohexane	40
Ethanol	1.5
Ethyl acetate	38
n-Hexane	32
Methanol	0.6
Toluene	50
Water	< 0.01

### Volatility TGA, air at 20°C/min)

Temperature at 1% weight loss	°C	230
Temperature at 10% weight loss	°C	288

These typical values should not be interpreted as specifications.

## Applications

Irganox 1076 is used in polyolefins such as polyethylene, polypropylene, polybutene, as well as, in other polymers, such as engineering plastics, styrene homo- and co-polymers, polyurethanes, elastomers, adhesives, and other organic substrates. In addition, Irganox 1076 can be used to thermally stabilize polymers used in construction applications.

It can be used in combination with other additives such as co-stabilizers (thioethers, phosphites, phosphonites), light stabilizers, and other functional stabilizers.

Irganox 1076 is recommended for applications such as:

- Hot-melt adhesives
- Solvent-based coating applications
- Tackifier resins
- Sealant systems
- Wood flooring adhesives
- Roof coatings

### **Recommended Concentrations**

The amount of Irganox 1076 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, requirements of the end application, and long term thermal stability requirements.

0.05 – 0.2% of Irganox 1076 provides long term thermal stability to the polymer.

<u>Application</u>	<u>Concentration</u>
Polyolefins	0.1 – 0.4%
Styrene homo- and co-polymers	0.1 – 0.3%
Hot melt adhesives	0.2 – 1%
Synthetic tackifiers resins	0.1 – 0.5%
Solvent-based coatings	0.2 – 1.0%

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## 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 1076.

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## Storage

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

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