

Ciba Specialty Chemicals

Additives

Polymer Additives

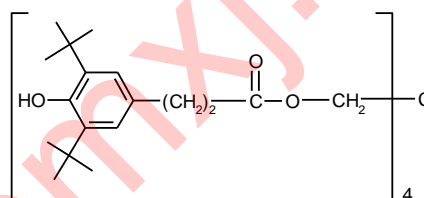
Ciba**®IRGANOX 1010****Phenolic Primary Antioxidant for Processing and Long-Term Thermal Stabilization**

Characterization ®IRGANOX 1010 - a sterically hindered phenolic antioxidant - is a highly effective, non discoloring stabilizer for organic substrates such as plastics, synthetic fibers, elastomers, adhesives, waxes, oils and fats. It protects these substrates against thermo-oxidative degradation.

Chemical Name Pentaerythritol Tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)

CAS Number 6683-19-8

Structure ®IRGANOX 1010



Molecular weight 1178

Applications ®IRGANOX 1010 can be applied in polyolefins, such as polyethylene, polypropylene, polybutene and olefin copolymers such as ethylene-vinylacetate copolymers. Also, its use is recommended in other polymers such as polyacetals, polyamides and polyurethanes, polyesters, PVC, styrene homo- and copolymers, ABS, elastomers such as butyl rubber (IIR), SBS, SEBS, EPM and EPDM as well as other synthetic rubbers, adhesives, natural and synthetic tackifier resins, and other organic substrates.

Features/ Benefits ®IRGANOX 1010 has good compatibility, high resistance to extraction and low volatility. It is odorless and tasteless.

The product can be used in combination with other additives such as costabilizers (e.g. thioethers, phosphites, phosphonites), light stabilizers and other functional stabilizers. The effectiveness of the blends of ®IRGANOX 1010 with ®IRGAFOS 168 (®IRGANOX B-blends) or with ®IRGAFOS 168 and HP-136 (®IRGANOX HP products) is particularly noteworthy.

Product Forms

Code:
powder
FF (C)
DD

Appearance:
white, free-flowing powder
white, free-flowing granules
white to slightly green pellets

Distributed by

Guidelines for Use Already 500 ppm - 1000 ppm of [®]IRGANOX 1010 provide long-term thermal stability to the polymer. Concentrations up to several percent may be used depending on the substrate and the requirements of the end application.

In polyolefins the concentration levels for [®]IRGANOX 1010 range between 0.05% and 0.4% depending on substrate, processing conditions and long-term thermal stability requirements. The optimum level has to be determined application specific.

Concentration levels of [®]IRGANOX 1010 in hot melt adhesives range from 0.2% to 1%, in synthetic tackifier resins, [®]IRGANOX 1010 concentration ranges between 0.1% and 0.5%. Extensive performance data of [®]IRGANOX 1010 in various organic polymers and applications are available upon request.

Physical Properties

Melting Range (°C)	110-125
Flashpoint (°C)	297
Specific Gravity (20°C)	1.15 g/cm ³
Bulk density	powder: 530 - 630 g/l FF (C): 480 - 570 g/l DD: 450 - 550 g/l
Solubility (20°C)	g/100g solution
Acetone	47
Chloroform	71
Ethanol	1.5
Ethylacetate	47
n-Hexane	0.3
Methanol	0.9
Methylene Chloride	63
Toluene	60
Water	<0.01

Handling & Safety In accordance with good industrial practice, handle with care and prevent contamination of the environment. Avoid dust formation and ignition sources.
For more detailed information please refer to the material safety data sheet.

Registration [®]IRGANOX 1010 is listed on the following inventories:

Australia: AICS	Canada: DSL	China: First Import
Europe: EINECS	Japan: MITI	Korea: ECL
Philippines: PICCS	USA: TSCA	

[®]IRGANOX 1010 is approved in many countries for use in food contact applications.
For detailed information refer to our Positive List or contact your local sales office.

IMPORTANT: The following supercedes Buyer's documents. **SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled or lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.