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Irganox® 3114

Phenolic primary antioxidant for processing and long-term thermal stabilization

Characterization

Irganox 3114 – a sterically hindered phenolic antioxidant – is a highly effective, non discoloring stabilizer for organic substrates such as polymers, synthetic fibers, elastomers, adhesives, waxes, oils and fats. It protects these substrates against thermo-oxidative degradation and contributes to their light stability.

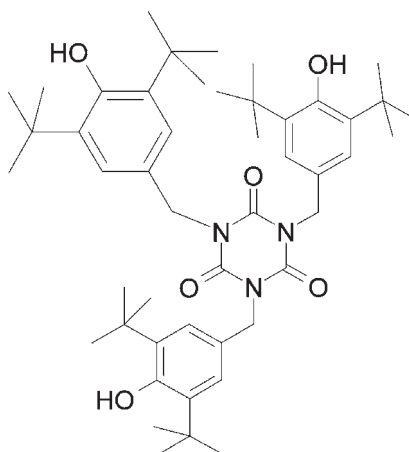
Chemical name

1,3,5-Tris(3,5-di-tert.-butyl-4-hydroxybenzyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione

CAS number

27676-62-6

Chemical formula



Molecular weight

784 g/mol

Applications and features/benefits

Irganox 3114 can be applied in polyolefins, namely polyethylene, polypropylene, polybutene as well as in other polymers such as styrene homo- and copolymers. It may also be used in linear polyesters, PVC, polyamides and polyurethanes, elastomers such as SBS, EPR, EPDM and other synthetic rubbers, adhesives, natural and synthetic tackifier resins and other organic substrates. Irganox 3114 has good compatibility with most substrates, high resistance to extraction, and low volatility. It is odorless and stable to light. 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 3114 with Irganox 168 (Irganox B-blends) is particularly noteworthy.

Product forms	Irganox 3114	white, free-flowing powder
	Irganox 3114 FF	white, free-flowing granules
Guidelines for use	In polyolefins, the concentration levels for Irganox 3114 range typically between 0.05 % and 0.3% depending on substrate, processing conditions and long-term thermal stability requirements. The optimum level is application specific. Extensive performance data of Irganox 3114 in various organic polymers and applications are available upon request.	
Physical properties	Melting range	218–223 °C
	Flashpoint	289 °C
	Specific gravity (20 °C)	1.03 g/ml
	Bulk density	
	Powder	530–630 g/l
	FF	480–570 g/l
	Solubility (25 °C)	g/100 g solution
	Acetone	29
	Chloroform	21
	Ethanol	1.5
	n-Hexane	0.6
	Methanol	0.5
	Water	0.01
Health & Safety	Irganox 3114 exhibits a very low order of oral toxicity and does not present any abnormal problems in its handling or general use.	
	Detailed information on handling and any precautions to be observed in the use of the product(s) described in this leaflet can be found in our relevant health and safety information sheet.	
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