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Irgastab® FS 533

Phenol-free processing stabilizer system for use in polyolefin fibre applications

Characterization

Irgastab FS 533 is a blend composed of a phosphite processing stabilizer Irgafos® 168, a hydroxylamine (Irgastab FS 042), and a high molecular weight hindered amine stabilizer (Chimassorb® 2020), specifically designed for polyolefin fibre applications.

Chemical name

Irgafos 168	Tris(2,4-di-tert.-butylphenyl)phosphite
Irgastab FS 042	Oxidized bis(hydrogenated tallow alkyl)amines
Chimassorb 2020	1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidinyloxy)-polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products with, N-butyl-1-butanamine and N-butyl-2,2,6,6,-tetramethyl-4-piperidinamine

CAS number

Preparation

Applications

Irgastab FS 533 is a phenol-free processing stabilizer for polyolefin fibre. This product is especially suitable for controlled rheology polypropylene fibre grades.

Features/benefits

Irgastab FS 533 provides outstanding process control during polyolefin fibre manufacture. It offers low color and minimal gas fade discoloration due to no phenolic interaction. The system also offers excellent long term thermal and light stability. Irgastab FS 533 can be used in both controlled rheology and rheology reactor PP fibre grades. It is suitable in particular for bulk continuous filaments and staple fibre applications, e. g. upholstery and floor covering.

Product forms

Irgastab FS 533 FF white to off-white free flowing granules

Guidelines for use

The normal usage levels in polyolefin fibre for Irgastab FS 533 range between 0.10–0.15 %.

Irgastab FS 533 can be combined with hindered amine light stabilizers such as Chimassorb 2020 and/or UV absorbers such as Tinuvin® 326 to further enhance the UV stability of PP fibres and fabrics.

Physical Properties

Melting range	93–182 °C
Softening point	47 °C

Bulk density	
FF	0.40–0.50 g/ml

Solubility (20 °C)	g/100 g solution
Acetone	<0.1
Ethyl acetate	<0.1
n-Hexane	<0.1
Water	<0.01

Health & Safety

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.

Note

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