## Technical Information Plastic Additives



## Irgastab<sup>®</sup> FS 301

## Phenol-free processing stabilizer system

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® = registered trademark of BASF SE			
Characterization	Irgastab <sup>®</sup> FS 301 is a system composed of a phosphite processing stabilizer Irgafos <sup>®</sup> 168 and a high molecular weight hydroxylamine Irgastab <sup>®</sup> FS 042. It is designed specifically as a powerful non-phenolic processing stabilizer system with excellent color control, compatibility, low volatility and high resistance to extraction.		
Chemical name	Irgastab FS 042Oxidized bis(hydrogenated tallow alkyl) aminesIrgafos 168Tris(2,4-di-tertbutylphenyl)phosphite		
CAS number	Preparation	Preparation	
Chemical formula	OH N Irgastab FS 042	gafos 168	
Molecular weight	Irgastab <sup>®</sup> FS 042 538 g/mc   Irgafos 168 647 g/mc		
Applications	Irgastab <sup>®</sup> FS 301 is used as a processing stabilizer in polyolefin applications where low color and low gas fade discoloration are required. Irgastab <sup>®</sup> FS 301 is particularly suited for PP fiber applications such as carpets, hygienic non-wovens and apparel as well as in polypropylene moldings (such as automotive TPO's and outdoor construction applications) where high UV stability is required. When post-processing thermal and /or UV stability is required, Irgastab <sup>®</sup> FS 301 should be used in combination with a hindered amine stabilizer.		
Features / benefits	Irgastab <sup>®</sup> FS 301 provides outstanding processing stability to polyolefins while virtually eliminating gas fade discoloration that may occur when phenolic systems are used. When used in combination with a Uvinul <sup>®</sup> , Chimassorb <sup>®</sup> or Tinuvin <sup>®</sup> hindered amine stabilizer, the system also provides both long-term thermal stability as well as a higher level of light stability in comparison to phenolic processing stabilizer systems. Furthermore Irgastab <sup>®</sup> FS systems also enhance the ability of hindered amines to act as light stabilizers.		

Product forms	Irgastab <sup>®</sup> FS 301 FF free-flowing granules	
Guidelines for use	Irgastab <sup>®</sup> FS systems are effective as processing stabilizers when used at $0.05 \% - 0.15 \%$ depending upon the polymer substrate, processing conditions and application. They are generally effective at 50 % to 60 % of the concentration of conventional phenolic-phosphite process stabilizers.	
Handling & Safety	Irgastab FS 301 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 safety data sheet. When using this product, the information and advice given in our <b>Safety Data Sheet</b> should be observed. Due attention should also be given to the <b>precautions</b> necessary for handling chemicals.	
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