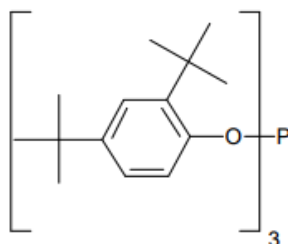


PUREfos 168

Hydrolytically Stable Phosphite Processing Stabilizer

Description **PUREfos 168** is a hydrolytically stable phosphite processing stabilizer. It acts as a secondary antioxidant during plastic processing and protects the polymer matrix by reacting with the hydroperoxides formed at this stage by auto-oxidation. The combination of **PUREfos 168** with primary antioxidants provides a synergistic stabilization activity, preventing the overall thermo-oxidative degradation of the material.

Chemical Structure



Chemical name Tris(2,4-ditert-butylphenyl) phosphite

CAS number 31570-04-4 **Molecular weight:** 646.9 g/mol

Features & benefits **PUREfos 168** is an organo-phosphite of low volatility and can be used at high processing temperature. It is particularly resistant to hydrolysis.

PUREfos 168 protects polymers that are prone to oxidation during pelletizing, compounding, converting, recycling, as well as any processing step exposing the matrix to oxygen, high temperature and mechanical stress. It prevents molecular weight changes in the material triggered by the degradation processes such as chain scission (dominant in case of PP) and cross linking (dominant in the case of LDPE). It also contributes to reduce discoloration effects such as yellowing or pinking. **PUREfos 168** blend with other primary antioxidants (PUREstab 1010 and PUREstab 1076) has a very good synergetic effects for polymer stability.

Applications **PUREfos 168** is a hydrolytically stable phosphite processing stabilizer. As a secondary antioxidant, it protects the polymer, in particular during the early stages of the processing step where oxygen, high temperature and mechanical stress trigger the formation of hydro-peroxide species responsible for degradation. **PUREfos 168** reacts with hydro-peroxides to yield non-radical harmless products and is therefore called hydro peroxide decomposer.

As a secondary antioxidant, **PUREfos 168** can be combined with primary antioxidants such as PUREstab 1010 or PUREstab 1076 providing a synergistic blend for applications in polyolefins or olefin-copolymers such as HDPE, LLDPE, PP, EVA, as well as PC, PA. These types of blends can also be used in engineering plastics such as PBT, PET and styrenic elastomers like PS, ABS, BR, SBS as well as tackifier resins and adhesives.

TECHNICAL DATA SHEET

Polygel Product Management

Email: info@polygelbrunei.com



Guidelines for Use-

Recommended loading concentrations of **PUREfos 168** range between 0.05% and 0.2% combined with appropriate levels of other additives required for a proper processing stabilization of polymers.

Handling & Safety

In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid continuous or repetitive breathing of dust. Use only with adequate ventilation. Avoid dust formation and ignition sources. For more detailed information please refer to the material safety data sheet.

Storage

This product may be stored up to two years in a sealed container. Containers should be kept tightly closed when not in use and stored in a cool, dry place.

Physical Properties:

Product form	White free flowing powder		
Melting range	181 – 186.5°C		
Vapor pressure	7E-10 pa		
Flash Point	>297°C		
Bulk density	480 - 630 g/l		
Solubility (20°C) g/100g solution	Solubility (20°C) g/100g solution		
- Acetone	47	- Chloroform	71
- Ethyl-acetate	47	- Ethanol	1.5
- Methanol	0.9	- n-hexane	0.3
- Methylene Chloride	63	- Water	<0.01

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November, 2019