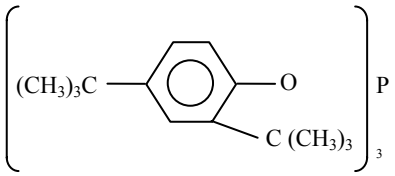
EVERFOS®-168

Hydrolytically Stable Phosphite Processing Stabilizer

Chemical Name Tris (2,4-di-tert-butylphenyl) phosphite

Formula $C_{42}H_{63}O_3P$

Structure



Molecular Weight 646.9

CAS Number 31570-04-4

Specification

Criterion	Requirement
Appearance	White, free-flowing powder
Volatiles	0.3% max
Color of solution (10g in 100 ml toluene)	clear solution
Transmittance (10g in 100 ml toluene)	at 425 nm 97.0% min at 500 nm 98.0% min
Content of 2,4-di-tert-butylphenol	0.4% max
Content of phosphate	0.5% max
Assay	99.0% min

Physical Properties

Melting range (℃)	183-187
Specific gravity (20℃)	1.03 g/cm^3
Bulk density	480-570 g/l
Solubility (20℃)	g/100g solution
Acetone	1
Benzene	34
Chloroform	36
Cyclohexane	16
Ethanol	0.1
Ethyl acetate	4
n-Hexane	11
Methanol	<0.01
Methylene Chloride	36
Toluene	30
Water	<0.01

Weight loss (TGA, in air at 20℃/min)

Temp.(℃) at 1 % weight loss	230
Temp.(℃) at 10 % weight loss	260

Applications

EVERFOS-168 is a hydrolytically stable phosphite processing stabilizer as a secondary antioxidant. It reacts during processing with hydroperoxides formed by autoxidation of polymers preventing process induced degradation. EVERFOS-168 reacts with hydroperoxides to yield non-radical products, therefore called hydroperoxide decomposer. EVERFOS-168 is synergistically combined with other primary antioxidant such as EVERNOX-10 and EVERNOX-76 for applied used in polyolefins or olefin-copolymers such as HDPE, LLDPE, PP, EVA as well as PC, PA. The blends can also be used in engineering plastics such as PBT, PET, and styrenics, elastomers like PS, ABS, BR, SBS and tickifier resins, adhesives.
EVERFOS-168 protects polymers which are prone to oxidation during processing steps (compounding, pelletizing, fabrication and recycling) from molecular weight change (e.g. chain scission of PP, crosslinking of PE) and prevent discoloration.

Hydrolytic Stability

Unlike other organic phosphites, EVERFOS-168 shows no water absorption even after 4 months storage at 20℃ and 80% relative humidity.

Handling & Safety

EVERFOS-168 should be handled 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.

Packing

The following packages are available upon customer's request：

(1) 25 kgs×2 PE bags in a carton box.
(2) 50 kgs fiber drum.
(3) Other specific request.

Transportation

EVERFOS-168 is not a dangerous goods according to the transportation regulations.

Storage

EVERFOS-168 be stored under suitable conditions (dry & cool).

Maximum recommended storage time from the date of analysis：24 months.

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