# Irgafos® 168

## Product description

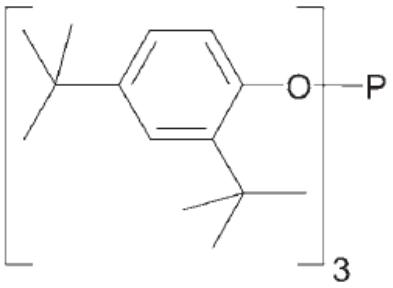
Irgafos® 168 is a solid, hydrolytically stable organo-phosphite processing stabilizer (secondary antioxidant), which protects substrates such as coatings, plastics, elastomers, adhesives, waxes from thermo-oxidative degradation during processing by decomposing hydroperoxides to form non-radical, non-reactive products, thereby also extending the performance of primary antioxidants.

## Key benefits

- Particularly resistant to hydrolysis
- Low volatility
- Protects polymers from degradation during processing steps (curing, recycling)
- Prevents molecular weight changes (e.g. chain scission or crossliking)
- Avoids discoloration related to polymer degration
- High performance at low concentration levels
- Synergistic performance when used in combination with primary antioxidants (Irganox® range)
- Can be used in combination with light stabilizers from the Tinuvin® range.

## Chemical nature

Tris(2,4-di-tert.-butylphenyl) phosphite




Molecular weight: 646.9 g/mol, CAS No. 31570-04-4

## Properties

| | | |
|---|---|---|
| **Physical form** | Irgafos® 168 | White, free-flowing powder |
| **Technical data** | Melting range | 183 – 186 °C |
| **(no supply specification)** | Density (20 °C) | 1.03 g/cm$^3$ |
| | Bulk density powder | 480 – 570 g/l |

| **Solubility (20 °C)** | **g / 100 g solution** |
|---|---|
| Wasser | < 0.1 % |
| Butanol | < 0.1 % |
| Methoxypropanol | < 0.1 % |
| Butyldiglycol | < 0.1 % |
| Butylacetate | 1 % |
| Butylglycolacetate | 1 % |
| Methoxypropylacetate (MPA) | 1 % |
| Methylethylketone | 5 % |
| Solvesso 100 | 15 % |
| Xylene | 20 % |

## Application

Irgafos® 168 provides outstanding processing stability in a variety of coating applications and substrates, particularly effective when used in combination with primary antioxidants of the Irganox® range.

Irgafos® 168 is predominantly used in high bake applications such as powder and coil coatings. It can be used in direct gas fired ovens thus preventing thermally induced oxidation and discoloration (especially in white and pastel tones).

**Guidelines for use**

For coating applications requiring high temperature stabilization the recommended concentration range is 0.5 – 1 % (based on total solids of the formulation).

In systems where polymers are already prone to oxidation during processing, the performance can be further improved in synergistic combinations with primary anti-oxidants (Irganox® range).

## Storage

Irgafos® 168 shall be stored in its tightly sealed original packaging at temperatures between 5 °C and 40 °C.

**Safety**

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

**Note**

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.



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