

Polymer Add (Thailand) Co.,Ltd.

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TECHNICAL DATA SHEET

ANTIOXIDANT 1076

Product classification

Item	Description
Chemical name	Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate
Product name	Antioxidant 1076
CAS No.	2082-79-3
EC No.	218-216-0
Molecular formula	$C_{35}H_{62}O_3$
Molecular weight	530.86 g/mol
Chemical class	Hindered phenolic primary antioxidant

Physical and chemical properties

Property	Specification	Test method
Appearance	White crystalline powder	Visual inspection
Content	≥98.0%	Chromatographic assay
Melting point	50–55 °C	Melting point apparatus or DSC
Moisture	≤0.2%	Validated moisture determination
Light transmittance at 425 nm	≥97%	UV–visible spectrophotometry
Light transmittance at 500 nm	≥98%	UV–visible spectrophotometry

Function and performance

Antioxidant 1076 is a hindered phenolic primary antioxidant that helps protect polymers against thermal and oxidative degradation during processing and subsequent use. It acts primarily by scavenging free radicals. It can be combined with a suitable phosphite secondary antioxidant to improve processing stability.

Uses and applications

Material	Typical application
Polyethylene and polypropylene	Thermal and oxidative stabilisation during processing and service
Other polyolefins	Stabilisation of polybutene and compatible formulations
Styrenic polymers	Stabilisation of polystyrene and styrene copolymers
Engineering plastics	Use in compatible formulations where thermal stability is required
Polyurethanes and elastomers	Protection against oxidative degradation
Adhesives and coatings	Stabilisation of suitable organic formulations

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Principal benefits

- Helps limit heat-induced oxidation and loss of polymer properties.
- Supports long-term thermal stability in suitable formulations.
- Offers low volatility and resistance to extraction.
- Can be used with compatible secondary antioxidants and other stabilisers.

Storage and handling

Store in tightly closed packaging in a cool, dry, well-ventilated area. Protect from excessive heat, direct sunlight and ignition sources. Minimise dust formation and use suitable ventilation and personal protective equipment.

Packaging

Confirm the available pack size and packaging configuration before ordering.

Regulatory information

Suitability for regulated uses, including food-contact plastics, must be confirmed for the specific formulation, concentration, conditions of use and destination market using current supplier declarations.

Disclaimer

The specification limits above follow the supplied Antioxidant 1076 COA. They do not reproduce its batch test results. The proposed test methods require confirmation by the manufacturer before this document is issued as a controlled sales specification.

Month of creation: September 2026

Month of review: September 2028