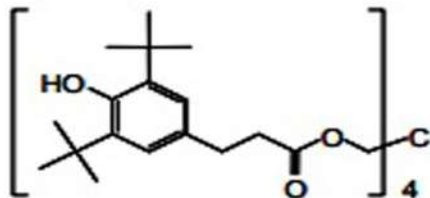


# ADK STAB AO-60 ADK STAB AO-60G

— Phenolic Antioxidant —

## Identification



[CAS Number]  
6683-19-8

[Chemical Name]  
Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl ester

[Formula]  
 $C_{73}H_{108}O_{12}$

[Molecular Weight]  
1178

## Features

- Is the most common hindered phenolic antioxidant which provides very low volatility and excellent retention within the polymer due to high molecular weight.
- Protects polymers against thermal degradation during/after processing and provides marked long-term heat stabilization for the life time of the article.
- Shows a synergistic effect when used with phosphites on process stability, and a synergistic effect when used with thioethers on a long-term heat stability.
- Approved as an indirect additive in food contact substances in US, EU, and Japan. Potential application is food packaging. (For additional information such as kind of adaptable polymers, please ask our Sales Department.)

## Applications

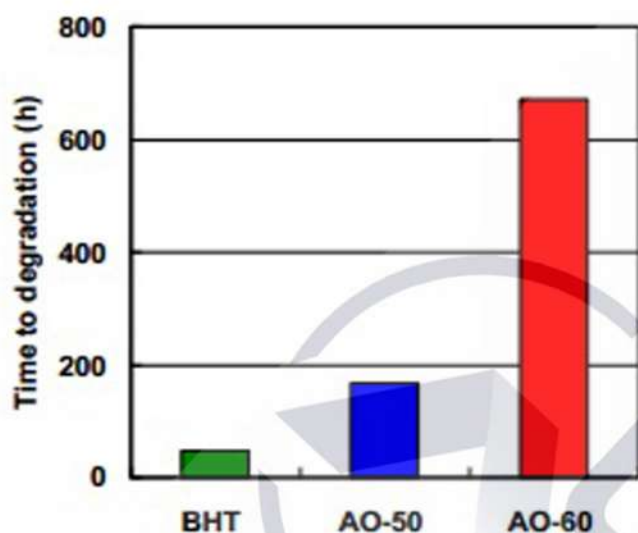
- Polyolefins such as PP and PE.
- Engineering plastics such as polyester resins, PA, PC, etc.
- Polyester resins, PVC, PU, synthetic rubbers, etc.
- Adhesives, Sealants, etc.

## Physical and chemical properties

- Appearance AO-60 : White powder  
AO-60G : White granule and powder
- Melting point 110 -130 °C
- Thermal stability (TGA, 10°C/min, Air 200ml /min) 10% weight loss temperature: 345°C
- Solubility (g/100g solvent at 25 °C ) Acetone: 47 Chloroform: 71 Benzene: 56  
Acetic ether: 46 Water: < 0.01

\* Above value of properties are just typical, not specific

## Performance

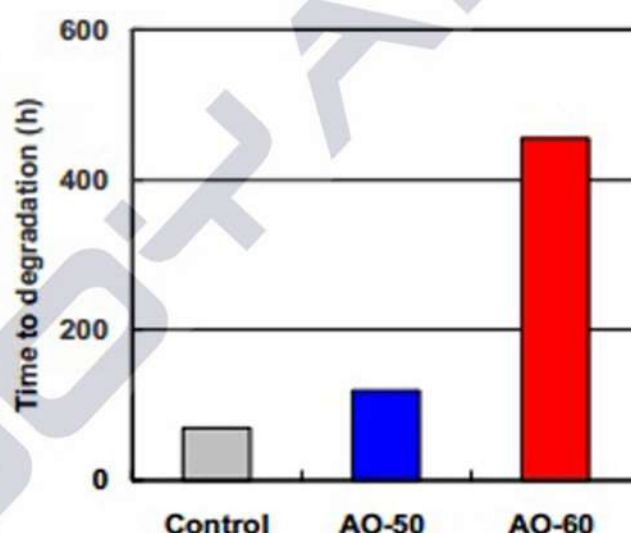


**Fig.1 Long-term heat stability of PP at 150°C**

Test: 150°C Oven  
Formulation: PP-h (100)/ Ca-St (0.1)/ phenolic antioxidant (0.1)  
Process: Extrusion at 250°C, Injection at 250°C  
Test plaque: 1mm- thick sheet

\*BHT: butylated hydroxytoluene

\*AO-50: ADK STAB AO-50 (Cas No. 2082-79-3)



**Fig.2 Long-term heat stability of HDPE at 150°C**

Test: 150°C Oven  
Formulation: HDPE (100)/ phenolic antioxidant (0.1)  
Process: Roll at 180°C, Press at 180°C  
Test plaque: 1 mm-thick sheet

\*Control: without phenolic antioxidant

## Handling and storage

- Store in the original container securely under cool and dry condition.
- Protective clothing should be worn when operators are handling, or being exposed to, this product. See the MSDS for further detailed advice.