Technical Data Sheet

Product name: AO-1024
Product form: Crystalline powder
Chemical name: 2’,3-bis[[3-[3,5-di-tert-butyl-4-hydroxyphenyl]propioyl]]propionohydrazide
Synonym: Irganox@MD1024
CAS No: 32687-78-8
EINECS No: 251-156-3
Chemical formula: C_{34}H_{52}O_{4}N_{2}
Formula weight: 553

Chemical Structure:

Producing routine:
Hydrazine + methyl 3,5-di-t-butyl-4-hydroxyphenyl-propionate = 1024

Quality norm: technical grade

Specification

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White granular</td>
</tr>
<tr>
<td>Assay (%)</td>
<td>99.0 min.</td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td>224-229</td>
</tr>
<tr>
<td>Volatiles (%)</td>
<td>0.5 max.</td>
</tr>
<tr>
<td>Ash (%)</td>
<td>0.1 max.</td>
</tr>
<tr>
<td>Transmittance (nm)</td>
<td>425 nm 97.0 min.</td>
</tr>
<tr>
<td></td>
<td>500 nm 98.0 min.</td>
</tr>
</tbody>
</table>

Packaging:
In 25/20kg net bag or carton or drum or 250kg net bulk bag on pallet as customer requires.

Characterization:
AO-1024 is a metal deactivator and primary (phenolic) antioxidant.

Applications:
Polyethylene wire and cable resins
Filled polyolefins
Polyolefins in contact with copper
NBR fuel hoses
X-SBR
SBR
Styrene homo- and copolymers

Features/benefits:
As the world’s most widely applied metal deactivator for telecommunications wire and cable, AO-1024 provides unmatched extraction resistance and processing stabilization. Used alone, or with other phenolic antioxidants, such as AO-1010. AO-1024 is recommended for the stabilization of polymers in contact with copper both during processing and long-term service.

Product forms
Appearance: White to slightly yellowish crystalline powder

Guidelines for use
For any application in contact with copper during processing or long-term service:
0.1-0.2% AO-1024.

Physical Properties:
- Melting Range (°C) 221-232 °C
- Flashpoint (°C) > 180
- Specific Gravity (20°C) 1.11 g/cm³
- Vapor Pressure (20°C) ca. 1x10⁻¹⁰Pa
- Bulk density 320-380 g/l

Solubility (20°C) g/100g solution
- Acetone 4
- Benzene 0.1
- Chloroform 0.4
- n-hexane < 0.01
- Methanol 4
- Water < 0.01

Handling & Safety:
In accordance with good industrial practice, handle 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.

Registration:
AO-1024 is listed on the following Inventories:
- Australia AICS
- Canada DSL
- China IECSC
- Europe EINECS
- Japan ENCS
- Korea ECL
- New Zealand TSA
- Philippines PICCS
- Switzerland BUWAL
- USA TSCA

AO-1024 is approved in many countries for use in food contact applications.
For detailed information please contact us.

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