November 10, 2009

ADK STAB LA-31 ADK STAB LA-31RG

Benzotriazole UV Absorber—

Identification

[CAS Number]
103597-45-1
[Chemical Name]
2,2'-Methylenebis[6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol]
[Formula] $C_{41}H_{50}O_2N_6$ [Molecular Weight]
659

Features

- Is a high molecular weight benzotriazaol UV absorbor which shows very low volatility, excellent thermal stability, excellent retention within the polymer, and resisits mold staining during processing compared to other benzotriazaol-type UV absorbors.
- Is recommended for applications which require high-temperature processing or/and high retention within the polymer such as polycarbonate sheets.
- Protects polymers from photo-degradation by absorbing UV light before it hits the polymer, which drastically reduces discoloration and slows the decline in physical and mechanical properties of the polymer.
- Approved as an indirect additive in food contact substances in US and Japan.
 Potential application is food packaging. (For additional information such as kind of adaptable polymers, please ask our Sales Department.)

Applications

• PC, PMMA, PET, etc.



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Physical and chemical properties

Appearance Pale yellow powder (LA-31 and LA-31RG)
 Melting point 194 - 200 °C

Thermal stability (TGA, 10°C/min, Air 200ml /min)
 10% weight loss temperature: 390°C

• Solubility (g/100g solvent at 25 °C) ethyl acetate: < 1, Ethanol < 1, Xylene:5 (mg/l solvent at 21.5 °C) Water: < 0.13

Performance

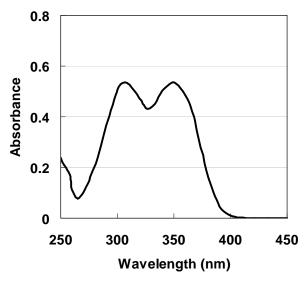


Fig.1 UV absorption spectra

Chloroform solution (10mg/ L) 1cm cell

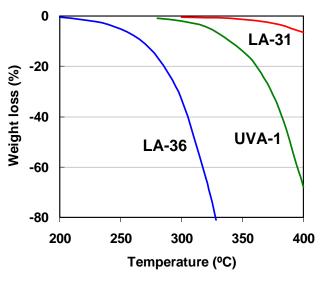


Fig.2 Volatility of UVA (TGA)

Heating rate: 10°C/ min in air stream 200ml /min

UVA-1: 2-(2H-Benzotriazol-2-yl)-4,6-bis(a,a-dimethylbenzyl)phenol

LA-36: 2-(3'-tert-Butyl-2'-hydroxy-5'-methylphenyl)-5-chlorobenzotriazole

Handling and storage

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

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^{*} Above value of properties are just typical, not specific