

Introduction

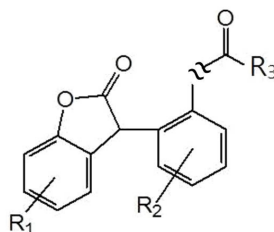
Revonox[®] 501 belongs to the benzo-furanone family, and optimally combines carbon-centered radical scavenger and primary antioxidant function in one molecule. Being a multi-functional antioxidant, Revonox[®] 501 provides outstanding performance in a variety of polymers such as PP, PE, PBT, styrenics and adhesives, especially for engineering plastics. Its superior effectiveness over conventional antioxidant systems is particularly pronounced in improved melt flow index (MFI) control, good color maintenance, and long-term thermal stabilization.

Applications

Revonox[®] 501 can be applied as a high efficient melt processing stabilizer system in polyolefins, styrenics and olefin-copolymers. Revonox[®] 501 can be blended with hindered phenolic and phosphate-based antioxidants to provide synergistic effect. A dosage of Revonox[®] 501 as low as 50-100 ppm secures a stable MFI performance, along with reduced yellowing.

Chemical Information

Structure



CAS No. Proprietary

Physical Data

Odor : Odorless
 Specific gravity : 1.086 @ 20°C
 Bulk density : 0.56 g/cm³

Specification

Appearance : White crystalline powder
 Assay : 98% min.
 Melting point : 183°C min.
 Volatile : 0.5% max.
 Transmittance (0.5g in 10ml Toluene) : 97% min. @ 460nm
 98% min. @ 500nm

Solubility (g in 100ml solvent @ 25 °C)

Toluene : 25
 Acetone : 35
 Ethyl Acetate : 25
 Dicholomethane : >50
 Water : <0.2

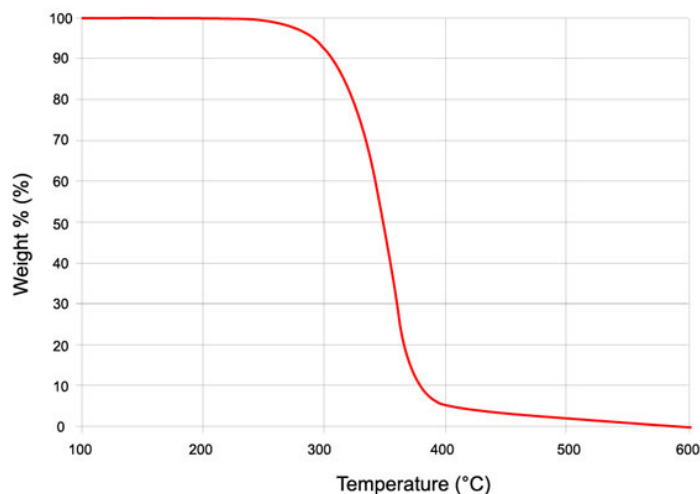
Patent Numbers

US 8840810 B2
 EP 2500341 B1
 TW I403507 B
 JP 5280501 B2
 CN 102675269 B
 KR 101338786 B1

Packaging

20 Kg net / Carton box

Thermogravimetric analysis (TGA) diagram



Oxidation induction time

Number	1	2	3	4	5
PP	100	100	100	100	100
Deox 10			0.025	0.025	
Deox 604		0.1	0.065	0.065	
Revonox [®] 501				0.01	0.01
OIT time (min)	4.2 min	5.6 min	5.4 min	9.4 min	4.4 min
	3.7 min	7.1 min	6.3 min	10.1 min	4.3 min
	4.3 min	8.5 min	6.0 min	10.3 min	5 min
Ave. OIT	4.07 min	7.07min	5.90 min	9.93 min	4.57 min