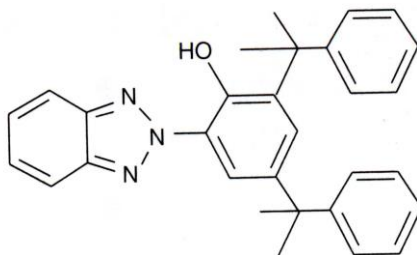


K.SORB 234

Ultraviolet Light Stabilizer of the Benzotriazole class (UVA)

<u>CHEMICAL NAME</u>	2-[2'-Hydroxy-3',5'-bis(1,1-dimethylbenzyl)-phenyl]benzotriazole or 2-(2H-benzotriazol-2-yl)-4,6-bis(1-methyl-1-phenylethyl) phenol
<u>CAS NUMBER</u>	70321-86-7
<u>EINECS NUMBER</u>	274-570-6
<u>MOLECULAR FORMULA</u>	C ₃₀ H ₂₉ N ₃ O
<u>STRUCTURE</u>	



<u>MOLECULAR WEIGHT</u>	447.6 Dalton
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CHARACTERIZATION **K.SORB 234** is a broadband absorber of the ultraviolet radiation, with absorption maxima at 302 nm and 343 nm. It provides exceptional protection against the sun's UV rays and prevents the yellowing and degradation (in terms of mechanical properties loss) of a variety of polymers during their service life. The very low volatility of K.SORB 234 makes this UVA the photoprotector of choice for the engineering resins processed at high temperature.

The efficiency of **K.SORB 234** can be moreover enhanced by synergistic combination with HALS like K.SORB 770 or K.SORB 944

<u>PHYSICAL PROPERTIES</u>	Appearance	Slightly yellowish powder
	Assay (GC)	≥ 99 %
	Melting range (capillary)	137-141°C
	Specific gravity @ 20°C	1.22 g/cm ³
	Flash point (C.C. DIN 51584)	>150°C
	Volatility, % weight loss (TGA-analysis, heating rate 20°C/min in air)	
		1% at 264°C
		2% at 280°C
		5% at 302°C

Solubility @ 20°C (% w/w)	
Toluene	20
Acetone	2
Cyclohexane	5
Ethylacetate	4
Methylene chloride	34
Water	<0.01

PACKAGING

K.SORB 234 is supplied in 25 kg net fiber drums

TOXICOLOGY

Acute oral toxicity (LD50 rat) > 2000 mg/kg
 Acute dermal toxicity (rabbit) > 2000 mg/kg

STORAGE/HANDLING

K.SORB 234 must be stored in a dry and ventilated cool place, in securely closed drums. Maximum recommended Storage time under suitable condition (dry and cool): 5 years. Protect eyes and face and use gloves when handling the product.
 For detailed information on toxicity, Storage and handling please refer to the relevant Material Safety Data Sheet.

APPLICATION

Owing to its broad absorption spectrum and its extremely low volatility **K.SORB 234** is highly recommended for engineering resins such as PET, PBT, PC, PC/ABS blend, POM copolymer, PA, PES, TPE, TPU especially in applications characterized by large surface areas like films and fibers (like PA6 fibers, PET fibers and films, PU fibers).
K.SORB 234 is as well recommended for coatings (like automotive, powder and coils) cured at temperature above 130°C and exposed at prolonged extreme environmental UV attack.
K.SORB 234 is also specifically used as UV filler to protect PET bottle contents from UV damage (in terms of color, odor, taste and nutritional value change).

REGULATORY CLEARANCE STATUS

K.SORB 234 is approved by the European Community for use in all polymers coming in contact with food (see Directive 2002/72/CE, N. Rif. 60320, LMS: 1,5 mg/kg).

ADDITION LEVELS

Taking into account the type of polymer, the type and amount of pigments and synergistic additives the additional levels of **K.SORB 234** range between 0,15 and 0,75% (up to 1.50% in coatings).
 Extensive performance data of **K.SORB 234** in various polymers and specific application areas are available upon request.

The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, this data does not relieve processors from the responsibility of carrying out their own tests and experiments. Neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom K Chimica supply their own products to ensure that any proprietary rights or patents and existing laws and legislation are observed. The product has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.