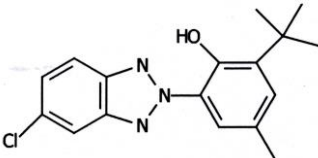


K.SORB 326

Ultraviolet Light Stabilizer of the Benzotriazole class (UVA)

<u>CHEMICAL NAME</u>	Phenol,2-(5-chloro-2H-benzotriazole-2-yl)-6-(1,1dimethylethyl)-4-methyl- or, 2-(3'-tert-butyl, 5'methyl-2'-hydroxy-phenyl)-5-chlorobenzotriazole
<u>CAS NUMBER</u>	3896-11-5
<u>EINECS NUMBER</u>	223-445-4
<u>MOLECULAR FORMULA</u>	C ₁₇ H ₁₈ N ₃ OCl
<u>STRUCTURE</u>	
<u>MOLECULAR WEIGHT</u>	315,8 Dalton
<u>CHARACTERIZATION</u>	<p>K.SORB 326 is a broad absorber of the UV radiation (290 – 400 nm with λ_{max}: 353 nm). It provides protection against the sun's UV rays and prevents yellowing and mechanical properties degradation of various polymers.</p> <p>Owing to its low volatility and thermostability at the high processing temperature, and thanks also to its wide range of indirect food approvals for polyolefins, K.SORB 326 is especially suited for polyolefins (HDPE, LDPE, LLDPE, EVA, PP). It is also largely used for the UV protection of the insaturated polyester resins (normal and chlorinated flame retarded), because K.SORB 326 (for its highly hindered phenolic OH group) does not react (and discolor) with metallic driers, e.g. cobalt, used for the cold curing of these resins.</p> <p>The efficiency of K.SORB 326 can be enhanced in polyolefins by synergistic combination with HALS like K.SORB 770 or K.SORB 944.</p>

**PHYSICAL
PROPERTIES**

Appearance	Slightly yellow powder
Assay (GC)	≥ 98 %
Melting range (capillary)	138° – 141°C
Volatiles (2h @ 105°C)	≤ 0.5 %
Ash	≤ 0.1 %
Transmittance % (solution of 10 g /100 ml toluene, 1 cm cell)	
@ 460 nm	≥ 93.0 %
@ 500 nm	≥ 96.0 %
Specific gravity @ 20°C	1.32 g/cm ³
Flash point (C.C. DIN 51584)	238 °C
Volatility, % weight loss (TGA-analysis, heating rate 20°C/min in air)	
	0,5% at 175°C
	3,5% at 225°C
Solubility @ 20°C (g/100 ml solvent)	
Hexane	1
Methyl ethyl ketone	3
Ethyl acetate	2,5
Methanol	0,1
Methylene Chloride	9
Styrene	12
Water	< 0,01

PACKAGING

K.SORB 326 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 326 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.

**REGULATORY
CLEARANCE STATUS**

K.SORB 326 is approved by the European Community for use in all polymers coming into contact with food (see Directive 2002/72/CE, N. Rif. 60400, LMS(T) = 30 mg/kg).

APPLICATION

K.SORB 326 provides UV protection for a wide range of plastics, elastomers and adhesives. It is today however outstandingly used for polyolefins and unsaturated polyesters.

ADDITION LEVELS

Taking into account the type of polymer, the type and amount of pigments, fillers, synergistic additives and the expected service life, **K.SORB 326** should be used at 0.15 to 0.5% in polyolefins, at 0.20 – 0.30% in normal UPES and at 0.5 – 0.6% in chlorinated UPES.

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.