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K.SORB 111

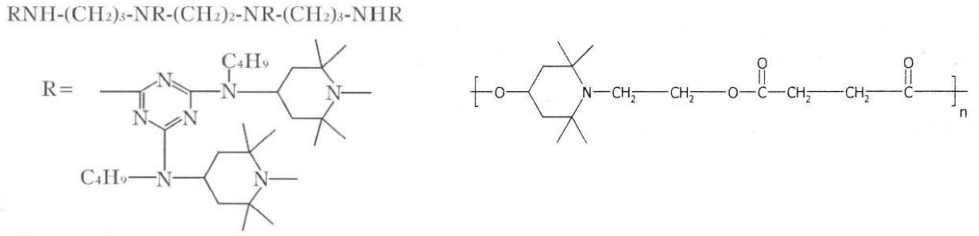
Synergistic Light and Heat Stabilizing HALS Preparation for Thermoplastic Polymers, TP Elastomers and Powder Coating

Technical Data Sheet

COMPOSITION 50% Component A - 50% Component B

	Component A	**Component B**
CAS NUMBER	106990-43-6	65447-77-0
MOLECULAR WEIGHT	2286 Dalton	3100-4000 Dalton
MELTING RANGE	146-150°C	50-70°C
CHEMICAL NAME	N,N',N'',N'''-tetrakis (4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	Butanedioic acid, dimethylester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidine ethanol

STRUCTURE



CHARACTERIZATION

K.SORB 111 (like K.SORB 119) is a synergistic blend of Component A and B.
Therefore all the general information given on K.SORB 119 applies as well for **K.SORB 111** (see TDS K.SORB 119).
However the higher content of Component B increases the protective effect against strong light radiation and heating (especially in presence of high carbonblack content like PE mulch films).
K.SORB 111 is also suggested when high gas-fading resistance is required (e.g. PP textile fibers) and in powder coating for its stronger tribo effect.
Last but not least **K.SORB 111** offers often a better price/performance against K.NOX 119.

Technical Data Sheet

PHYSICAL PROPERTIES (OF K.SORB 111)	Appearance	yellowish powder
	Odor	faint
	Melting range	58 -106 °C
	Flash point	>275°C (open cup)
	Ignition temperature	400°C BAM
	Volatility (2h at 100°C)	1 % max
	Ash	0.5 % max.
	Solubility in water (25°C)	<2 mg/l
	pH (100g/l water slurry)	6,2
	Colour solution (10g/100ml toluene, 1 cm cell)	
		@ 425 nm: 90% min.
		@ 500 nm: 93% min.

PACKAGING

20 Kgs net in cardboard box with inner PE bag

TOXICOLOGY

Acute oral toxicity (LD50 rat)	> 2000 mg/Kg
Skin irritation (rabbit)	Non-irritant
Eye irritation (rabbit)	Irritant

REGULATORY STATUS

For details on indirect food contact approval, information available on request.

STORAGE - HANDLING

K.SORB 111 must be stored in a dry and ventilated cool place, in securely closed drums. Maximum recommended time under suitable condition (dry and cool): 2 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

K.SORB 111 is hightly effective for PP in thick, thin, fiber, film, filled forms and for all other olefin resins (HDPE/LDPE/EVA/TPO). It is also suggested for PA, PMMA, PET, TPE, styrene copolymers (ABS, ASA, HIPS), HM adhesives and for powder coatings where it contributes to the triboelectric effect.
Moreover, in general, it is the HALS of choice in all above polymers colored with organic pigments: f.i. in PP, PA, PET fibers.

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 111** should be used at 0,15 up 1%.
Extensive performance data of **K.SORB 111** in various polymers and specific application areas are available upon request.