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Technical Data Sheet

Rev. 2 - Data rev. 03/2015

K.SORB 111

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

COMPOSITION

50% Component A - 50% Component B

Component A 106990-43-6

CAS NUMBER
MOLECULAR WEIGHT

MELTING RANGE

CHEMICAL NAME

<u>r</u>

N,N',N'',N'''-tetrakis

2286 Dalton 146-150°C

(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethylpiperidin-4yl)amino)triazin-

2-yl)-4,7-diazadecane-1,10-diamine

Component B

65447-77-0

3100-4000 Dalton

50-70°C

Butanedioic acid,

dimethylester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidine

ethanol

STRUCTURE

RNH-(CH2)3-NR-(CH2)2-NR-(CH2)3-NHR

$$R = \begin{array}{c|c} & C_4H_9 & \\ \hline & N & N \\ \hline & C_4H_9 & N \\ \hline \end{array}$$

$$\begin{bmatrix} -O & -CH_2 & -CH_$$

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.

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HANDLING

<u>Physical</u> Appearance yellowish powder

PROPERTIESOdorfaint(of K.SORB 111)Melting range58 -106 °C

Flash point >275°C (open cup)

Ignition temperature 400°C BAM Volatility (2h at 100°C) 1 % max 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

<u>Toxicology</u> Acute oral toxicity (LD50 rat) > 2000 mg/Kg

Skin irritation (rabbit) Non-irritant Eye irritation (rabbit) Irritant

<u>REGULATORY STATUS</u> For details on indirect food contact approval, information available

on request.

STORAGE - 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.

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.

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