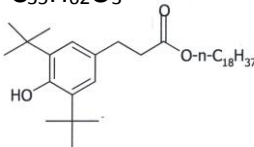


# K.NOX 1076

## Phenolic Primary Antioxidant and Thermal Stabilizer

<b><u>CHEMICAL NAME</u></b>	Octadecyl-3-(3'-5'-di-tert-butyl-4'-hydroxyphenyl)-propionate or Benzene propionic acid 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester
<b><u>CAS NUMBER</u></b>	2082-79-3
<b><u>EINECS NUMBER</u></b>	218-216-0
<b><u>MOLECULAR FORMULA</u></b>	C <sub>35</sub> H <sub>62</sub> O <sub>3</sub>
<b><u>STRUCTURE</u></b>	
<b><u>MOLECULAR WEIGHT</u></b>	531 Dalton
<b><u>CHARACTERIZATION</u></b>	<p><b>K.NOX 1076</b> – a monofunctional sterically hindered phenolic compound, acts as alkyl Radical Scavenger or, as commonly said, as Primary Antioxidant for organic substrates such as thermoplastic resins, elastomers, plasticizers, tackifiers, binders for coatings and “offset” printing inks, waxes.</p> <p>Used since long, <b>K.NOX 1076</b> is today mainly the “work-horse” antioxidant for LDPE/LLDPE, γ-irradiated PP, styrene polymers (crystal, HI, ABS, SAN, ASA, MBS), PC, elastomers (EPDM/EPM, Polybutene-1), plasticized and rigid PVC and PVC stabilizers, adhesives (solvent and water based, Hot-melt).</p> <p><b>K.NOX 1076</b> protects these substrates against their thermo-oxidative degradation during processing and service life avoiding the consequent loss of their mechanical and aesthetic properties.</p> <p><b>K.NOX 1076</b> is an odourless, colourless protector, it has good compatibility with these substrates, low volatility and high resistance to extraction.</p> <p>The efficiency of <b>K.NOX 1076</b> is enhanced by combination with secondary antioxidants:</p> <ul style="list-style-type: none"> <li>- for processing stability: organophosphites like K.NOX 168</li> <li>- for LTT stability: thioesters like K.NOX DSTDP. (However, for outstanding processing and LTT protection the use of K.NOX 1010 along with K.NOX 168 and K.NOX DSTDP is recommended).</li> </ul> <p><b>K.NOX 1076</b>, moreover, is a powerful “booster” for many photostabilizers: noteworthy in styrene polymers its combination with K.SORB P</p>

**CHEMICAL-PHYSICAL PROPERTIES**

Appearance	White odourless free-flowing powder
Purity (HPLC)	≥ 98%
Melting range (capillary)	50-55°C
Volatiles (2h @ 105°C)	≤ 0,2%
Sulphated ash	< 0,1%
Transmittance % (solution of 10 g /100 ml toluene, 1 cm cell)	
@ 425 nm	≥ 96%
@ 500 nm	≥ 98%
Specific gravity @ 20°C	1.02 g/cm <sup>3</sup>
Flash point	273°C DIN 51584
Ignition temperature	340°C BAM
Volatility, % weight loss (TGA-analysis, heating rate 20°C/min in air)	
	1% at 230°C
	10% at 280°C
Solubility @ 20°C (g/100ml solvent)	
Acetone	19
Toluene	50
Ethyl acetate	38
Hexane	32
Methanol	0.6
Water	0.01

**PACKAGING**

**K.NOX 1076** is supplied in 25 kg paper bags with inner PE liner

**TOXICOLOGY**

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

**FOOD CLEARANCE STATUS**

**K.NOX 1076** is approved in all industrial countries for use in polymers coming in contact with food. Information about country, type of polymer and relative limitation are available upon request.

**STORAGE/HANDLING**

Store in a dry and ventilated cool place away from incompatible materials. Maximum recommended storage time under suitable condition (dry, cool and closed containers): 24 months.

**APPLICATION**

The main use of **K.NOX 1076** is in LDPE/LLDPE, styrene homo- and copolymers, PC/ABS blends, PVC compounding, adhesives.

**ADDITION LEVELS**

Taking into account the type of polymer, the type and amount of synergistic additives and the expected service life, **K.NOX 1076** is used at 0,05 ÷ 0,75 phr. Extensive performance data **K.NOX 1076** 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.