

K.NOX 245

Phenolic Primary Antioxidant for processing and LTTS of Specialty polymers

CHEMICAL NAME

Ethylenebis(oxyethylene)bis-(3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate) or Triethylene glycol-bis-3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionate

CAS NUMBER

36443-68-2

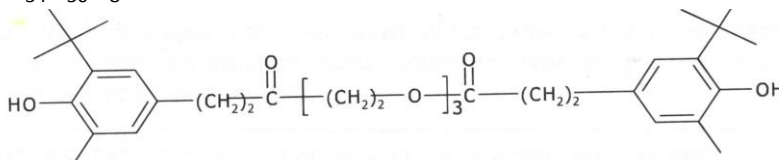
EINECS NUMBER

253-039-2

MOLECULAR FORMULA

C₃₄H₅₀O₈

STRUCTURE



MOLECULAR WEIGHT

586,8 Dalton

CHARACTERIZATION

K.NOX 245 is a Radical Scavenger or, as commonly said, a Phenolic Antioxidant which protects plastomers/elastomers against thermo-oxidative degradation during their manufacture, processing and end-use. **K.NOX 245** is a semi-hindered phenol and owns (in respect to the fully hindered phenolic AOX like **K.NOX 1010, 1076, 1098**) a peculiar effectiveness in polymers like POM homo - and copolymers, PA6/66/12, TPU, PMMA, styrene homo-and copolymers (ABS, HIPS, SAN, MBS), NR/SBR latices, PBT, PVC compounding. And moreover **K.NOX 245** is the first choice as chainstopper during PVC polymerization. Like the AOXs with full sterical hindrance, **K.NOX 245** too can be strongly synergized by thioesters and phosphites (like **K.NOX DSTDP, K.NOX 168**)

CHEMICAL-PHYSICAL

PROPERTIES

Appearance	White, free-flowing powder
Odor	Odorless
Purity (HPLC)	≥ 98%
Melting range (capillary)	76 – 80 °C
Volatiles (2h @ 105°C)	0,5% max
Ash	≤0.1%
Transmittance % (solution of 10 g /100 ml toluene, 1 cm cell)	
@ 425 nm	≥ 95%
@ 500 nm	≥ 97%

Specific gravity @ 20°C	1.14 g/cm ³
Flash point	> 150 °C
Volatility, % weight loss (TGA-analysis, heating rate 20°C/min in air)	Temp. at 1% weight loss 280°C Temp. at 10% weight loss 330°C
Solubility @ 20°C (g/100 ml solvent)	
Chloroform	>40
Acetone	>50
Benzene	18
Toluene	6
Styrene	6
Ethyl acetate	37
Hexane	<0,1
Methanol	12
Ethanol	10
Methylene chloride	>40
Water	<0.01

PACKAGING

K.NOX 245 is supplied in 25 kg net plastic bag

TOXICOLOGY

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

FOOD CLEARANCE STATUS

K.NOX 245 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

K.NOX 245 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

K.NOX 245 exhibits a good color stability and a high extraction resistance. It is widely used in various polymers as previously indicated and, more expressly, in POM polymers, PA66, TPU and PVC polymerization as chainstopper

ADDITION LEVELS

Taking into account the type of polymer, the type and amount of pigments, fillers, synergistic additives and the expected service life, **K.NOX 245** should be used at 0.25 to 1.00 phr. Extensive performance data of **K.NOX 245** 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.