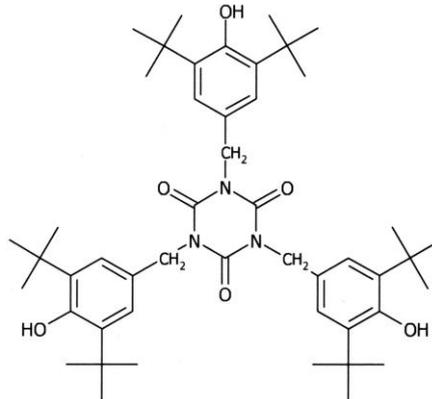


K.NOX 3114

HMW Phenolic Primary Antioxidant for Polymer Processing and LTT Stabilization

<u>CHEMICAL NAME</u>	1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione
<u>CAS NUMBER</u>	27676-62-6
<u>EINECS NUMBER</u>	248-597-9
<u>MOLECULAR FORMULA</u>	C ₄₈ H ₆₉ N ₃ O ₆

STRUCTURE



<u>MOLECULAR WEIGHT</u>	784 Dalton
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CHARACTERIZATION

K.NOX 3114 acts as Radical Scavenger or, as commonly said, as Antioxidant for organic substrates like polymers, synthetic fibers, elastomers, protecting them against oxidation and deterioration initiated by heat and light.

K.NOX 3114 has good compatibility with most substrates, high resistance to extraction and low volatility.

Its effectiveness is strongly increased by costabilizers (eg.thioesters, organophosphites). It is to be noted that the strong thermal protective effectiveness given by **K.NOX 3114**, even in comparison of the standard "work-horse" K.NOX 1010, appears at its maximum when the oven test is carried out at the more realistic service temperature of 80/100°C instead of the conventional one of 150°C.

Moreover, **K.NOX 3114** is a powerful "booster" for many photostabilizers added in various substrates.

K.NOX 3114 is approved in many Countries for indirect food application (information available upon request).

**CHEMICAL-PHYSICAL
PROPERTIES**

Appearance	White crystalline powder / flakes
Odour	Odourless
Purity (HPLC)	≥ 98 %
Melting range	218-224°C
Volatiles	≤ 0.2%
Ash	≤ 0.05 %
Transmittance % (solution of 10 g/100 ml toluene, 1 cm cell)	
@425 nm	≥ 95%
@500 nm	≥ 97%
Specific gravity @ 20°C	1.05 g/cm ³
Flash point	289°C
Volatility, % weight loss (10 mg @ 10°C/min under N ₂)	
	5% at 305°C
	10% at 319°C
Solubility @ 20°C (g/100ml solvent)	
Chloroform	32
Acetone	22
Benzene	8.7
Hexane	0.1
Methyl alcohol	0.4
Water	insoluble

PACKAGING

K.NOX 3114 is supplied in 20 kg net plastic bags into a cardboard box.

TOXICOLOGY

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

STORAGE/HANDLING

K.NOX 3114 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 3114 main use is in all grades of PP (but also in LD/HDPE) especially for the fabrication of pipes and fittings in continuous contact with water (even boiling and containing syndets).
K.NOX 3114 can also be used for HIPS, SAN, ABS, PVC, ÈVA, Elastomers (SBS, EPDM, EPR).

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 3114** is used at 0.10 - 0.50%.

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.