CollectChem
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OXIRIS
Extending life

Certificado de Análisis

Referencia cliente:
Pedido Oxiris: PED-OXR24-00207
Total Kg 10.000
Fecha: 28/06/2024

IONOL CPF BAGS 20 KG. (10098)
Code 180027 BHT FLAKE NO ANTICACKING
Especificación : EV-132
BHT; 2,6-di-tert.butyl-4-methylphenol
C15H240; CAS nª: 128-37-0

Lote No : 01700124
Kg Netos : 8.000
Fecha fabricación : 26/06/2024

Propiedad:	Especificación:	Resultado:	Método:
Appearance	White flaked solid	Corresponds	(Visual)
Color (30%w in acetone) (Apha)	max 30 apha	20	L_MA_002
Melting point (ºC)	70±1ºC	69,8	L_MA_001
Purity (GC) (%w)	min 99,8%w	99,95	L_MA_009
Water content (%w)	max 0,10%w	0,008	L_MA_000
Sulfate ash* (%w)	0.002 max	< 0.002	L_MA_003
Arsenic * (ppm)	3 max	<3	L_MA_020
Lead* (ppm)	2 max	<2	L_MA_020
Mercury* (ppm)	1 max	<1	L_MA_021
Heavy metals* (ppm)	10 max	<10	L_MA_019

Fecha de caducidad: 12 meses después de la fecha de fabricación.
* Valor estadístico

Este certificado es válido sin firmar.

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Total Kg 10.000
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IONOL CPF BAGS 20 KG. (10098)
Code 180027 BHT FLAKE NO ANTICACKING
Especificación : EV-132
BHT; 2,6-di-tert.butyl-4-methylphenol
C15H240; CAS nª: 128-37-0

Lote No : 01700224
Kg Netos : 2.000
Fecha fabricación : 26/06/2024

Propiedad:	Especificación:	Resultado:	Método:
Appearance	White flaked solid	Corresponds	(Visual)
Color (30%w in acetone) (Apha)	max 30 apha	20	L_MA_002
Melting point (ºC)	70±1ºC	69,7	L_MA_001
Purity (GC) (%w)	min 99,8%w	99,95	L_MA_009
Water content (%w)	max 0,10%w	0,01	L_MA_000
Sulfate ash* (%w)	0.002 max	< 0.002	L_MA_003
Arsenic * (ppm)	3 max	<3	L_MA_020
Lead* (ppm)	2 max	<2	L_MA_020
Mercury* (ppm)	1 max	<1	L_MA_021
Heavy metals* (ppm)	10 max	<10	L_MA_019

Fecha de caducidad: 12 meses después de la fecha de fabricación.
* Valor estadístico

Este certificado es válido sin firmar.

IONOL® CPF

$C_{15}H_{24}O$

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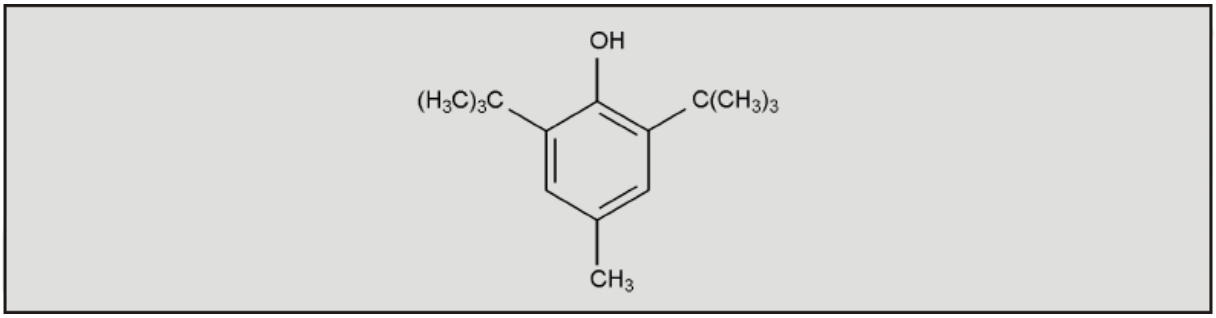


Synonyms	2,6-Di-tert.-butyl-4-methylphenol
CAS-No.	128-37-0
Molar Mass	220.4 g/mol
Packaging	Standard packaging in: - PE-lined paper bags, 20 kg net, shrink-wrapped on pallets. - big bags, 350 kg net.
Registration	EINECS, TSCA, MITI, DSL
Storage	IONOL® CPF has a 12 months shelf life when properly sealed and stored (in a dry, cool, well-ventilated area, at ≤50°C). Non-adherence to these requirements may cause yellowing.

Specification

Property	Value Unit	Method
Purity	min 99.8 w/w-%	L_MA_009
Melting point	70±1ºC	L_MA_001
Water content	max 0.10 w/w-%	L_MA_000 (ASTM E203)
Colour (30% w/w-% in acetone)	max 30 apha	L_MA_002 (ASTM D1209)
Sulphate Ash	max 0.002 w/w-%	L_MA_003
Arsenic	max 3 ppm	L_MA_020
Lead	max 2 ppm	L_MA_020
Mercury	max 1 ppm	L_MA_021
Heavy metals	max 10 ppm	L_MA_019

Safety data, transport regulations and toxicological data are indicated in the safety data sheet.

OXIRIS
Extending life

Typical Properties

Property	Value	Unit	Method
Appearance	White flaked solid		Visual
Boiling point at 1013 hPa	265	°C	
Bulk density	0.50	kg/L	
Density at 80 °C	0.899	g/ml	
Flash point	127	°C	ASTM D93
Refractive index n^{75}_{D}	1.4859		
Solubility in water at 25 °C	0.6	mg/L	
Solubility in acetone at 20 °C	> 50	%	
Solubility in chloroform at 20 °C	> 50	%	
Solubility in heptane at 20 °C	47.8	%	
Solubility in methanol at 20 °C	26.6	%	
Solubility in toluene at 20 °C	> 50	%	

Characteristics

IONOL® CPF is a white, flaked antioxidant and belongs to the group of non-staining, sterically hindered phenols.

IONOL® CPF is mainly used for the stabilisation of polymers which come into contact with foodstuffs and/or drinking water, polyols, polyurethanes, adhesives, foodstuffs and printing inks. There is BfR (formerly BGA, BgVV) and FDA approval for IONOL® CPF.

Product also meets all the requirements established on Regulation 231/2012 regarding specifications for food additives, specifically criteria for E321. Furthermore, IONOL® CPF conforms to the analytical requirements of the FCC (Food Chemical Codex).

Applications

Polymers

IONOL® CPF is used for the stabilisation of plastics, natural and synthetic rubber, waxes, synthetic and natural resins as well as for articles and mixtures which are produced from any of the above.

The stabilisation with IONOL® CPF starts with the production of plastics and ensures, dependent on the dosage quantity, the storage stability of the polymer raw material until processing to the finished article. During the processing of the polymer raw material to the final product, an additional long-term stabilisation with IONOL® CPF can be very effective.

The application field of IONOL® CPF is widespread because of its excellent cost-efficiency ratio as well as its almost universal application possibilities in plastics, particularly for articles requiring approval as defined by food contact legislation.

IONOL® CPF is authorized according Annex I of the Regulation (EU) 10/2011 Plastic and articles intended to come into contact food.

Adhesives and hot melts

Adhesives and hot melts are also subject to autoxidative damage caused by mechanical stress, heat and light. IONOL® CPF is used for process as well as for long-term stabilisation.

Foodstuffs

In foodstuff IONOL® CPF decelerates the damaging effect in fats, carotenoids, vitamins as well as in further essential food constituents caused by oxidation with atmospheric oxygen.

IONOL® CPF is manufactured under Food Safety conditions and Food Hygiene Regulation (EU) 852/2004. A Hazard Analysis & Critical Control Points (HACCP) system is implemented.

Polyols

Polyols are subject to oxidative damages by light and heat in the presence of oxygen due to radical reactions. By using IONOL® CPF the reactive radicals are captured and transformed into non-reactive compounds. The chain reaction is stopped and a further damage is avoided.

IONOL® CPF is used as a long-term stabiliser in order to protect the polyols during storage (e.g. before use in polyurethanes) against decomposition reactions. Depending on application, the optimum dosage amounts to 0.1 - 1.0 %.

Further Applications

Polyurethanes

IONOL® CPF is used for polyurethanes as a processing and long-term stabiliser.

Particularly in the production of polyurethane foams, IONOL® CPF is more efficient than many other antioxidants. Due to the high temperatures which arise inside the block foams during production, partially strong scorching can occur. IONOL® CPF is very efficient and mobile, and prevents scorching-effects. Hence, the production of undamaged and non-discolouring foams made possible.

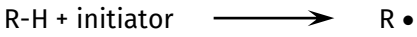
Printing inks

The shelf life of printing inks can be shortened by oxidation. Physical changes during processing may occur. The use of IONOL® CPF has a positive effect on the stability, levelling resistance as well as on the brightening and hardening properties of printing inks.

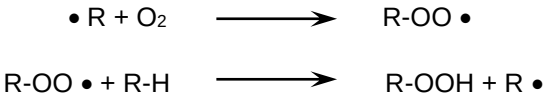
In lithographic printing IONOL® CPF prevents skin formation and accelerates the drying process. The average quantities to be employed amount to 0.5 – 1.0 %.

Reaction flow

Today's ideas on the decomposition of organic compounds (e.g. polymers in plastics, synthetic or native oils in lubricants or unsaturated fatty acids in foodstuff) start from the fact that decomposition is initiated by the formation of hydrocarbon radicals R •. This reaction is caused by heat, light and/or mechanical energy:



In the chain propagation reaction the radical R • reacts with atmospheric oxygen to the peroxide radical R-OO • and the latter with a further hydrocarbon molecule to a radical R• and a peroxide compound R-OOH.



The radical R • formed in the second reaction step further reacts by chain reaction with oxygen according to the reaction equation detailed on previous page. The peroxide R-OOH formed in the second reaction step may decompose to aldehydes, ketones and carboxylic acids and, depending on the type of the damaged organic compound, be responsible for discolourations, corrosion or unpleasant odour (e.g. rancid fats).

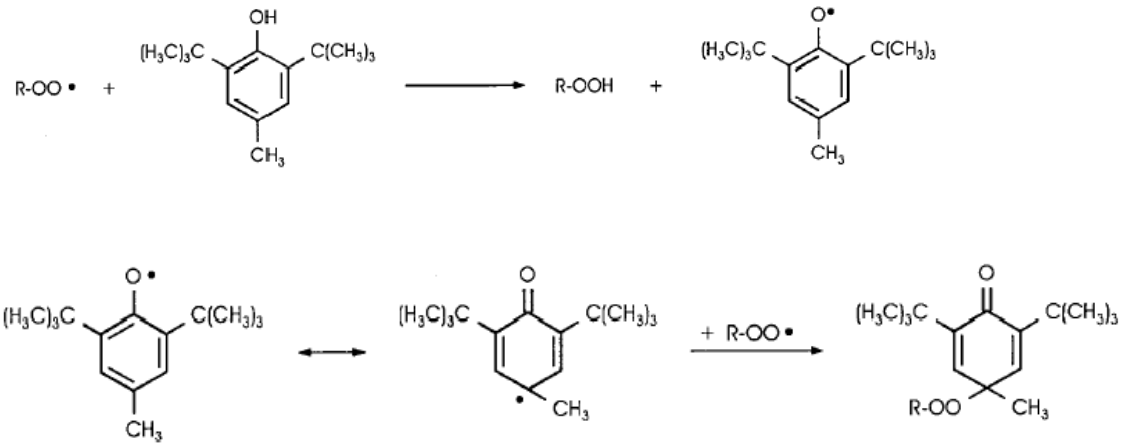
The chain reaction above can be stopped by a so-called recombination of the radicals.

The probability of such a chain reaction is very small so that the radical decomposition of organic compounds cannot come to a standstill without the addition of anti-ageing agents.

Anti-ageing agents on the basis of sterically hindered phenols act as radical scavengers, i.e. they directly intervene in the radical decomposition process by chemically bonding the radicals and preventing the chain propagation reaction.

IONOL® CPF

$C_{15}H_{24}O$



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