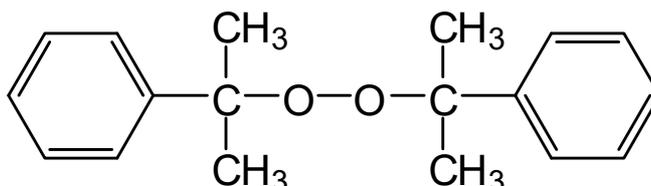


DCUP

Dicumylperoxide
CAS#80-43-3
Powder, technical pure
Molar mass: 270.4 g/mol

Structural Formula



Description

White or yellowish powder, consisting of technically pure dicumylperoxide. This diaralkylperoxide is used as an initiator (radical source) in crosslinking of polymers in extrusion- and injectionmoulding processes.

Technical Data

Appearance	nearly white cristal powder
Peroxid content	approx. 99,5 % w/w
Active oxygen	approx. 5.89 % w7w
De-sensitising agent	none
Solubility	soluble in acetone, aromatic solvents, alcohols, esters
Melting point	38-40 °C
Bulk density at 20°C	0.63 kg/l
Critical temperature (SADT)	approx. 80°C
Recommended storage temperature	below 30°C
Shelflife at 30°C	12 month

This product is in compliance with the ElektroG (E U-Directives: RoHS 2002/95/EG, WEEE 2002/96/EG)

Half-life-time

10 h/1 h/1 min (0.1 m/benzene): 116/136/177 °C

Application

POLYMER CROSSLINKING: A peroxidic crosslinking agent for polyethylene (LDPE), ethylene-propylene(diene) rubbers (EPM, EPDM), ethylene/vinylacetate copolymers (EVA or EAM), silicone rubbers (VMQ) as well as other natural and synthetic elastomers. Crosslinking temperature: above 160°C. Below 135°C no premature crosslinking (scorch) occurs. Usage level: 0.5-4% w/w of product as supplied on material to be crosslinked.

Special advantages: Widely applicable and extremely effective. Disadvantage:

The strong smell of acetophenone - one of the decomposition products.

Measurements

XL-Performance

Crosslinking of LDPE (Lupolen 1810-H) within Monsanto rheometer 100-S (torsion angle 3°, chamber volume 7.3 cm ³)						
Influence of temperature on crosslinking time (2.5% w/w, 0.15% AO DCUP)						
Temperature (°C)	140	150	160	170	180	190
Scorch time (min)	10	5.5	3.0	2.0	1.3	0.9
Crosslinking time t ₅₀ (min)	-	23	12	5.5	2.6	2.0
Crosslinking time t ₉₀ (min)	-	70	35	14	5.6	3.5
Influence of peroxide level on degree of crosslinking (temperature: 180°C)						
..... (% A O)	0.06	0.09	0.12	0.15	0.18	0.21
DCUP-level						
..... (% w/w)	1.00	1.50	2.00	2.50	3.00	3.50
Crosslinking time t ₉₀ (min)	6.3	6.0	5.8	5.6	5.5	5.4
torque (Nm)	2.0	2.7	3.5	4.2	4.8	5.6
*) gel content (%)	83	86	89	91	92	93
*) swelling index	10	9	8	7	5.5	4.5

Standard Packaging

4 X 5 kg, polyethylene bags in cardboards.

Disclaimer

This information and all further technical advice are reflecting our present knowledge and experience based on internal tests with local raw materials with the purpose to inform about our products and applications. The information should not be construed as guaranteeing specific properties of products described or their suitability for a particular application, nor as providing complete instructions for use. The information implies no guarantee for product and shelf life properties, nor any liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. We reserve the right to make any changes according to technological progress or further developments.

Application and usage of our products based on our technical advice is out of our control and sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming goods in order to verify the suitability for the intended application.

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