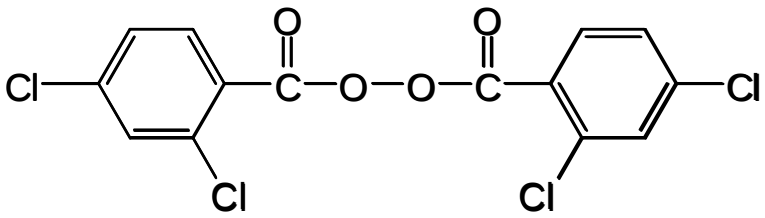
Technical Data Sheet

DCLBP-50-PSI

Di(2,4-dichloro benzoyl)peroxide
CAS#133-14-2
50%, paste in silicone oil
Molar mass: 380.0 g/mol

Structural Formula



Description

White, stiff paste, consisting of approx. 50 % di(2,4-dichloro benzoyl)peroxide, desensitised with silicone oil. This halogenated diaroyl peroxide is used as an initiator (radical source) in the crosslinking of polymers at above 100°C, particularly silicone rubbers.

Technical Data

Appearance	white paste
Peroxide content	approx. 50% w/w
Active oxygen	approx. 2.10% w/w
De-sensitising agent	silicone oil
Density at 20 °C	approx. 1.2 g/cm^3
Consistency	stiff paste
Critical temperature (SADT)	approx. 60 °C
Cold storage stability	freezing point below -25 °C
Recommended storage temperature	below 30 °C
Storage stability as from date of delivery	6 months

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

Half-life-time

10 h/1 h/1 min. (0.1 m/benzene): 54/72/110 °C

Application

POLYMER CROSSLINKING:
A peroxidic crosslinking agent for polymers, especially silicone rubbers (VMQ). Crosslinking temperature: above 100°C. At below 60°C no premature crosslinking (scorch) occurs. Usage levels: 1-2 % of product as supplied on the material to be crosslinked. The paste form facilitates mixing

and homogenisation. Special advantage: Crosslinking is not inhibited by oxygen. Disadvantage: sensitive to carbon blacks, possible generation of polychlorinated biphenyls (PCB's) during crosslinking process.
Crosslinking of silicone rubber can be effected in the temperature range 110-130°C under pressure. Subsequent postcuring for 12-24 hours at 150-250°C removes acidic decomposition products and improves ageing resistance. Crosslinking at atmospheric pressure in continuous systems with hot air at temperatures from 150-400°C is also possible. By this method bubble free vulcanisates be obtained.
Approved for crosslinking of silicone rubber by FDA (§ 177.2600) and BGVV (XV/3).

Measurements

Vulcanisation of VMQ (Wacker R 401/60-U) within Monsanto rheometer 100-S (Torsion angle 1°, chamber volume 7.3 cm^3)					
Influence of temperature on crosslinking performance (1.5 % DCLBP-50-PSI/0.03 % AO)					
Temperature [°C]	100	110	120	130	150
Scorch time [min]	1.0	0.7	0.4	0.3	0.1
Crosslinking time t_{50} [min]	1.7	1.1	0.7	0.6	0.3
Crosslinking time t_{90} [min]	3.2	2.3	1.4	1.0	0.5

Influence of peroxide level on the properties of vulcanisates (temperature: 110 °C)				
DCLBP-50-PSI level [% AO]	0.02	0.03	0.04	0.05
DCLBP-50-PSI level [% as supplied]	1.0	1.5	2.0	2.5
Crosslinking time t_{90} [min]	2.3	2.1	2.0	2.0
Torque [Nm]	3.1	3.7	3.7	3.9
Tensile strength [N/mm^2]	12	11	10	10
400 % Modulus[N/mm^2]	4.1	6.3	7.7	8.4
Elongation [%]	730	590	570	460

Standard Packaging 20 kg (44,1 lb) in plastic buckets

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