

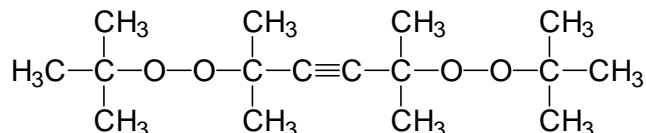
DYBP

2,5-Dimethyl 2,5-di (tert.butylperoxy) hexyne-3

CAS# 1068-27-5

Liquid, technical pure

Structural Formula



Description

Yellowish liquid, consisting of approximately 95% technically pure 2,5-dimethyl-2,5-di (tert.butylperoxy)hexyne-3. This bifunctional dialkyl peroxide is used as an initiator (radical source) in the crosslinking of polyethylene above 180°C.

Technical Data

Appearance	Yellow Liquid
Assay	ca. 95%
Active oxygen	ca. 10.6% w/w
De-sensitising agent	None
Density at 20°C	ca. 0.889 g/cm ³
Viscosity at 20°C	ca. 6.3 mPa•s
Critical temperature (SADT)	ca. 80°C
Cold storage stability	freezing point: ca. 8°C
Recommended storage temperature	+10°C to +40°C
Maintenance of activity at 25°C	12 months

Half-life Data

Half-life time: 10h/1h/1min (0.1 m / benzene): 128°C/149°C/195°C

Application

POLYMER-CROSSLINKING:

A peroxide crosslinking agent for polyethylene (HDPE, LLDPE and LDPE with carbon black). Crosslinking temperature: above 180°C. Below 150°C no premature crosslinking (scorch) occurs. Usage level: 0.2-2% of product as supplied on material to be cross-linked.

Special advantages: Thermally stable, low volatility, very efficient. Volatile, odor-free decomposition products that do not bloom to the vulcanizate surface.

Measurements

Crosslinking of HDPE (Lupolen 4261 A) using Monsanto Rheometer 100-S (torsion angle 3°, chamber volume 7.3 cm ³)							
Influence of temperature on crosslinking time, 0.65% DYBP-85-WO							
Temperature (°C)	150	160	170	180	190	200	210
Scorch-time (min)	10	5.5	3.4	2.3	1.5	1.2	1.1
Crosslinking time t ₉₀ (min)	-	27	12	8.1	4.3	2.8	2.2
Crosslinking time t ₃₀ (min)	-	80	40	22	10	5.4	3.7

Influence of peroxide level on degree of crosslinking at 200°C					
(% AO)	0.03	0.06	0.09	0.12	0.15
DYBP-level (% w/w)	0.33	0.65	0.98	1.3	1.63
Crosslinking time t ₉₀ (min)	6.5	5.1	5	4.6	4.1
max. torque (Nm)	6.1	8.8	9.8	11	12
* gel content (%)	91	98	99	99	99
* swelling index	6.5	4.3	3.5	3.1	2.9
* extraction in xylene: 6 h at 135°C					

Storage

Observe the recommended storage temperature range to preserve quality and usefulness and for safety reasons. Observe the safety recommendations of local regulations and codes, requirements of the local authority having jurisdiction, and your insurance provider. Keep this product from freezing. If frozen it should be thawed by bringing the product to recommended storage temperatures. Do not apply high temperature to thaw this product. Contact United Initiators for a special bulletin on safe thawing practices.

Standard Packaging

This product is packed in 20 Liter Jerricans filled to 35 pounds net weight. Standard Pallet quantities are 1050 pounds (30 containers).

Safety & Handling

See our Safety Data Sheet for details. This material is highly hazardous and self-reactive. Avoid heating to above maximum recommended storage temperatures and confinement. Store and handle in ways evaluated by a thorough safety review following process safety management techniques.

REACH

This material is pre-registered under REACH.

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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