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Technical Data

VAROX[®] DCBP-50 Paste

**Organic Peroxide Crosslinking Agent for Silicone Rubber
Bis (2,4-dichlorobenzoyl) peroxide, 50% in silicone oil**

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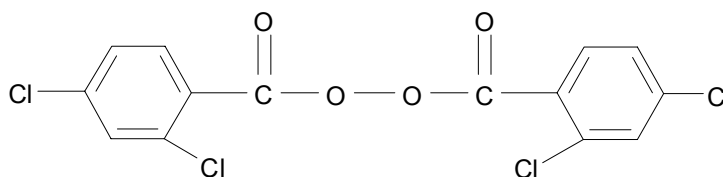
VAROX DCBP-50 Paste is a monofunctional organic peroxide which, owing to its low activation temperature, is used for low temperature crosslinking of silicone and fluorosilicone rubbers without external pressure (hot air and/or IR crosslinking).

VAROX DCBP-50 Paste is especially good for continuous hot air vulcanization (HAV) in the temperature range of 160 to 240°F, since non-carbon black-loaded compounds containing this peroxide show little tendency to develop porosity, even when vulcanized without external pressure. However, postcuring is recommended to prevent acidic decomposition of the rubber product.

The following technical data demonstrate the chemical and functional equivalence to Akzo's Perkadox[®] PD-50SA-ps and Dow Corning's T Catalyst.

CAS Number and Chemical Structure Analysis of VAROX DCBP-50 Paste:

- CAS # 133-14-2
- EINECS/ELINCS No. 205-094-9
- TSCA Status: Listed on Inventory
- Chemical Nomenclature: Bis (2,4-dichlorobenzoyl) peroxide in silicone oil
- SADT: 140°F (75°C)
- Chemical Structure:



VAROX DCBP-50 Paste vs. Perkadox PD-50S-ps-a and T Catalyst (RTV Rubber Laboratory Reports R-1800B and R-1876)

Three commercial brands of bis (2,4-dichlorobenzoyl) peroxide at 50% assay in silicone oil (**VAROX DCBP-50 Paste**, Perkadox PD-50SA-ps and T Catalyst) were mill-mixed into Silastic 4-4768 for rheological and physical property testing to determine product performance.

Compound:	1	2	3
Silastic® 4-4768	100.0	100.0	100.0
VAROX DCBP-50 Paste	1.5	-	-
Perkadox® PD-50SA-ps	-	1.5	-
T Catalyst (50% active)	-	-	1.5
Totals	101.5	101.5	101.5

ASTM D 5289, Moving Die Rheometer @ 115.5°C (240°F), 0.5° Arc

Minimum Torque, ML, dN·m	1.13	1.15	1.12
Maximum Torque, MH, dN·m	21.60	21.69	22.12
Ts1, minutes	0.28	0.28	0.28
T'90, minutes	0.86	0.84	0.85
Cure Rate Index, min ⁻¹	172.4	178.6	175.4
Cure Rate, dN-m/min	35.30	36.68	36.85
Tan Delta at M _L	0.99	0.98	0.98
Tan Delta at M _H	0.02	0.01	0.01

Physical Properties*

ASTM D 412, Method A, Die D, Stress Strain Tests @ 23°C (73°F)

100% Modulus, MPa	3.09	2.85	2.78
Tensile Strength, MPa	11.20	11.27	11.93
Elongation, %	305	349	359
Hardness, Shore A Durometer	68.0	67.7	68.3

ASTM D 395, Method B, Compression Set , 22 Hours @ 177°C (350°F), Plied Disks

Percent Set	28.8	30.2	31.1
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* Slabs press cured 5 minutes @ 116°C (240°F), and postcured for 4 hours @ 200°C (392°F)

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 - Perkadox is a registered trademark of Akzo Nobel
 - Silastic is a registered trademark of Dow Corning Corporation

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