ELASTOSIL® R 420

HCR silicone

Characteristics

ELASTOSIL® R 420 silicone rubbers feature outstanding tear resistance and high transparency.

Application

ELASTOSIL® R 420 silicone rubbers are designed for extrusion, compression, and transfer and injection moulding.
Post-cured articles can be used for food and drug applications.
ELASTOSIL® R 420/30 is not recommended for extrusion.

Storage

ELASTOSIL® R 420 has a shelf life of at least 12 months if stored at 25 °C in the tightly closed original container. The 'Best use before end' date of each batch appears on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety information

Detailed safety information is contained in each material data safety sheet, which can be obtained from our sales offices.

Product data

Property	Test method	Unit	ELASTOSIL® 420			
Hardness Shore A	DIN 53 505		30		40	
Curing agent			E	C1	E	C1
Appearance			Transparent		Transparent	
Specific grafity	DIN 53 479 A	[g/cm³]	1.10		1.11	
Tensile strength	DIN 53 504 S 1	[N/mm²]	8.0	10.4	9.3	10.7
Elongation at break	DIN 53 504 S 1	[%]	650	1,000	680	870
Tear resistance	ASTM D 624 B	[N/mm]	25	28	34	33
Rebound resilience	DIN 53 512	[%]	55	47	52	51
Compression set	DIN ISO 815-B (22 h / 175 °C)	[%]	30	20	25	28

These figures are intended as a guide and should not be used in preparing specifications.

Product data

Property	Test method	Unit	ELASTOSIL® 420					
Hardness Shore A	DIN 53 505		50		60		70	
Curing agent			E	C1	E	C1	E	C1
Appearance			Transparent		Transparent		Transparent	
Specific grafity	DIN 53 479 A	[g/cm³]	1.15		1.17		1.20	
Tensile strength	DIN 53 504 S 1	[N/mm²]	10.6	11.5	10.4	11.3	9.9	10.2
Elongation at break	DIN 53 504 S 1	[%]	670	790	620	690	660	660
Tear resistance	ASTM D 624 B	[N/mm]	38	39	41	42	42	41
Rebound resilience	DIN 53 512	[%]	47	46	44	46	40	42
Compression set	DIN ISO 815-B (22 h / 175 °C)	[%]	30	28	25	31	40	49

These figures are intended as a guide and should not be used in preparing specifications.

Cure conditions

Curing agent		[%]	Cure	Post-cure
E	50 % paste of bis-(2,4-dichlorbenzoyl)-peroxide in silicone fluid	1.5	10 min / 135 °C	4 h / 200 °C
C1	Dicumyl peroxide (98 %)	0.7	15 min / 165 °C	4 h / 200 °C
C6	45 % paste of 2,5-bis-(t-butylperoxy)-2,5-dimethyl hexane in silicone rubber	1.2	15 min / 165 °C	4 h / 200 °C

Curing Agent C6 yields similar values to those obtained with C1.

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The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001
The Business Unit Elastomers of the Division Silicones is ISO/TS 16949 certified.

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