ELASTOSIL® R 401

HCR silicone

Characteristics

Vulcanizates made from these compounds exhibit an unique combination of characteristics. They are noted for their good flexibility, high transparency, and mechanical properties. The compounds are easily pigmented with ELASTOSIL® PT Pigment Pastes and have good processing characteristics. The various grades can be mixed with each other in any proportion to achieve intermediate hardnesses.

Application

ELASTOSIL® R 401/20 to R 401/90 have many different uses, being suitable for molded articles and extrusions such as seals, sheet, tubing and profiles. ELASTOSIL® R 401/20 is a special formulation for the production of flexible extruded articles, with the aid of Curing Agent E. This grade is not suitable for press vulcanization with Curing Agents C1 and C6. Post-cured articles can be used for food and drug applications.

Storage

ELASTOSIL® R 401 has a shelf life of at least 12 months when 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® R 401				
Hardness Shore A	DIN 53 505		**20**	**30**		**40**	
Curing agent			E*	E	C1	E	C1
Appearance			Translucent	Translucent		Transparent	
Specific grafity ± 0,02	DIN 53 479 A	[g/cm³]	1.11	1.11		1.12	
Tensile strength	DIN 53 504 S 1	[N/mm²]	9	10	10	10	12
Elongation at break	DIN 53 504 S 1	[%]	1,000	730	820	610	800
Tear resistance	ASTM D 624 B	[N/mm]	19	15	17	17	21
Rebound resilience	DIN 53 512	[%]	39	54	53	55	51
Compression set	DIN 53 517 (22 h / 175 °C)	[%]	36	30	20	30	20

*0,8 % Curing Agent E

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

Product data

Property	Test method	Unit	ELASTOSIL® R 401					
Hardness Shore A	DIN 53 505		**50**		**55**		**60**	
Curing agent			E	C1	E	E	C1	
Appearance			Transparent		Transparent	Transparent		
Specific grafity ± 0,02	DIN 53 479 A	[g/cm³]	1.13		1.13	1.14		
Tensile strength	DIN 53 504 S 1	[N/mm²]	11	12	11	11	11	
Elongation at break	DIN 53 504 S 1	[%]	550	680	490	490	580	
Tear resistance	ASTM D 624 B	[N/mm]	21	24	18	21	24	
Rebound resilience	DIN 53 512	[%]	53	52	59	59	58	
Compression set	DIN 53 517 (22 h / 175 °C)	[%]	35	25	35	25	12	

*0,8 % Curing Agent E

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

Product data

Property	Test method	Unit	ELASTOSIL® R 401							
Hardness Shore A	DIN 53 505		**70**		**80**		**90**			
Curing agent			E	C1	E	C1	E	C1		
Appearance			Transparent		Transparent		Transparent			
Specific grafity ± 0,02	DIN 53 479 A	[g/cm³]	1,18		1,21		1.22			
Tensile strength	DIN 53 504 S 1	[N/mm²]	11	10	9	9	9	7		
Elongation at break	DIN 53 504 S 1	[%]	520	500	430	380	320	320		
Tear resistance	ASTM D 624 B	[N/mm]	26	24	25	22	18	19		
Rebound resilience	DIN 53 512	[%]	51	53	52	50	55	54		
Compression set	DIN 53 517 (22 h / 175 °C)	[%]	35	20	55	25	55	35		

*0,8 % Curing Agent E

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-dichlorobenzoyl)-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.

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

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 QS-9000 certified.

WACKER

and ELASTOSIL® are registered trademarks of Wacker-Chemie GmbH.

Version 2.00 from 22-10-03 replaces Version 1.00 from 01-03-00

For technical, quality, or product safety questions, please contact:

Wacker-Chemie GmbH
WACKER-SILICONES
Hanns-Seidel-Platz 4
D-81737 Munich, Germany

Silicone-Info Service
Germany:
Tel.: 0-800-6279-800
International:
Phone: +800-6279-8000

www.wacker.com
silicones@wacker.com