

# 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				
			20	30	40		
Hardness Shore A	DIN 53 505						
Curing agent			E*	E	C1	E	C1
Appearance			Translucent	Translucent		Transparent	
Specific gravity ± 0,02	DIN 53 479 A	[g/cm <sup>3</sup> ]	1.11	1.11		1.12	
Tensile strength	DIN 53 504 S 1	[N/mm <sup>2</sup> ]	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		<b>50</b>		<b>55</b>		<b>60</b>	
Curing agent			E	C1	E	E	C1	
Appearance			Transparent		Transparent		Transparent	
Specific gravity ± 0,02	DIN 53 479 A	[g/cm <sup>3</sup> ]	1.13		1.13		1.14	
Tensile strength	DIN 53 504 S 1	[N/mm <sup>2</sup> ]	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

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**Product data**

Property	Test method	Unit	ELASTOSIL® R 401					
Hardness Shore A	DIN 53 505		<b>70</b>		<b>80</b>		<b>90</b>	
Curing agent			E	C1	E	C1	E	C1
Appearance			Transparent		Transparent		Transparent	
Specific gravity ± 0,02	DIN 53 479 A	[g/cm <sup>3</sup> ]	1,18		1,21		1.22	
Tensile strength	DIN 53 504 S 1	[N/mm <sup>2</sup> ]	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**

<b>Curing agent</b>		<b>[%]</b>	<b>Cure</b>	<b>Post-cure</b>
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.

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The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

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.

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