

Typical Properties of Vulcanized Rubber

| | Natural Rubber | Styrol-Butadiene Rubber | Butyl-Rubber | Ethylene-Propylene-Diene Rubber | Silicone Rubber | Chloroprene-Rubber | Nitrile-Rubber | Fluoro-Rubber | | |
|--|---|-------------------------|---------------|---------------------------------|--------------------|--------------------|-----------------|---------------|---|---|
| International Symbol | NR | SBR | IIR | EPDM | VMQ | CR | NBR | FKM | | |
| Trade Name, for e. | SMR | Buna-Hüls EM | Polysar-Butly | Buna AP Keltan | Elastosil Silastic | Baypren Neoprene | Perbunan Krynac | Viton Fluorel | | |
| Durometer Shore A | 30-90 | 35-95 | 30-80 | 30-90 | 30-85 | 25-90 | 30-95 | 40-90 | | |
| Mechanical Properties @ Room temperature | Tensile strength (bei aktiv gefüllten Mischungen) | 1 | 2 | 3 | 3 | 4 | 2 | 3 | | |
| | Elongation | 1 | 2 | 1 | 3 | 4 | 2 | 3 | | |
| | Resilience | 1 | 3 | 6 | 2 | 3 | 3 | 4 | 6 | |
| | Tear growth resistance | 2 | 3 | 3 | 3 | 4 | 2 | 3 | 4 | |
| | Abrasion (for mixtures with reinforced fillers) | 3 | 3 | 4 | 3 | 5 | 3 | 2 | 4 | |
| | Resistance to permanent deformation | At high Temperatures | 4 | 4 | 2 | 3 | 1 | 4 | 3 | 1 |
| | | At low Temperatures | 2 | 3 | 2 | 3 | 1 | 4 | 4 | 5 |
| Thermal Properties | Cold flexibility | 2 | 3 | 2 | 3 | 1 | 3 | 4 | 5 | |
| | Heat Resistance | 6 | 6 | 4 | 4 | 1 | 4 | 4 | 1 | |
| Chemical Resistances | Benzine | 6 | 5 | 5 | 6 | 5 | 3 | 2 | 1 | |
| | Mineral Oil (at 100° C) | 6 | 5 | 6 | 5 | 2 | 3 | 1 | 1 | |
| | Acid (25%ige H ₂ SO ₄ at 50° C) | 4 | 4 | 1 | 1 | 4 | 2 | 2 | 1 | |
| | Base (50%ige NaOH at 50° C) | 2 | 2 | 1 | 1 | 6 | 2 | 6 | 1 | |
| | Water (at 100° C) | 5 | 5 | 2 | 1 | 2 | 3 | 2 | 3 | |
| | Weathering and Ozone | 4 | 4 | 3 | 1 | 1 | 2 | 5 | 1 | |
| | Light | 4 | 4 | 3 | 2 | 1 | 3 | 4 | 1 | |
| Gas Permeability | 5 | 4 | 1 | 4 | 6 | 3 | 2 | 1 | | |

Classification

- 1 very good
- 2 good
- 3 satisfactory
- 4 sufficiently
- 5 inconveniently
- 6 bad

This representation shows the characteristics of the various rubber vulcanisates merely indicative again. Can optimize a specific property in a mixture other characteristics are adversely affected.

Thus, conclusions can only be draw due to concrete mixtures.

