Silicone Material & Hardness Cheat Sheet

CYES SILICONE | www.cyesltd.com | A one-page reference to pick the right silicone.

1. Shore hardness - pick by feel and use

Shore	Feel	Typical applications
Shore 00-10	Ultra-soft, squishy	Squishy toys, stress relievers, cushioning pads
10-20A	Very soft, gel-like	Baby nipples, soft facial puffs, roll-up mats
20-30A	Soft, pliable	Baby teethers, beauty blenders, soft grips
30-40A	Medium-soft	Kitchen utensils, baking mats, food storage bags
40-50A	Medium, balanced	Baby/pet bowls, phone pouches, cosmetic containers
50-60A	Medium-firm	Keypads, remote covers, cable boots, suction cups
60-70A	Firm rubber	Seals, gaskets, O-rings, industrial feet
70-80A	Very firm	Bumpers, feet, industrial grips, dampeners
80A+	Hard rubber	Heavy industrial parts, precision connectors

2. Material families

Material	Cure	Key property	Typical use
LSR (liquid silicone)	Platinum	Precision, low extractables	Medical, food, high-volume injection
HCR (solid silicone)	Peroxide / platinum	Versatile, cost-effective	General molded parts
FVMQ (fluorosilicone)	Peroxide	Oil + heat resistance	Automotive seals, fuel contact
Conductive silicone	Various	Electrically conductive	Keypads, EMI shielding, sensors

3. Certifications & standards

Standard	Scope	Applies to
FDA 21 CFR 177.2600	US food contact	Food-grade silicone
LFGB Sec.30 / 31	Germany food contact + sensory test	EU food-grade silicone
ISO 10993 / USP Class VI	Biocompatibility	Medical silicone
ASTM D2000	Rubber classification	Material specification
ASTM D395	Compression set	Seal / O-ring life
ISO 3302-1	Dimensional tolerance	Part tolerances

4. Precision to expect

Item	Typical value
Mold cavity machining	+/-0.008 mm
Standard linear tolerance	+/-0.1 to 0.3 mm (size-dependent)
Precision LSR (critical features)	+/-0.02 mm achievable

This cheat sheet summarizes the full guides at www.cyesltd.com. Need a recommendation for your exact part? Email your drawing to get-a-quote via

the site - a materials engineer will reply in writing.