

Please note that FORMEROL® F.10 is a standard material and its properties can be varied for specific applications.

FORMEROL® F.10 is a developmental product. Typical properties are illustrative of the current product formulation but may change. This information is offered in good faith. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that FORMEROL® products are safe, effective, and fully satisfactory for the intended end use.

## DESCRIPTION

FORMEROL® soft-touch materials are specially formulated to allow for :

### 1. Cold moulding of silicone parts

Moulding at low temperatures allows silicone parts to be directly moulded onto unusual substrates such as aluminium and ceramics. This allows for exciting new design possibilities.

### 2. Fixing, Adapting and Creating : applications in DIY, Arts & Crafts, Prototyping

The high plasticity of the material allows it to be shaped easily by hand into any shape and its properties such as elasticity and adhesion offer many advantages.

## GENERAL

FORMEROL® F.10	Silicone Elastomer
Basic Material	RTV Moisture Curing Silicone
Service Temperature Range	- 50 to 180 °C
Colour When Uncured	White, but can be easily coloured to any shade
Appearance	Supplied as uncured non-slumping elastomer in moisture proof packaging ready to be processed by extrusion / compression moulding / manual shaping at room temperature.
<b>Cured material:</b>	
Ozone/UV-Resistance	Excellent
Oxidation Resistance	Excellent
Moisture Resistance	Good
Flame Resistance	Good

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FORMEROL® technology is protected by the following international patent applications:  
US Patent Application 10/517,057 and related filings in Europe, China and India.  
US Patent Application 11/921,006 and related filings in Europe, Japan, China and India.  
US Patent Application 11/921,005 and related filings in Europe, Japan, China and India.

## MECHANICAL & PHYSICAL PROPERTIES

Properties	Standard	Test Unit	Typical Value
Hardness	BS EN ISO 868	Shore A	70
Density		kg/ m <sup>3</sup>	1380
Williams Plasticity (uncured)	ASTM D 926	mm	166
Ultimate Tensile Stress	ASTM D638	MPa	1.89
Strain to Failure	ASTM D638	%	211
Modulus	ASTM D638	MPa	5.59
Abrasion Resistance	ISO4649 Method A	ARI index %	24
Thermal Conductivity	ASTM D5930	W/mK	0.189
Electrical Resistivity - Surface	BS903	Ohms	1.40 × 10 <sup>14</sup>
Electrical Resistivity - Volume	BS903	Ohm cm	2.55 × 10 <sup>14</sup>
Dielectric Strength	ASTM D419	V/mil	398

## ADHESION

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Substrate surfaces must be thoroughly degreased in all cases.

Test Title	Results
Adhesion to Butyl Rubber	Excellent
Adhesion to Aluminium	Excellent
Adhesion to Stainless Steel	Excellent
Adhesion to Glass	Excellent
Adhesion to Sugru	Excellent
Adhesion to Leather (Shoe)	Excellent
Adhesion to Fridge Door (Exterior)	Excellent
Adhesion to Fridge/Freezer Interior	Excellent
Adhesion to Brass	Excellent
Adhesion to Galvanised Steel	Excellent
Adhesion to Copper	Excellent
Adhesion to Plywood	Excellent

## PROCESSING

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FORMEROL® materials are processed at room temperature, in a dry atmosphere; most commonly by compression moulding, extrusion or manual shaping. Injection moulding processes are under development with a lead industrial partner.

The viscosity of the material at room temperature allows moulds to be fabricated from suitable polymers (eg PTFE, polycarbonate) as well as metal.

## PACKAGING

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Typical sealing materials include any polymer film with good moisture barrier properties e.g. PE/ALU/PET laminates.

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