



Construction and Architectural Molding

Bluestar Silicones. Delivering Your Potential.

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SILICONES

ARCHITECTURAL MOLDING is the art of manufacturing construction pieces that resemble high value materials – such as middle-age stones or marble - by using concrete or gypsum.

If a villa needs a facade made of middle-age stones, either every single stone is picked-up from somewhere and assembled together, or the whole facade can be made as one piece: just by casting a designed concrete formulation into a Silicone mold.

SILICONE RTV-2 are the key to obtain an accurate copy of any model stone: the outstanding reproduction fidelity of every single detail leads to reproduced stones showing veins and microcraps, forcing the observer to pass the finger onto such imitations to tell they do not come from the past middle age.

Architectural molding needs just 3 kind of materials:

1. Model stones (either real or artificial ones)
2. **BLUESIL™ RTV-2** silicone for moldmaking, to be casted onto the model stones in order to obtain their silicone mold
3. A suitable concrete formulation, that once casted and dried in the silicone mold, will look like exactly as the model stone.

BLUESIL™ grades dedicated to architectural molding combine the unbeatable reproduction fidelity of the silicone chemistry with the very high mechanical resistance and ease of processing required by the application.

The artificial stones produced thanks to such **BLUESIL™ RTV-2** products will show every single vein of the original middle-age stone from which they replicate.

BLUESIL™ RTV Polyaddition		3428	3430 SB ⁽¹⁾	3512 NB ⁽²⁾	3522	3433	3436
Special Feature		General Purpose	Self Bleeding	Very Soft	Hydrophilic	High Resistance	High Hardness
Benefits		high mechanical properties	self-releasing molds	easy demolding from vertically developed shapes	high compatibility with water-rich casting materials	better compatibility to high performance concretes	high dimensional stability (self-supporting molds)
Mix Ratio		10:1	10:1	1:1	1:1	10:1	10:1
Hardness	Sh.A	28	30	12	20	30	35
Working Time	[min]	60	90	60	90	90	150
Setting Time	[h]	16	16	6	6	6	16
Viscosity A	[mPa.s]	25000	25000	9000	20000	25000	20000
Viscosity B		8000	2500	7000	20000	10000	7000
Colour A+B		white	gray	white	light blue	colorless	red or colorless
Tensile Strength	[MPa]	7.5	6.0	4.5	3.5	6.0	5.0
Elongation at Break	[%]	600	450	800	400	450	400
Tear Strength	[KN/m]	20	20	20	15	15	18

(1) SB = Self Bleeding
(2) NB = Non Bleeding

■ Selector guide

BLUESIL™ RTV	3428 A&B	3430 SB A&B	3512 NB A&B	3522 A&B	3433 A&B	3436 A&B
Standard construction materials (gypsum, plaster, ...)	✓			✓		✓
High performance concrete					✓	
Vertical shapes (pillars)			✓			
Artificial resins		✓		✓	✓	

■ Why choosing silicone vs the PU alternative?

	SILICONES RTV-2	PU
Application	<ul style="list-style-type: none"> • All applications: from simple to complex forms with excellent reproduction fidelity 	Only flat products of simple geometry: panels, bricks, borders, ...
Processing	<ul style="list-style-type: none"> • No H&S issues for skin contact or skin touch • No heat evolution upon curing • Mix of 2 parts with a ratio of 1:1 or 10:1 	<ul style="list-style-type: none"> • Toxic due to certain components of PU • Sensible to humidity • Very exothermic curing • Mix of 2 parts with various mix ratio possibilities (depending on grade)
Chemical & Mechanical Properties	<ul style="list-style-type: none"> • Intrinsic release properties • Neglectible shrinkage • Weathering resistant (molds can be stored outdoors) 	<ul style="list-style-type: none"> • Need of treatment with release agents before each casting • Hydrolizable, oxidizable and UV-yellowing

Users have to perform preliminary tests in order to check the compatibility between the silicone mold and the reproduction material in use and so assess the durability performance of the silicone mold. These preliminary tests must be performed every time a new reproduction material is to be used with the mold.

Bluestar Silicones guarantees only the sales specifications of the **BLUESIL™ RTV-2** product, but cannot guarantee its compatibility with reproduction materials.



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www.bluestarsilicones.com

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