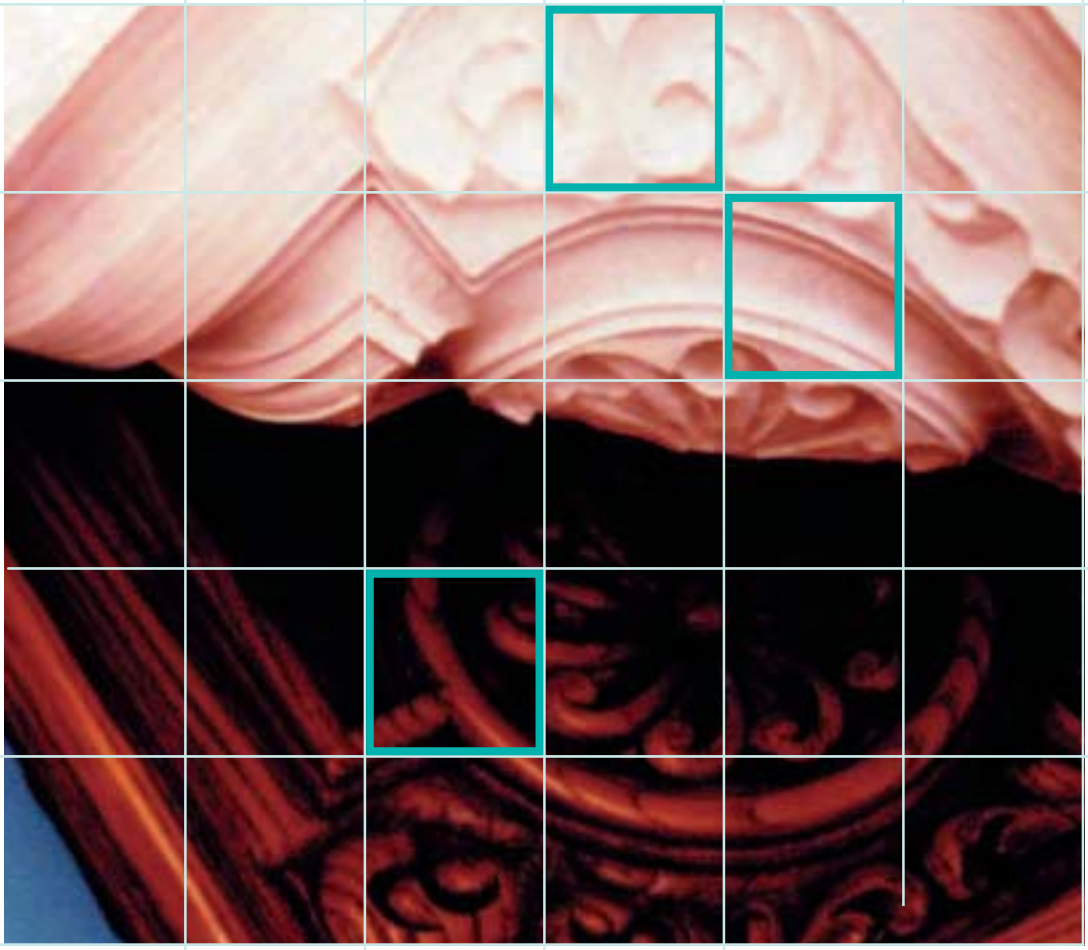
DOW CORNING® brand Silicone Moldmaking Materials

quality/solutions

profit through performance

Moldmaking Products for Craft Industry and Hobby Market



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DOW CORNING

SILASTIC® silicone moldmaking products from Dow Corning are two-component products consisting of a flowable base and curing agent (or catalyst). These materials are simple to process, have excellent mold release properties and surface reproduction. Typical applications are the detailed reproduction of sculptures, staples, reliefs, jewelry, candles, architectural models, plaster elements and much more.To choose the correct base, curing agent and additive, depends on many factors. The tables in this reference guide should allow you to select the material best suited for your application

FEATURES

- Products for various applications in artistic moldmaking, e.g. reproduction of sculptures, figurines, jewelry, candles, plasterworks, etc.
- Condensation- and addition-curing RTV elastomers
- Excellent mold release properties
- Variable working and demolding times
- Requires no special mixing or dispensing equipment
- Excellent mechanical properties
- Broad viscosity range

PRODUCT SELECTION

Selecting the right product is often a difficult task. Nature, complexity and selected material for the replicas must be taken into account. Please consult the technical data sheets for detailed information on Dow Corning's moldmaking products. The final decision on products and additives can often only be made after practical tests.

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CURE TYPES

Condensation curing

SILASTIC moldmaking products are characterized by high tear-strength and elasticity. Together with a very good flowability, this allows detailed reproduction of complex originals with deep undercuts, without harming the original. Often one- or two-part molds are sufficient. The multitude of possible combinations of base with curing agents and additives allows customizing products for different purposes.

Addition-curing

SILASTIC moldmaking products are characterized by extremely low shrinkage during curing, as well as by high temperature stability. These materials are therefore appropriate if a high dimensional accuracy is required of the replica.

Inhibition of the cure

Addition-cured silicone elastomers are susceptible to cure inhibition when in contact with certain materials and chemicals, such as amines, sulfur and organic tin salt containing products and substrates.

PRODUCT PROPERTIES

Base SILASTIC®	Curing agent*	Type of curing agent	Color	Mixing ratio
Condensation-curing materials				
General purpose silicone moldmaking rubber				
3120	1 Catalyst	Standard	Red	100:10
3133	33	Standard	Light blue	100:5
High strength silicone moldmaking rubber				
3481	81	Standard	Off-White	100:5
	81-R	Resin resistant	Off-White	100:5
	81-F	Fast	Off-White	100:5
	81-VF	Very fast	Off-White	100:5
	81-T	Thin layer	Off-White	100:5
3483	83	Standard	Off-White	100:5
3487	87-S	Standard	White	100:5
High strength silicone mold making rubbers with improved mold life for polyester resins				
3496	81-R	Resin resistant	Off-White	100:5
	81-F	Fast	Off-White	100:5
	81-T	Thin layer	Off-White	100:5
3497	81-R	Resin resistant	Off-White	100:5
	81-F	Fast	Off-White	100:5
	81-T	Thin layer	Off-White	100:5
3498	81-R	Resin resistant	Off-White	100:5
	81-F	Fast	Off-White	100:5
	81-T	Thin layer	Off-White	100:5
Addition-curing materials				
High tear resistance, high elasticity, medium hardness				
S	S	Sold as a kit	Green	100:10

* DOW CORNING® Curing Agent or SILASTIC® Curing Agent

PATTERN CHARACTERISTICS

Base SILASTIC	3120	3133	3481	3483	3487	3496	3497	3498	S
Simple, no undercuts	***	***	***	***	***	***	***	***	***
Complex, some undercuts		***	***	***	***	***	***	***	***
Complex, deep undercuts			***	***	***	***	***	***	***
Vertical surface, large or immovable objects			***	***	***			***	***

***=recommended **=good *=can be used

COMPATIBILITY WITH CASTING RESINS

Base SILASTIC	3120	3133	3481	3483	3487	3496	3497	3498	S
Polyester	*	**	***	***	***	***	***	***	*
Polyurethane, rigid	*	**	***	***	*	**	***	***	*
Polyurethane, foam	*	*	*	*	*	*	*	**	*
Low melting point metals	***	*	*	*	*	*	*	**	**
Wax	**	**	***	***	***	***	***	***	***
Plaster	*	***	***	***	***	***	***	***	***
Cement	*	*	*	*	*	*	*	*	*

***=recommended **=good *=can be used

PRODUCT PROPERTIES

Base SILASTIC®	Curing agent*	Mixed Viscosity (mPa.s)	Working time(min)	Curing time (hours)	Hardness Shore A	Tear Strength (kN/m)	Elongation at break (%)	Linear shrinkage (%)
Condensation-curing materials								
3120	1 Catalyst	28,000	120-180	24	60	<5	130	0.4 - 0.6
3133	33	15,000	90-120	24	13	<10	450	0.4 - 0.5
3481	81	25,000	90-120	24	21	26	560	0.2 - 0.5
	81-R	25,000	90-120	24	21	25	600	0.2 - 0.5
	81-F	25,000	30-45	5	22	23	520	0.2 - 0.5
	81-VF	25,000	8-10	2	22	21	420	0.2 - 0.5
	81-T	25,000	90-120	24	25	23	370	0.2 - 0.5
3483	83	17,000	90-120	24	13	25	600	0.2 - 0.5
3487	87-S	15,000	90-120	24	8	13	650	0.2 - 0.5
3496	81-R	12,800	120-180	24	15	23	470	0.2 - 0.5
	81-F	14,200	60-90	8	16.5	27	440	0.2 - 0.5
	81-T	13,400	120-180	24	19	25	350	0.2 - 0.5
3497	81-R	16,600	120-180	24	22	32	450	0.2 - 0.5
	81-F	18,000	60-90	8	24.5	27	400	0.2 - 0.5
	81-T	17,600	120-180	24	27	31	330	0.2 - 0.5
3498	81-R	16,400	120-180	24	27	35	410	0.2 - 0.5
	81-F	18,200	60-90	8	29.5	34	390	0.2 - 0.5
	81-T	18,200	120-180	24	32	27	300	0.2 - 0.5
Addition-curing materials								
S	S	13,500	40-60	7	25	23	850	<0.1

* DOW CORNING® Curing Agent or SILASTIC® Curing Agent

ADDITIONAL DOW CORNING PRODUCTS FOR THE CRAFT INDUSTRY AND HOBBY MARKET

Silastic® Thixo Additive: Adding 1-3% of this additive to the following Dow Corning moldmaking products Silastic® 3481, 3483, 3487, 3498, P-1, S, S-2, T-2, T-4, V, will give them a paste-like consistency. After applying and curing a thin layer of moldmaking material base without Thixo additive, a thicker layer can be applied with a spatula, e.g. on vertical surfaces, in order to obtain the final mold. When stored below 20ºC (68ºF), Silastic Thixo Additive may solidify: apply heat to re-liquefy by placing the closed container into hot water.

Dow Corning® 732 Multi-purpose Sealant, clear: This one-part adhesive cures at room temperature and can be used to repair torn molds.

Dow Corning® 734 Flowable Sealant, clear: This one-part, room temperature coating can be used for painting silicone robotic skins. It can be easily pigmented and diluted with solvents.

Dow Corning® 1-2287 Cure Retardant: This product can be used to slow down room temperature cure of all addition cure (platinum cure) mold making rubbers.

Syl-Off® 4000 Catalyst: This cure accelerator can be used to speed room temperature cure of all addition-cure (platinum cure) moldmaking silicone rubbers. It can also be used as a surface treatment to prevent inhibition.

Dow Corning® 200 Fluid, 50cst: This product can be used as a thinner to lower mixed viscosity and also to adjust the hardness of the cured silicone. It can also be used as a release agent. Users must conduct their own trials to establish the optimum silicone oil viscosity and amount.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.
For further information, please see our website, www.dowcorning.com or consult your local Dow Corning representative.

Your Global Connection

Dow Corning has sales offices, manufacturing sites, as well as science and technology laboratories around the globe. Telephone numbers of locations near you are available on the world wide web at www.dowcorning.com, or by calling one of our primary locations listed below.

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