

SILICONE SOLUTIONS FOR TEXTILE INJECTION



ABOUT TEXTILE INJECTION MOLDING

Injection printing is a type of molding where silicone is filled into a metal mold with any texts, logo and shape in any colors by using high temperature press machine.

It is a perfect printing type to obtain desired height and shape such as sharp or oval edge.



Factors To Pay Attention

- If the air inside the silicone is completely discharged by applying vacuum before molding, the molding quality will increase and no crater will appear on the surface.
- It is important to clean the metal mold before the application in order to avoid contamination, traces and craters on the silicone
- The metal mold must be completely filled with silicone.
- It is necessary to clean the metal mold surface by sliding not to leave any silicone trace on the mold.

WHY HyperTEX® ACTIVE 100?

- **HyperTEX® Active 100** is a silicone elastomer completely produced for injection printing and formulated for maximum printing clarity.
- Unlike PVC and rubber molding, **HyperTEX® Active 100** provides improved physical properties in order to achieve the same clarity.
- The pot life of the **HyperTEX® Active 100** is 48 hours. Therefore, drying does not occur during the application and the silicone can be used for a long time even after mixing.
- **HyperTEX® Active 100** cures fast in the mold and is very easy to release from the mold. There is no need to use a mold release agent.
- Since the adhesion between textile and **HyperTEX® Active 100** is very strong, **HyperTEX® Active 100** maintains its original structure after washing.

Key Performance Features

HyperTEX® Active 100 is a solvent-free, flowable, two component RTV silicone rubber. After mixing the **HyperTEX® Active 100A** and **HyperTEX® Active 100C** at a mix ratio of 10:1 the material will cure by an addition reaction at room temperature. The cure rate can be accelerated significantly by heat.

- Optimum viscosity for this specific application
- Excellent tear and tensile strength
- Excellent adhesion
- High durability for washing and ironing
- Fast curing time (can be accelerated by adding HyperTEX® Cure 1002)
- PVC & Rubber Replacement for better physical properties
- Easy colourability with silicone based pigments

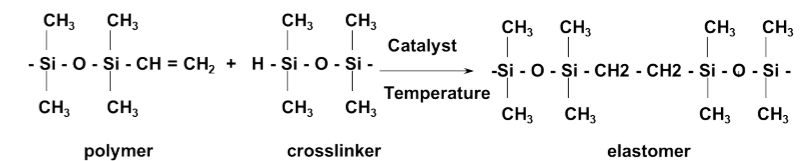


Figure 1: Silicone Cross linking by Addition

Process Set Up	
Vacuum Time	Depends on the vacuum power until the air bubbles disappear
Upper side of molding press	180°C
Bottom side of molding press	50°C-60°C
Molding time*	8-15 sec

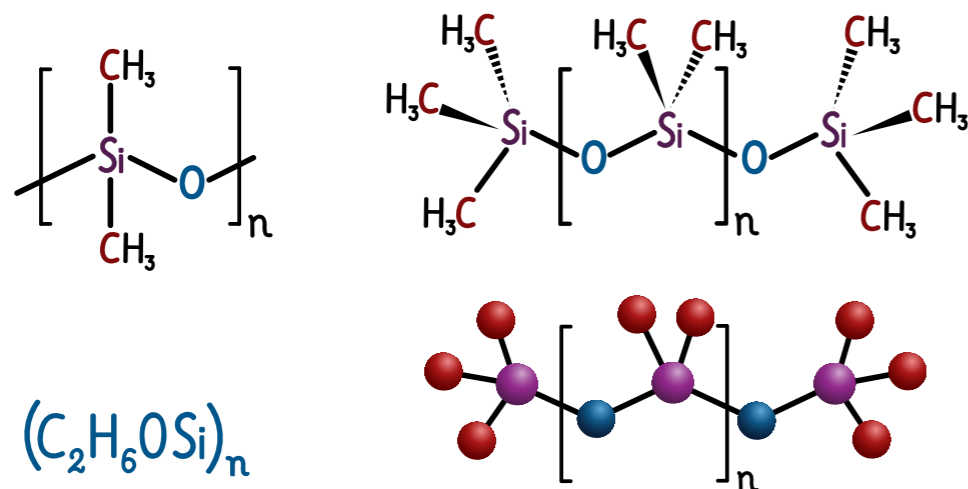
*Molding time depends on the temperature and design

Better Solutions for a Better World



Comparing to PVC and other plastic based products, silicone has Si-O bond in its structure, and the following parameters make the silicone special,

- Heat resistance
- Chemical stability
- Electrical insulation
- Abrasion resistance
- Weatherability as well as ozone resistance



Plastics such as PVC have many additives and plasticizers, which give plastics flexibility, softness and other physical properties. For example, PVC contains phthalate plasticizers such as DEHP (Di-Ethylhexyl Phthalate), DINP (Di-Isononyl Phthalate), and they make plasticizers soft and used to provide softness. Phthalate plasticizers may cause health problems when in direct contact with the body.

Besides all, silicon has no harm to human health. Thus, silicone is used in medicine and foodstuffs. In addition, the high bonding energy of silicon with oxygen (Si-O) provides stability against degradation by UV radiation.

About Latro

Latro has developed a high-quality service at formulating and supplying sustainable chemical raw materials and solutions. Our comprehensive solutions are served in an extensive spectrum of sectors, such as Textile, Cosmetics, Agriculture, RTV silicones, and many Industrial applications.

Latro offers technical support, new product development, and sufficient solution suggestions for pre and after-sales. The key factors that separate us from most of the other chemical companies are our chemistry know-how, technical logistics, client-oriented solutions, specialty products, product development studies, and attention we pay on nature via sustainability. With these assets, we set our target higher not only providing the products but also eliminating the problems our customers can encounter.

To fulfill our commitment better we established "Wonderlab", a laboratory specialized in research and product development. This facility allows us to develop new formulation solutions as well as product characterizations. Wonderlab is also a laboratory where our customers can experiment with the products and formulations with us. Latro aims to invest further into research by supporting young researchers, acquiring new equipment, and providing laboratory experience to customers.

Latro offers a wide range of innovative and sustainable solutions for textile injection molding with silicone elastomer. We are supporting our customers by creating tailor-made formulations and making various performance tests in our application laboratory in order to support the marketing claims. Our main goal is to create value-added and cost-effective products by following the market trends.

Latro

UNIQUE CHEMICAL SOLUTIONS

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