

Processing

RAPID CURING AGENT and CURING AGENT A

Mixing with Curing Agent

Silcoset base must be mixed thoroughly with a Silcoset curing agent to produce a uniformly cured product. Mixing can be carried out mechanically or by hand, but care should be taken to avoid trapping air in the mixture, since this can cause voids in the cured rubber.

For applications where such voids are undesirable, the mixture should be de-aerated under reduced pressure before use. The time and pressure required for de-aeration depend on the quantity and viscosity of the Silcoset base being used. As a guide, 150g of Silcoset 101 can be de-aerated in 5-10 minutes at a pressure of 5-10mm of mercury. Containers should be only two-thirds full to prevent spillage during the initial stages of de-aeration.

Curing

With all two pack Silcoset rubbers; the curing process begins, without exotherm, immediately the base and curing agent are mixed together. Depending on the type of curing agent and the amount used, the cure times vary from less than 30 minutes to as long as 24 hours. There is no significant change in the physical properties of the final rubber when the curing agent concentration is varied within the recommended limits. The terms used in the table describe the various stages of cure are defined as follows:

Pot-Life:

The time from the addition of the curing agent until the mixture ceases to flow. It indicates the working life of the material.

Tack-free Time:

The time taken from curing agent addition in which the material loses all surface tack.

Cure Time:

The time from curing agent addition to obtain a rubber of the stated hardness.

Stages of cure	Rapid curing agent		
	0.25%	0.50%	1.00%
Silcoset 105			
Pot life	20 mins	10 mins	5 mins
Tack-free Time	2 hrs	40 mins	10 mins
Cure Time	3 hrs	1 hr	35 mins