

Rapid Curing Agent Catalyst

Description	Property	Test Method	Value
This catalyst may be employed at levels of 0.3 to 1% of the rubber compound as an alternative to CA28. However, as its name implies, the curing time of the rubber to a tack-free state is reduced to a matter of a few minutes. Because good adhesion is best achieved with slower controlled curing conditions, Rapid Curing Agent should not be employed where good adhesion is important. In addition, because of the very rapid cure and short pot-life, it is inadvisable to use Rapid Curing Agent to cure more than a 200 grams of rubber compound at a time.	Uncured Product		
	Appearance		Liquid
Key Features	Color B		Pale yellow
	Cure Type		Condensation
Application	De-mould Time / Full Cure at 23°C/73°F		0.58 - 3 hrs
	Density B	BS ISO 2781	1.27
Use and Cure Information	Mix Ratio By Weight		0.25:100 to 1:100
	Pot Life mins at 23°C/73°F		5 - 20 mins
Processing information	Tack Free Time / Skin Formation at 23°C/73°F		15 - 120 mins
	Max Storage Temperature		40 °C / 104 °F
For Silcoset 101, 105 and 2 part condensation cure rubbers using Rapid curing agent	Shelf Life		12 mths

Selecting the Silcoset Rubber to Use

The choice of the right Silcoset rubber base will achieve a balance between optimum flow characteristics and the final physical properties when cured.

For maximum surface detail reproduction, a low-viscosity rubber such as Silcoset 105 is recommended. Where superior physical properties are the main requirements, the medium viscosity, general-purpose Silcoset 101 is widely used.

Mixing With Curing Agent

Silcoset base must be mixed thoroughly with a 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 -10 mm 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 tables on page two to 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

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Stages of cure	Rapid Curing Agent		
	0.25%	0.5%	1.0%
Silcoset 101			
Pot Life	20 Mins	10 Mins	5 Mins
Tack Free Time	2 Hrs	45 Mins	15 Mins
Cure Time	3 Hrs	2 Hrs	45 Mins
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

Health & Safety

Please refer to the current safety data sheet which is available on request

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