WACKER SILICONES

Catalyst EP / Inhibitor PT 88

RTV-2 Silicone Rubber

For modifying reactivity

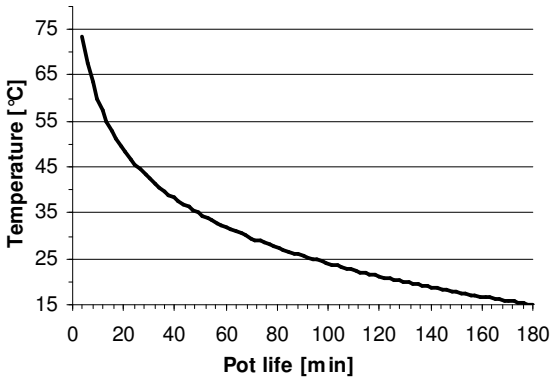
Pot life and curing time

Catalyst EP and Inhibitor PT 88 are added to addition curing silicone rubbers to modify their reactivity, i. e. their pot life and curing behaviour. These properties can be adjusted within wide limits to suit the processing requirements of the particular application.

Pot life means the time required for the viscosity to increase to a predetermined limit.

The **curing time** is the time required for the vulcanizate to reach at least 75 % of its ultimate hardness at the temperature indicated.

The reactivity of addition-crosslinking silicone rubbers is highly dependent on temperature. Increasing the temperature increases the reactivity. Reducing it prolongs the pot life, or curing time (e. g. WACKER SilGel® 612).



Catalyst EP

Catalyst EP increases the reactivity of addition-crosslinking silicone rubbers, i. e. their pot life and curing times are reduced.

Increasing the concentration of catalyst also reduces the risk of inhibition.

In many cases, the addition of 0.2 % Catalyst EP (based on the total weight of the mixture) is sufficient to prevent inhibition.

Transparent compounds may be discolored yellow or brownish by the addition of Catalyst EP.

Inhibitor PT 88

Inhibitor PT 88 is a pot-life extender and reduces the reactivity of addition-curing silicone rubbers.

Compounds with very long pot lives should be cured at elevated temperature to ensure complete vulcanization.

Where the pot life is very long, and the curing temperature consequently high, the high coefficient of thermal expansion of silicones may cause problems.

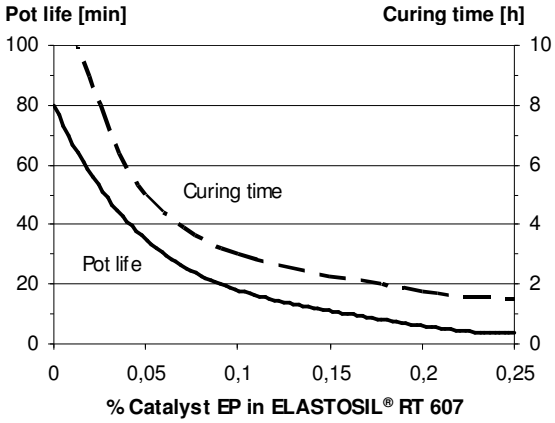
Differential expansion between the uncrosslinked and crosslinked regions can cause high stresses to build up as the material shrinks on cooling.

To avoid brown discoloration, always add Inhibitor PT 88 to the crosslinker or catalysed compound.

The examples below refer to particular products. They are only intended to serve as a guide.

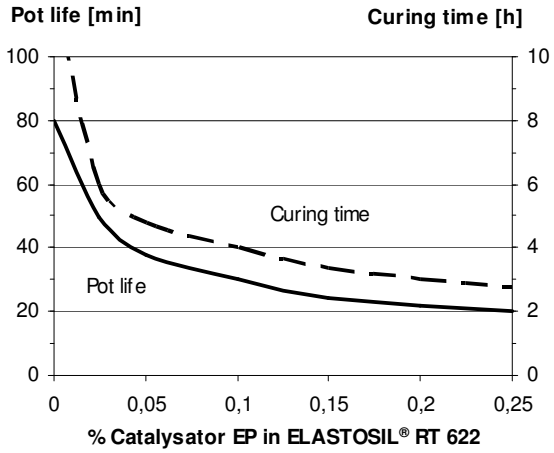
ELASTOSIL® RT 607

The addition of 0.1 % Catalyst EP reduces the pot life from 80 to 21 minutes. Curing at room temperature takes place within approx. 2 hours (instead of 10 hours).

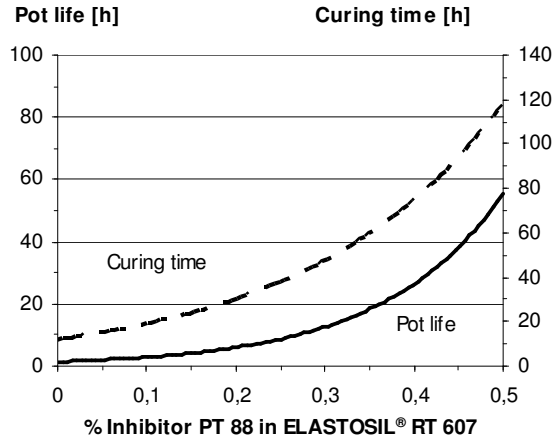


ELASTOSIL® RT 622

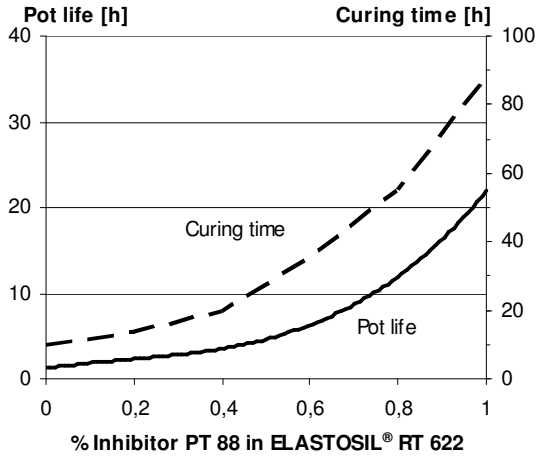
The addition of 0.1 % Catalyst EP reduces the pot life from 60 to 34 minutes. Curing at room temperature takes place within approx. 3 hours (instead of 6 hours).



The addition of 0.2 % Inhibitor PT 88 increases the pot life from 80 minutes to approx. 6 hours.

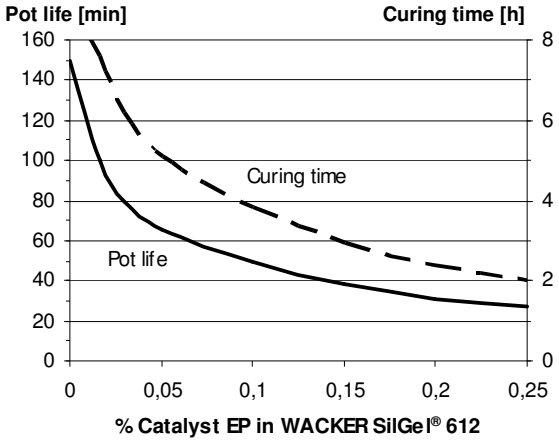


The addition of 0.5 % Inhibitor PT 88 increases the pot life to approx. 5 hours.

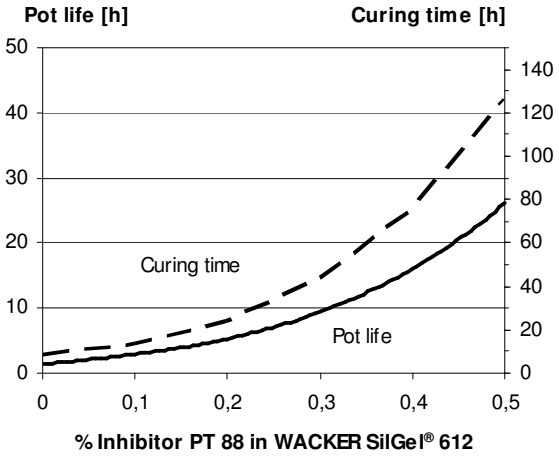


WACKER SilGel® 612

The addition of 0.1 % Catalyst EP reduces the pot life from 151 to 55 minutes. Full curing at room temperature takes place within approx. 4 hours (instead of 6 hours).



The addition of 0.5 % Inhibitor PT 88 increases the pot life to over 24 hours.



Storage

ELASTOSIL® Catalyst EP / Inhibitor PT should be stored between 5 °C and 30 °C in the tightly closed original container. The 'Best use before end' date of each batch appears on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety information

Detailed safety information is contained in each Material Safety Data Sheet, which can be obtained from our sales offices.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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Version 5.00 from 10-06-08 replaces Version 4.00 from 10-04-07

For technical, quality, or product safety questions, please contact:

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