



Schill + Seilacher

Technical Data Sheet

STRUKTOL® PERMALEASE® 90

Instant curing semi-permanent mould release agent on aqueous base for the rubber and plastics processing

Composition

Aqueous emulsion of reactive, crosslinking prepolymers

Properties

Appearance		slightly cloudy emulsion
Density at 20 °C	[kg/m ³]	1000
pH value		6
Physiological behaviour		refer to safety data sheet
Storage stability		at least 9 months at temperatures up to 40 °C. Protect from frost!
Packaging		5 kg cans 25 kg cans 200 kg drums

The data given are typical values which are not intended for use in preparing specifications. For test methods refer to the corresponding supplement.



Schill + Seilacher "Struktol" GmbH
Moorfleeter Str. 28
D-22113 Hamburg

Fon: +49 40 733 62-0
Fax: +49 40 733 62-194
E-Mail: info@struktol.de
Internet: www.struktol.de

Recommendation for application

STRUKTOL PERMALEASE 90 is a semi-permanent mould release agent on aqueous basis. It is free of organic solvents and therefore harmless as far as environmental and health aspects are concerned.

STRUKTOL PERMALEASE 90 forms a solid film on the mould surface and permits a large number of releases without renewal of the film. Mould contamination is reduced to a minimum. Transfer of the film onto the moulded article has not been observed, i.e. adverse effects on adhesion, varnishing or printing are not to be expected.

Thorough cleaning before application of STRUKTOL PERMALEASE 90 is essential for the adhesion of the coating to the mould and the number of cycles one can obtain. The cleaning of the mould prior to the application of the release agent can be done either in a conventional, mechanical way or more efficiently by using specially designed mould cleaning compounds (e.g. STRUKTOL MC-A or MC-B). A semi-permanent release agent applied to a dirty mould will give only a much smaller number of proper releases than a coating applied to a clean mould under otherwise identical conditions.

STRUKTOL PERMALEASE 90 is applied directly onto the hot mould after thorough cleaning. This is important to start the film building polymerisation reaction but especially for water based release agents it is also important to evaporate the solvent immediately to prevent corrosion of the mould. Minimum application temperature for STRUKTOL PERMALEASE 90 is 110°C. Before moulding the applied coating must be heated to 140°C. If STRUKTOL PERMALEASE 90 is applied at 130°C or above no pre-cure is necessary and moulding can commence immediately.

STRUKTOL PERMALEASE 90 can be applied by brushing, dipping or spraying but spraying is by far the most popular method as it is the easiest and it gives the best results regarding uniform thickness of the coating.

As soon as the coating of STRUKTOL PERMALEASE 90 is abraded by the rubber to a certain point the release properties drop. In most cases the coat can simply be replenished by spraying again.

This replenishment will lead to a build-up of material on parts of the mould that are less abraded by the rubber and eventually this build-up has to be removed in order to produce perfect parts. This again can be done most efficiently by the use of STRUKTOL MC-A or MC-B mould cleaning compounds.

The use of STRUKTOL PERMALEASE 90 in the production of rubber parts can be described as a process with three controlling loops, the moulding loop, the replenishment loop and the reapplication loop. These three loops are visualised in the flow chart of figure 1.

The number of cycles that can be achieved in each loop has to be determined individually for each production setup because they depend heavily on a whole range of factors: the preparation and cleaning of the mould before applying the release agent, the application itself, the abrasiveness, the stickiness and the fouling properties of the compound, the geometry of the mould, the mould material, the injection and curing parameters and others.

In case of prolonged storage emulsions, like STRUKTOL PERMALEASE 90, can show concentration differences due to condensation of water at the top of the drum and to slight creaming. Before application STRUKTOL PERMALEASE 90 should therefore be stirred thoroughly.

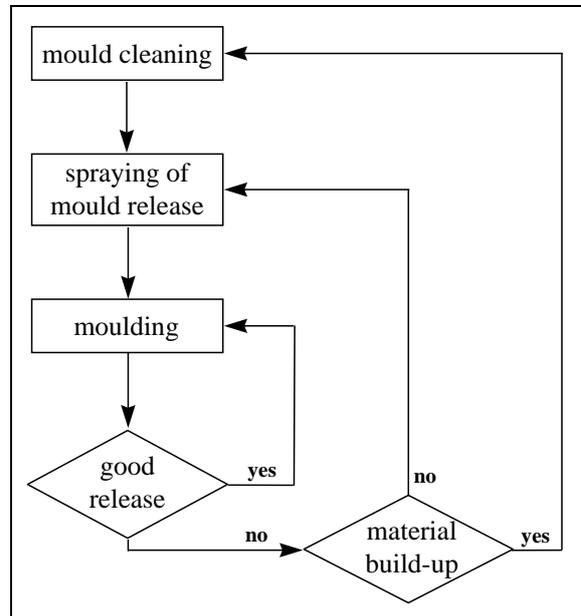


Figure 1 Loops in the use of semi-permanent release agents in rubber moulding

The suggestions for application and usage of our products as well as possible proposed formulations are meant to advise only to the best of our knowledge. This information is without obligation and does not release customers from their own testings to ensure suitability for intended processes and use. Liability is only accepted in case of intention or gross negligence. Liability for any defects caused by minor negligence are not accepted. Each producer is responsible and liable to observe legislation and patent rights of third parties.

This new leaflet replaces all previously printed documentation.

Alterations reserved. 04/2010

Schill + Seilacher "Struktol" GmbH Moorfleeter Straße 28 22113 Hamburg Germany
Phone: +49 40 73362-0 Fax: +49 40 73362-194 E-Mail: info@struktol.de