

Technical Data Sheet

STRUKTOL® PERMALEASE 80

Instantly curing, semi-permanent mould release agent on aqueous basis for 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		5.0
Physiological behaviour		Refer to safety data sheet
Storage stability		Up to 12 months in sealed original containers at temperatures between 5 °C to max. 40 °C. Protect from frost!
Packaging		5 kg plastic cans 25 kg plastic cans 200 kg plastic drums 950 kg containers



Recommendations for Application

STRUKTOL® PERMALEASE 80 is a semi-permanent mould release agent on an aqueous basis. It is free of organic solvents.

STRUKTOL® PERMALEASE 80 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 80 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 80 is applied directly onto the hot mould after thorough cleaning. This is important to evaporate solvent of the water-based formulation and to start a film-building polymerisation reaction. A release coating builds up. The form should be sprayed at minimum temperatures of 100 °C, after that a curing time of approx. 10 minutes is needed. From a temperature of above 150 °C, demoulding can start without prior curing time.

STRUKTOL® PERMALEASE 80 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 80 is abraded by the rubber to a certain point the release properties drop. In most cases, the coat can simply be replenished by spraying (brushing, dipping) 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 80 in the production of rubber parts can be described as a process with three controlling loops, the moulding loop, the replenishment loop and the re-application 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.

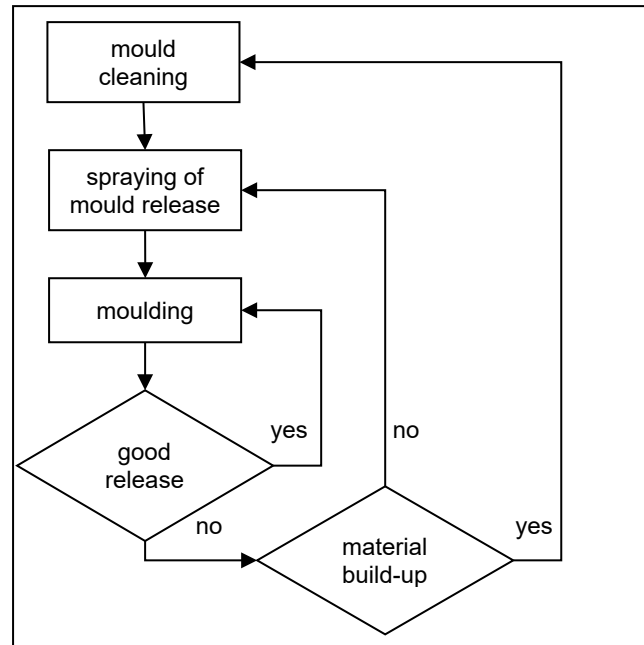


Figure 1: Loops in the use of semi-permanent release agents in rubber moulding

In case of prolonged storage, emulsions such as STRUKTOL® PERMALEASE 80, can show concentration differences due to condensation of water at the top of the drum and slight creaming. Before application, STRUKTOL® PERMALEASE 80 should therefore be stirred thoroughly.



Disclaimer:

This publication is not a specification and does not contain any instruction manual or operating guidelines. It is provided for information purposes only and without any responsibility. Schill + Seilacher "Struktol" makes no representations about the accuracy, reliability or completeness of the information in this publication. We reserve the right to revise our not specified products and the information at any time without notice. The information in this publication is based on the present state of our knowledge and experience and serves the general description of our products and their possible applications. Our technical advice and recommendations, whether verbal, in writing or by way of trials, do not absolve the recipient, on account of the many outside influences which may affect the product use and application, from their own testing and trials. A legally binding assurance based on the information contained herein regarding particular properties or the suitability for definite customer applications cannot be derived from our information.

In accordance with the provisions of our General Terms and Conditions of Sale and Delivery, which can be accessed under www.struktol.de, Schill+Seilacher "Struktol" excludes liability for slightly negligent breaches of obligations arising from the use of the information contained in this publication, provided that they do not relate to damage from injury to life, limb or health or guarantees or claims under the Product Liability Act are affected. Furthermore, the liability for the breach of obligations, the fulfilment of which is essential for the proper execution of the contract and on the observance of which the customer may regularly rely, remains unaffected. The same applies to breaches of duty by our agents.

This technical datasheet is created automatically and is valid without signature.

