Schill + Seilacher

Technical Data Sheet

STRUKTOL® PERMALEASE® 20

Semi-permanent mould release agent, solvent based, for the rubber and plastics processing

Composition

Reactive prepolymers dissolved in hydrocarbons (contains **no** fluorochlorohydrocarbons)
Propellant of the spray form: Propane/Butane

Properties		liquid version	spray version
Appearance		colourless liquid	
Density (20 °C)	[kg/m^3]	790	670
Flash point	[°C]	approx. 30	< 0

Physiological behaviour	refer to safety data sheet	
Storage stability	at least 1 year if stored cool in closed containers	
Packing	5 l metal cans (= 3.85 kg) 200 l metal drums (=150 kg)	400 ml spray cans (=268 g) (boxes of 12 cans each)

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

TÜV NORD DIN EN ISO 9001

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Recommendation for application

STRUKTOL PERMALEASE 20 is a semi-permanent mould release agent on solvent basis. It 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 20 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 20 is applied directly onto the hot mould after thorough cleaning. This is important to start the film building polymerisation reaction. After application the STRUKTOL PERMALEASE 20 coating must be precured for 10 minutes at a minimum of 160°C before moulding can begin.

STRUKTOL PERMALEASE 20 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 20 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 20 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 on the next page.

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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.

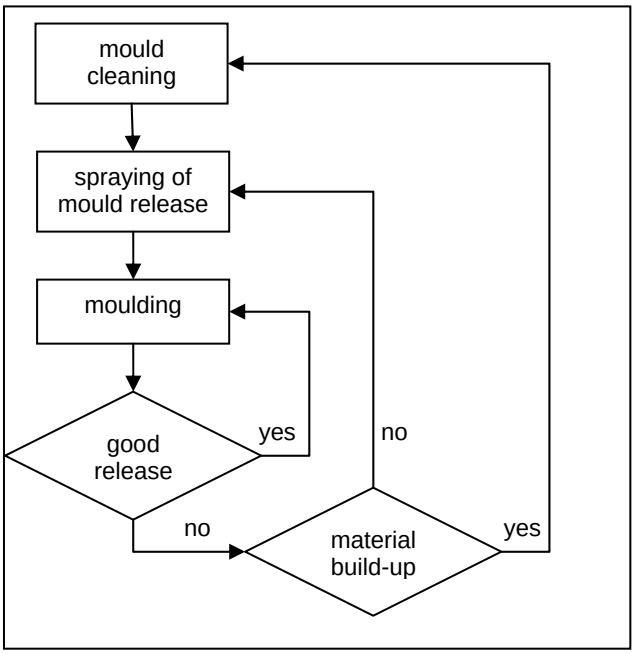

Figure 1 **Loops in the use of semi-permanent Release agents in rubber**

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