

## PTFE solid lubricant

### KONTAKT CHEMIE Kontakflon 85

#### Description:

Dry oil-, grease- and silicone-free PTFE-based lubricant and release agent

#### General properties and applications:

KONTAKT CHEMIE Kontakflon 85 is a completely dry lubricant. The lubricating solid particles consist of PTFE (polytetrafluoroethylene). Compared with simple PTFE powder sprays, KONTAKT CHEMIE Kontakflon 85 contains a binder who bonds the PTFE particles firmly to the surface. This binder, together with the PTFE particles, forms a very thin non-wear film. Binder and PTFE have very good heat resistance. In the given temperature range there are only a very few chemicals (alkali metals and hot, concentrated sulphuric acid) which attack the lubricant film. From this viewpoint, KONTAKT CHEMIE Kontakflon 85 differs from so-called gliding coatings, of which the thermal and chemical resistance is determined by the properties of the used resin.

KONTAKT CHEMIE Kontakflon 85 can be used in the vicinity of or on sensitive materials: textiles, paper, cardboard, wood. It can be used at extremely low temperatures (e.g. liquid nitrogen). It can also be used on sensitive plastics and in presence of aggressive chemicals. When very thin, non-contaminating lubricating films are required, e.g. for the lubrication of the ejector pins in plastic injection moulds. PTFE has a very low static/gliding friction ratio; it is very effective therefore at inhibiting back gliding.

KONTAKT CHEMIE Kontakflon 85 is used as a temperature-resistant mould release agent in plastics and elastomer processing.

#### Technical data

Properties in condition as-supplied		
<b>Aerosol</b>		
Density at 20°C	FEA 605	0,59 g/cm <sup>3</sup>
Flash point	ASTM D 56	< 0°C
<b>Bulk (concentrate)</b>		
Density at 20°C	ASTM D 891	0,89 g/cm <sup>3</sup>
Flash point	ASTM D 56	11°C
Typical thinning ratio	1 part Kontakflon 85 / 20 parts Thinner	
Thinner	KONTAKT CHEMIE Thinner for Kontakflon 85, KONTAKT CHEMIE Cleaner 601	

<b>Properties after evaporation of the solvent</b>		
Working temperature range		-195°C to +260°C
Density	ASTM D 891	2,16 g/cm <sup>3</sup>
Hardness	Needle penetration as per ASTM D 1321-57 T 400 g, 5 s	0,5 mm
Average particle size		5 µm
Drying time at 20°C		15 min

### **Application instructions:**

KONTAKT CHEMIE Kontakflon 85 is most easily applied using the aerosol can. For fairly large scale operations one can use the concentrate. When relatively large surfaces have to be coated with very uniform lubricating films, KONTAKT CHEMIE Cleaner 601 is recommended as a thinner. For smaller components, KONTAKT CHEMIE Thinner for Kontakflon 85 can be used. This thinner can be used to employ dipping baths. The solid active substance settles to the bottom relatively quickly in the aerosol, concentrate and dilutions. Therefore the storage container needs to be shaken and/or stirred at regular intervals.

Before the product is applied, the surfaces must be clean and grease-free. Metal surfaces can be degreased, e.g., using KONTAKT CHEMIE Degreaser 65.

The solutions of KONTAKT CHEMIE Kontakflon 85 are moisture-sensitive. During storage, containers must always be properly closed and sealed. Diluted solutions are to be prepared only in amounts capable of being consumed in a day. Installations and equipment used must be suitable for the handling of flammable liquids.

Freshly coated surfaces "feel" relatively flat. If optimum gliding properties are to be guaranteed immediately, the lubricating film should be polished with a cloth or swab after 15 to 30 minutes drying time.

The load bearing capacity of PTFE is relatively small compared with other solid lubricants. When high surface pressures are involved, therefore, other solid lubricants are to be preferred (e.g. graphite or MoS<sub>2</sub>).

KONTAKT CHEMIE Kontakflon 85 is a release agent who prevents the sticking of coatings, plastics moulding compounds and adhesives. In contrast to silicones, however, it is non-volatile and non-penetrating. When components are moved into areas where coatings or adhesives are being applied, there is no danger of wetting problems on adjacent surfaces.

In the given working temperature range, PTFE is a substance of extraordinary chemical stability. No harmful effects are observed when it is absorbed orally or comes into contact with the skin. When handling relatively large quantities, we recommend that a good ventilation should be provided and dust filter masks should be worn. When PTFE combusts, toxic decomposition products are released. A no-smoking rule must also be enforced therefore when using the product. Tobacco products must not be kept close to the working area because deposits of the PTFE may decompose in the tobacco. Ensure there is good ventilation when using the aerosol or the diluents. Further information on safety can be found in the safety datasheet.

**Available :**

Aerosol : 200 ml, 400 ml  
Bulk : 1 l (concentrate)

These values are not intended to be used as specifications. They are based on information we believe reliable. However, it is the user's responsibility to determine the suitability



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