Dr. Tillwich GmbH
Werner Stehr

Antispread E2/30 FE 60

Article No. TE1403

Epilamisation Agent for Metals and Plastics

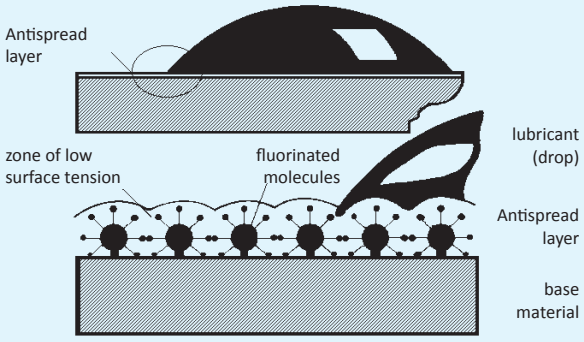
Product Specifications

Technical Information:

Function	the agent polymerizes on the solid surface on evaporation of its solvent
Film Thickness	approx. 0.07 µm (E2/30)
Active Ingredient	fluorinated polymer (solid) with a repelling effect on allknown lubricants (reduced efficiency with fluorinated lubes)
Solvent	**Partially fluorinated ether (FE 60)**; (contains no chlorine, does not contain perfluorinated carbons PFCs)
Thermal Stability (film)	-75 °C to +200 °C [-103 °F to +392 °F]
Density	1.5 g/cm³ at 20 °C [+68 °F]
Color	colorless
Boiling Range	30 °C to 60 °C [86 °F to 140 °F]
Ecology	GWP = 350 (low global warming potential) ODP = 0 (no ozone depleting potential) ALT = 5 years (atmospheric life time)
Inflammability	not inflammable
Toxicology	physiologically harmless, if used properly; details see safety data sheet
Coverage	approx. 85 g/m², depending on method of application and type of parts

Compatibility with Plastics (static tests)

compatible	PE, PP, POM, PBT, PA66, PC*, PPOX*, PMMA, ASA*, ABS*, elastomers (butyl-rubber, natural rubber, EPDM, EPR) *additionally tension crack tests
limited compatible	PTFE, silicone rubber, NBR (during longer exposure)
Efficacy	on all materials, except PTFE

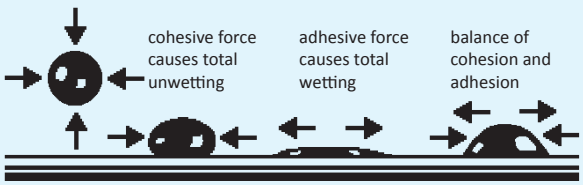


The Antispread coating acts as a network whose fluorine „bristles“ repel the lubricant.

Test of Efficacy:

Apply drop of test fluid of 1 mm diameter ro treated parts. Over 4-hour period, area covered by drop may not become bigger. Contact angle must be between 5° and 45° at room temperature.

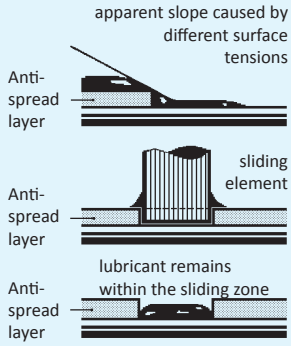
P245c



Antispread reduces the surface tension of the solid as far as silicon oil can´t spread any more.

Lubricant creeps to the untreated area.

Epilam layer is removed by friction.



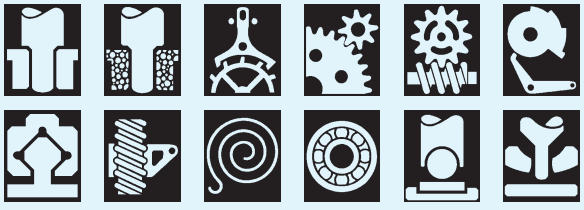
If possible sliding elements should be allowed to work without lubrication for a short time, thus the antispread layer being removed and the lubricant applicated remaining precisely at the point or area of friction.

Directions:

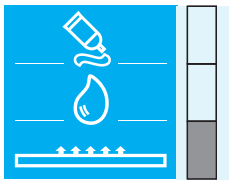
Cleaning	surface contaminants, such as corrosion inhibiting oils, detaching fluids and water must be removed before using Antispread.
Immersing	5-10 seconds at room temperature
Spraying	caution, use only in well ventilated areas.
Brushing	should be done rapidly. Antispread is highly volatile!
Stamping	a circular stamp can be used to build a barrier.
Drying	approx. 10 seconds at room temperature. Warm air speeds the process.

Application:

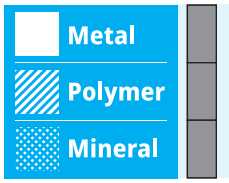
The use of Antispread is recommended for precision and for lifetime lubrication in precision machinery. The use of Antispread ist essential for the silencing effect of high viscous lubricants in quartz clocks with step motors. The use of Antispread is imperative for the lubrication of plastics. For dented wheels, bottom plates, electric contacts, printed circuit boards, ball bearings, sensitive machine tools, counters, printers, open bearings. Using the system bearing/shaft both parts, bearing as well as shaft must be treated with Antispread.



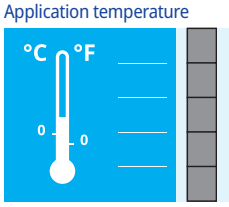
Product



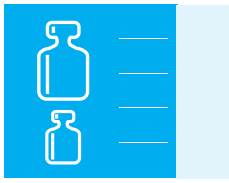
Bearing material



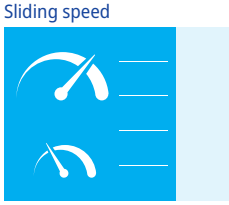
Application temperature



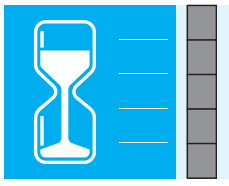
Bearing load



Sliding speed



Durability



Viscosity

Wetting

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