



TECHNICAL INFORMATION

MOEBIUS FIXODROP ES



An Epilame process is a surface treatment which allows decreasing the surface energy avoiding the spreading of a lubricant all over the surface.

Fixodrop ES eradicates undesired spreading for almost all lubricants on many different materials. This is also true for plastics.

Fixodrop ES is a modern, versatile and efficient Epilame developed by MOEBIUS, based on synthetic fluorinated molecules and formulated with a solvent which is compliant with the actual regulation.

- The nanometric film formed by the Epilame is invisible.
- Fixodrop ES is not Toxic neither Flammable
- The Epilame film shows a good resilience to classical cleaning agents and traditional organic solvents.
- The Epilame film may be removed by polishing the surface or using strong alkaline soap.

Fixodrop ES –BS type

This type of Fixodrop is well appropriate for all type of material, notably for Rubis, steel, or other metals.

Fixodrop ES – type K

This type is also well appropriate for any metals and alloys and particularly efficient on polymers.

Champ d'application

Fixodrop procures the highest degree of safety to the micromechanical devices which requires long term durability and reliability.

Since many years, Fixodrop is successfully used in the following domains of activity:

- Cameras, optical objectives
- Mechanical counting devices
- Dashboard devices for planes and cars
- Ball Bearing
- Mechanical and Quartz movements for any size of watches

Fixodrop ES

Deposition process

- All the part in contact with a lubricant should be treated
- Before the Epilame deposition, the surfaces should be clean and dry
- Before lubricating the Ruby of the escapement, the movement should run few minutes

Dipping process:

- Pieces are immersed under stirring during at least 30 seconds in a bath containing the Fixodrop ES.



- Then, pieces are drained by spinning, and immediately dried preferably using warm air at 60°C.

This treatment is necessary, especially in case of high humidity (HR 65%) when the evaporation of the solvent may cause water condensation which might favor esthetic default.

- In order to minimize the solvent evaporation, the Epilame bath has to close immediately after used.
- For huge volume bath, a cooling system to condensate the solvent vapors might be needed to avoid solvent emission into the atmosphere.
- The cleanness of the Epilame bath has to be controlled regularly. In case of appearance of dust or other impurities, the bath should be filtrated.

Spraying process:

- Fixodrop ES may also be sprayed on surfaces using for example an Airspray system.

Technical and environmental data of ready-to- use solution of Fixodrop ES

Active substance	Fluorinated Polyester
Solvent (diluent)	partially fluorinated solvent
Density	1,59 g/cm ³
Boiling point	110°C
Flammable point	non inflammable
Toxicity	non toxique
This product is not detrimental for environment	0 (ODP)
Atmospheric lifetime	< 10 days

Technical data of Fixodrop ES film

Film Thickness	~ 3 - 5 nm
Surface Energy	~ 20 mN/m
Polymer Stability	up to 150°C

Sales program for Fixodrop ES

8980	concentrate ES/BS
8981	Ready-to-use ES/BS-10
8982*	Ready-to-use ES/BS-20

8990	concentrate ES/K
8991	Ready-to-use ES/K-10

*Such ready-to-use solutions are recommended only for production presenting high degree of cleanness and required frequent monitoring of the bath.

Important:

Fixodrop ES can be diluted only using our solvent EcoSolv.