

MECASURF-MT[®]

Anti oil spreading on metals and plastics



Mecasurf-MT is a coating product that prevents oils from spreading on adjacent surfaces with the main following benefits:

- Increase lubrication performances and lifetime
- Decrease noise of friction

Surfactis
Technologies

APPLICATIONS

Essential for plastics and metals, Mecasurf-MT is recommended as a surface treatment before lubrication of micro-mechanisms and precision instruments for which long lifespan and reliability are required:

- Micro-motors: stepper motors, DC motors
- Sensors and measurement instruments
- Ball bearings, open bearings
- Connectors, circuit board
- Actuators
- Printers

KEY FEATURES & BENEFITS

Mecasurf-MT is a surface agent that binds to surfaces as a Self-Assembled-Monolayer and reduces significantly the surface energy of the treated material.

High performance

Effective oleophobic and hydrophobic coating:

- Oil contact angle $>70^\circ$
- Water contact angle $>100^\circ$

Effective on a wide range of materials:

Metals and alloys: stainless steel, aluminum, copper, nickel, gold, silver

Plastics : POM, PET, PBT, plastoferrite, PA, ABS, PU, PMMA, PC

Ceramics : glass, silica, alumina, ruby, sapphire, zircon

Resistant:

To washing cycles (solvents, detergents) with long-term efficiency

To thermal cycles up to 150°C

Easy to Apply:

By dipping, spraying or wiping on clean surfaces

Due to its high evaporation rate, treated surfaces are functional after a short evaporation time (few seconds)

Robust:

Long term efficiency (> 5 years)

Reproducible treatment in various industrial environments

Invisible:

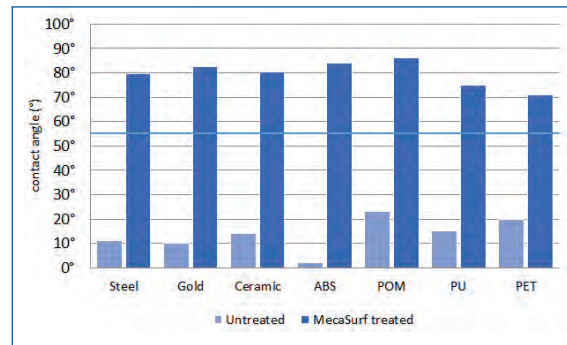
Mecasurf-MT binds to the surface as an ultrathin monolayer with a constant thickness ($<5\text{nm}$), causing no visual modification to the parts. No whitening of the treated parts

Safety:

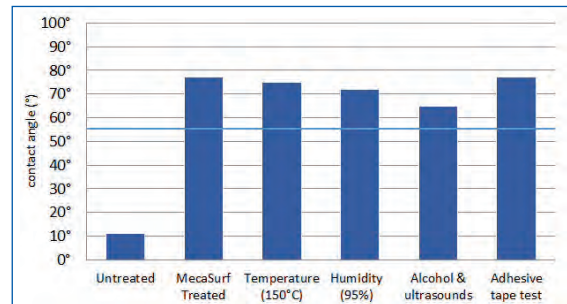
Harmless and Non-Flammable product (see Safety Data Sheet)

EFFICACY

Efficacy is demonstrated by oil contact angle measurements on different materials before and after Mecasurf-MT treatment and after various tests (aging, temperature, chemicals).



Oil Contact angle measurements on different materials before and after Mecasurf-MT treatment. Values above the blue line correspond to oleophobic surfaces (CA=55°).



Oil Contact angle measurements on 316L stainless steel treated by Mecasurf-MT, before and after different tests. Values above the blue line correspond to oleophobic surfaces (CA=55°).

PHYSICO CHEMICAL CHARACTERISTICS

Surface Tension.....13 +/- 2 dyn.cm-1
 Aspect.....Clear Colorless
 Flash Point.....None
 Boiling Point.....76°C
 Freezing Point.....-138°C

Density at 25°C.....1.43
 Ozone Depletion Potential.....0
 Global Warming Potential.....55
 Atmospheric lifetime.....0.77 year

PRODUCT INFORMATION

Mecasurf-MT is a nonflammable product composed of a chemically active perfluoropolyether compound dissolved in a fluorinated solvent.

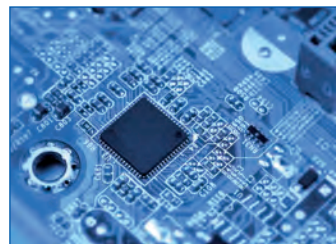
The surface coverage is approximately 80 mL/m² (7.4 mL/ft²).

Mecasurf-MT is available in containers of 1L and 5L.

Mecasurf-MT is patented by Surfactis Technologies (patent n° W02008017721).

Surfactis technologies is certified according to ISO 9001.

Mecasurf-MT is registered in the International Material Data System (IMDS), the automotive industry's material data system.



Surfactis Technologies

nanocoating solutions



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