

# RUST PREVENTATIVES





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Applied in a variety of industries as well as shipping and aerospace industry. Please take a look at our rust preventive oils, dewatering fluids and other specialities.

### A RUST PREVENTIVE OILS

Rust preventive oils are used for intermediate storage of dry work pieces during and after production. Besides a rapid application speed and a reliable corrosion protection they offer further advantages:

· barium-free · VOC-free\* · easily removed with our FEROCLEAN product series

PRODUCT	FLASH POINT	VISCOSITY / 40°C	TYP. FILM WEIGHT	FILM TYPE	POURPOINT	ALTERNATING CLIMATE
ISOTECT OM 606 is a low viscosity rust preventive oil for intermediate conservation in a medium corrosion potential environment.	> 137°C	~ 6 mm²/s	~ 4.0 g/m²	oily	<-10°C	> 25 cycles
ISOTECT OM 614 is a medium viscosity rust preventive oil for intermediate conservation in higher corrosion potential environment.	> 140°C	~ 14 mm²/s	~ 7.0 g/m²	oily	< -20°C	> 50 cycles
ISOTECT OM 625 is a medium viscosity rust preventive oil for intermediate conservation in medium corrosion potential environment.	> 180°C	~ 25 mm²/s	~ 6.9 g/m²	oily	<-15°C	> 25 cycles



#### SOLVENT-BASED RUST PREVENTIVES

Solvent-based rust preventives form thin rust preventive films with the consistency depending on the inhibitor type. Due to the evaporating solvent the film normally appears much drier than with rust preventive oils. The evaporation speed correlates with the solvent flash point. Further advantages are:  $\cdot$  reliable rust prevention  $\cdot$  fast drying  $\cdot$  easily removed with our FEROCLEAN product series

PRODUCT	FLASH POINT	VISCOSITY / 20°C	TYP. FILM WEIGHT	FILM TYPE	VOC- CONTENT*	ALTERNATING CLIMATE
ISOTECT 377 leaves a vaseline-like rust preventive film that offers a long lasting transport protection.	> 42 °C	~ 5 mm²/s	~ 6.5 g/m²	vaseline- like	68 %	> 100 cycles
ISOTECT OS 306 is a solvent-based rust preventive, which leaves a thin oily film on the work piece.	> 68°C	~ 3 mm²/s	~ 0.7 g/m²	oily	78%	> 25 cycles

<sup>\*</sup>according 1999/13/EC

Dewatering Fluids offer a reliable rust prevention that is built following the evaporation of the solvent. Protection films are available in both an oily and a slightly waxy type. The different solvent carrier flash points offer the possibility to select the Dewatering Fluid to suit the working environment. Dewatering Fluids can be successfully used on emulsion wetted components and work pieces.

PRODUCT	FLASH POINT	VISCOSITY / 20°C	TYP. FILM WEIGHT	FILM TYPE	VOC- CONTENT*	ALTERNATING CLIMATE
ISOTECT WSD 212 is a fast evaporating Dewatering Fluid that leaves a slightly waxy film.	>46°C	~ 3.2 mm²/s	~ 3.7 g/m²	waxy	73%	> 100 cycles
ISOTECT OSD 213 is a fast evaporating Dewatering Fluid that leaves an oily film.	> 48°C	~ 4.3 mm²/s	~ 4.8 g/m²	oily	65%	> 100 cycles
ISOTECT WSD 310 is a medium evaporating speed Dewatering Fluid that leaves a slightly waxy film.	>62°C	~ 3.9 mm²/s	~ 3.2 g/m²	waxy	73%	> 75 cycles
ISOTECT OSD 311 is a medium evaporating speed Dewatering Fluid that leaves an oily film.	>64°C	~ 5.1 mm²/s	~ 3.5 g/m²	oily	65%	> 75 cycles
ISOTECT WSD 408 is a VOC-free* Dewatering Fluid conforming to 1999/13/EC that leaves a slightly waxy film.	>84°C	~ 6.8 mm²/s	~ 3.0 g/m²	waxy	0%	> 25 cycles
ISOTECT OSD 409 is a VOC-free* Dewatering Fluid conforming to 1999/13/EC that leaves an oily film.	>86°C	~ 7.9 mm²/s	~ 3.2 g/m²	oily	0%	> 50 cycles

<sup>\*</sup>according 1999/13/EC

Importantly PETROFER Dewatering Fluids are  $\cdot$  barium-free  $\cdot$  fast drying  $\cdot$  available without VOC\* (1999/13/EC)  $\cdot$  easily removed with our FEROCLEAN product series



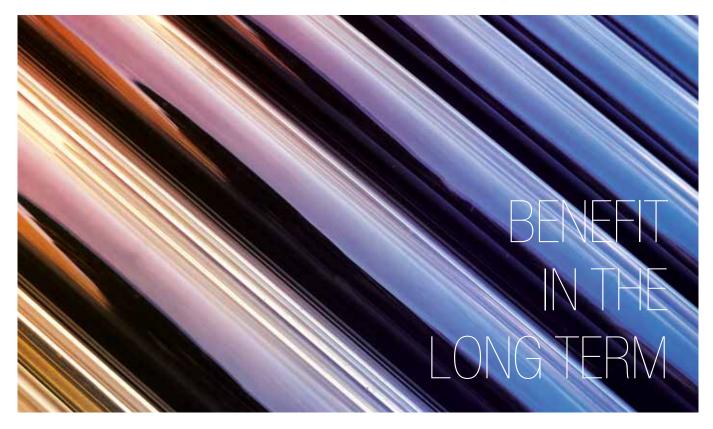


### WATER-DILUTABLE CONCENTRATES

Due to their water content, water-dilutable rust preventive concentrates offer advantages compared to mineral oil and solvent based rust preventives in the field of operational safety, especially fire protection.

PRODUCT	VISCOSITY / 40°C	PH/20°C/5% IN DI-WATER	APPLICATION TEMPERATURE	APPLICATION CONCENTRATION	FILM TYPE
ISOTECT OW 600	~ 238 mm²/s	~ 8.6	~ 80°C	1-3%	oily
is used to keep the decorative gloss on cast parts made of aluminium or zinc when quenching from casting temperature.					
ISOTECT OW 603	~ 80 mm²/s	~ 9.6	20-80°C	6-20%	oily
is a water-miscible, mineral oil based concentrate, which can be used from room temperature to 80°C, and leaves an oily protection layer.					
ISOTECT WW 604	~ 26 mm²/s	~ 8.9	50-80°C	5-20%	waxy
is a water-miscible, synthetic concentrate. It is used at higher temperatures and leaves a thin waxy film.					

Due to the solubility with water it is important to fully dry the work pieces following application, within an appropriate period of time. This can be achieved by hot application and therefore the drying by residual heat of the work piece or by forced hot air. As town water salts are potentially corrosive, we recommend the use of DI-water or water with low water hardness. Other advantages are: • economical • adjustable concentration depending on the process requirements • free from heavy metals



Water soluble rust preventive additives are added to cleaning baths or coolant emulsions to achieve an improved corrosion protection. Some products may be used as stand-alone processes, e.g. in cooling water systems.

PRODUCT	VISCOSITY / 40°C	PH/20°C/1% IN DI-WATER	APPLICATION CONCENTRATION
AQUAPLUS KSO	~ 65 mm²/s	~ 9.3	1-2%
is a nitrite and mineral oil free concentrate. It is used when the physical properties of water should not be changed significantly. Typical applications are cooling systems, inductive hardening, flame hardening or pressure leak testing.			
AQUAPLUS 22	~ 2.9 mm²/s	~ 9.2	1.5-3%
is a nitrite and mineral oil free concentrate. It is used when the physical properties of water should not be changed significantly. Typical applications are cooling systems, inductive hardening, flame hardening or pressure leak testing.			
ISOADD C 200 is mainly used in cleaning baths. It is primarily used in the rinsing baths to provide a good temporary corrosion protection.	~ 38 mm²/s	~ 9.2	1-5%
ISOADD AC 001	~ 5.5 mm²/s	~ 9.5	0.3-1%
is an additive for water-miscible coolant systems for the simultaneous improvement of alkalinity and rust preventive properties. It is free from secondary amines and nitrite agents.			

The rust preventing properties mainly work in fluid application systems, and not for storage. The remaining film is very thin and easily removed by water. We are glad to help you to find the right additive for your application.

