



## HODT MULTI FILM

Product information is a not binding planning aid.

Issued 07.2017

### 1. Product Type

HODT MULTI FILM is a watery based "Hybrid" System, which contains a physically drying water dispersion as well as a water-soluble, oxidatively hardening binder. With this combination the use properties of the two binding bases are shown off to their best advantage. The primary dispersion provides in this system a quick drying and high chemical and mechanical stability.

The water-soluble, chemically hardening binder however gives in this combination a closed film with high gloss and good fullness. The film formation in this system is that the oxidatively hardening binder in the film fills the free volumes of the fused dispersion parts and that thereby a closed diffusion-resistant film is formed after drying and hardening.

### 2. Color

Clear, black

### 3. Application fields

Single or multi-layer one component topcoat for indoor and outdoor use. The product meets the highest demands in terms of chemical and mechanical resistance. The coating provides a hard, abrasion-resistant, elastic varnish with excellent resistance against corrosion, most solvents and oils. It is recommended as a top layer of a paint system in order to increase the mechanical, chemical and UV resistance of a surface.

HODT MULTI FILM can also be used for sealing and hardening of concrete surfaces. For a diffusible weather-resistant impregnation of concrete and plastic plasters a 1:2 dilution with water is recommended.

HODT MULTI FILM is also well-suited as a primer directly on metal. Due to the physical-chemical effects of its components, the corrosion of the metal surfaces is effectively prevented.

HODT MULTI FILM is also suitable for the production of polymer concrete. This polymer concrete consists of dry cement, which is mixed instead of water with HODT MULTI FILM. This cured polymer concrete is characterized by high strength, frost resistance, compressive strength, flexural strength and abrasion consistency. The material is temperature resistant from -40°C to 120°C and resistant to aggressive liquids. Furthermore this building material convinces by corrosion, weathering and aging resistance.

#### 4. Properties

1. HODT MULTI FILM is a watery emulsion with a mild odor, low VOC content and very low toxicity;
2. It is a non-hazardous and environmentally friendlier alternative to solvent-borne topcoats and corrosion preventive with a dry film thickness (dft) > 100 µm ;
3. 1-component-product with excellent adhesion and elasticity, rapid oxidative drying, water resistance and overcoatability;
4. Suitable surfaces:  
organic coatings, non-fatty iron, galvanized steel, aluminum, cement plaster, concrete, plastic, dispersion paint-coatings etc.
5. Economical in application and uncomplicated in handling. In one step a thickness from 50 up to 80 µm can be applied (by spraying and dipping);
6. The dilution with water results in a much stronger reduction of viscosity than synthetic resin with organic solvents;
7. The product meets the highest demands for chemical and mechanical resistance. It adheres to nature- and synthetic rubber, polyethylene, PVC;  
  
Moreover the water based clear varnish meets strict environmental requirements.  
  
High elasticity of the coating ensures that no cracks or chipping will appear during expansion or contraction of the carrier metal;
8. HODT MULTI FILM - as an oxidatively drying coating – has to absorb oxygen for curing, such as alkyd products. It is not enough that the water of the emulsion evaporates and a film is formed (so-called initial drying), an additional drying time for the absorption of oxygen has to be considered, in order to obtain a fully resilient coating. This drying time depends on temperature. By forced drying at a temperature of 50 – 60 °C the drying time can be shortened to 2 -3 hours. On the other hand at a normal temperature of about 20°C a drying time of 24 hours has to be expected before applying on the MULTI FILM coating additional layers of HODT MULTI FILM or other paints.  
  
Although HODT MULTI FILM is very resistant to most solvents, i.e. it can be applied as a primer for other coatings, a resistance test should be carried out on a small area before such an application.

**Apply HODT MULTI FILM only on degreased surface!**

## 5. Technical Data

Dynamic viscosity (10 1/s; 23°C)DIN EN ISO 3219	10000 mPa. sek
Flashpoint (liquid):.....	not applicable
Solid content (weight ):.....	34-36
Specific weight:.....	1,02 g/cm <sup>3</sup>
Temperature range °C):.....	-40 to +120 (+150° short)
Touch dry (at 20° C and 25 µm film thickness):.....	2 hours
Cure time (at 20° C in hours):.....	24
Solvent resistance:.....	excellent
Moisture resistance:.....	excellent
Thinner:.....	water
Available as aerosol :.....	no
Color:	Clear/black
Salt spray test DIN EN ISO 9227.....	Duration 480 h

## 6. Storage

At temperatures up to 25 °C the original packed goods are storable for at least 1 year.  
Water containing ace resins may freeze or become inhomogeneous at temperatures below 0 °C. This will not damage the product, but the necessary regeneration requires a longer heat treatment at 40 - 50 °C with stirring.  
Therefore HODT Multi Film should be suitably stored frost-free.

## 7. Packaging

Tin: .... 1 Liter  
Pail: ... 20 Liter

## 8. Surface Preparation

Slightly rusted ferrous-metals:  
Remove loose particles with a wire brush and clean the surface carefully with an organic solvent. On steel surfaces, which for esthetic reasons are blasted metallically bright, in order to be then coated with the clear varnish HODT MULTI FILM, a very thin layer HODT MULTI FILM should be applied first (for example with a sponge) before the coating is applied in normal wet film thickness of 70-80 µm to protect the active, blasted Fe material against the action of ammonia (dispersion-stabilizer). The thin HODT MULTI FILM coating can be oversprayed at normal temperature after 1 hour. In order to guarantee the necessary corrosion resistance of the clear coat outdoors, the dry film thickness of the coating should be > 100 µm.

### Overcoatings :

Prior to overcoat a test paint is recommended. If after 25 minutes exposure of the topcoat no reaction with the HODT MULTI FILM-coating occurs, the coating can be continued.

### Old coatings :

Remove loose paint - and rust particles with a wire brush and sand surface.  
Remove grinding dust and clean surface carefully with a solvent.

	<p><u>Galvanized iron:</u> Clean the surface by means of ammonia wetting agent. After cleaning wash the treated surface thoroughly with water. Ammonia wetting agents are available in hardware stores or can be prepared as follows: 0,5 liter 25% ammonia water (sal ammoniac) to 10 liter tap water, add 1 tablespoon detergent and stir. Apply to the zinc surface, leave 15 minutes and rinse with plenty of water.</p> <p><u>Non-ferrous metals:</u> Usually such surfaces must be degreased only. When aluminum surfaces are to retain an aesthetic, shiny, metallic and corrosion resistant effect, we recommend abrasive blasting with coconut shell pellets(simultaneous polishing of the surface) or the use of sand paper. The surfaces should not be cleaned with wire brush.</p>
<b>9. Application</b>	<p>When applying HODT MULTI FILM with brush, roller, dipping or spraying always spread dry on dry (after approx. 2 hours) in order to achieve a thickness of approx. 120 - 160 µm. For spraying HODT MULTI FILM can be diluted with water - if necessary. However after diluting several layers have to be applied in order to achieve the desired optimal layer thickness.</p>
<b>10.General notes</b>	<p>Always read the label and product information before use.</p>

All information in this document reflects our current state of knowledge and is intended to inform about our products and possible applications.

It does not, therefore, act as a guarantee of specific properties of the product described or of their suitability for a particular application.

Any existing industrial property rights must be taken into consideration.

Modification of the data according to technological progress under reserve.

The quality of our products is warranted under the terms of our general business conditions.