

## Technical Bulletin

### CMR-413.W Antigrffiti Clear Coat

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Version:

V-2020-002

#### 1. Characteristic:

**CMR-413.W is a water based clear coat (2-component), its basic is polyurethane.**

It is to be cross-linked by CMR-613.W (2:1).

#### 2. Applications:

**CMR-413.W** provides a very high brilliance, abundance and high brightness. A problem-free processing and a high standing power in very good levelling are characteristics of this product. Due to its extremely high density of crosslinking this product provides a very good resistance against graffiti, different kinds of cleanser and chemicals.

Apart from this the product offers an excellent UV protection.

This clear coat is used in graphics market and also in the field of automotive, machines and apparatus construction, rail vehicles, cranes, diggers etc. to be coated with a high-quality coating and without solvent emissions.

Due to its simple workability and its huge application possibilities, this clear coat provides an economic alternative compared to UV curable coating systems.

In general the application is made by spraying or by screen printing.

#### 3. Typical Data:

Basic:	aqueous polyurethane dispersion
Colour:	yellowish
Crosslinker:	<b>CMR-613.W (2:1)</b>
Potlife:	2 - 3 hours (20 °C)
Solubility:	miscible with deioned water
Wet film:	60 - 80 µ
Dry film:	30 - 40 µ
Spreading rate:	15 - 20 qm/kg
Solids content:	50 - 55 %
Specific gravity/density (20 °C):	1.04 g/cm <sup>3</sup>
pH value:	not applicable
Neutrality:	ammonia
Viscosity - kin. (4 mm DIN flow cup): (T = 20 °C)	> 65 s
Volatiles/VOC:	approx. 10 %
<u>Drying (at 40 µ dry film):</u>	
Air drying at room temperature 20 - 25 °C:	dust-free: approx. 30 min, not tacky: 12 h.
Forced drying at 60 - 80 °C:	dust-free: approx. 30 s

#### 4. Properties:

Transparent  
High-gloss  
Scratch resistance  
Abrasion resistance  
High crepe and chemical resistance  
Excellent antigraffiti properties  
Heat resistant until 80 °C  
Easy-to-clean, polishable  
Excellent UV protection

#### 5. Recommendation for end-use:

Stir bevor using.

The crosslinking process is reached by adding of the hardener.

The crosslinker is adding up to the lacquer in a recommended concentration.

Use a mechanical stirring unit in order to adding up the hardener.

Use propeller mixer with 500 to 2,000 turns per minute, for deaeration.

Stirring only by hand is unsuitable to create a homogen mixture.

Stirring constantly while adding crosslinker slowly.

Stir carefully for at least 5 min at moderate speed in order to avoid air intake.

After stirring do not touch the mixture for 15 min.

After totally dispersed both components and achieved a homogeneous lacquer apply a suitable filter (50 µ).

The processing time of the lacquer depends very strongly on the environment temperature.

It should lie between 18 °C and 30 °C.

Surfaces to be varnished must be cleaned fat free and must be prepared correspondingly.

Perfect application: spraying (spray-viscosity: 15 - 30 s)

For spraying or automatic application further adjustment can be necessary.

In this case a dilution of max. 20% water is possible.

Not suitable for paint-brush application!

The application equipment (coater, rods, cable, pumps, drums) are to be cleaned after use simply with water immediately in order to avoid dried varnishes.

Areas of dried varnishes can be cleaned with isopropyl alcohol (IPA).

Dried varnishes can be removed with suitable polish remover.

**Our recommendation: CMR-914 Special Thinner.**

Don't use nitro thinner!

After around one week the cross-linking process is finished and the surface has reached its definite chemical resistance and physical properties.

Based on different chemical composition of substrates we recommend to make own tests.

## 6. Storage:

The product may be stored at least 6 months if kept in tightly closed container and below 25 °C.  
Protect against cold.  
Don't store and apply the product below +5 °C.

## 7. Safety:

The Material Data Sheet informs on all data relevant to the safety of this product.  
It contains information concerning classification, transport and storage of the product  
and also further information regarding handling, surity and ecology.

## 8. Further Information:

These information reflect our current state of the knowledge and they are intended to inform  
on our products and its application possibilities. They cannot deduce any legally binding  
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