

# RESCRYL TC 310

Two-component clear, low viscosity MMA topcoat for dry production areas



## DESCRIPTION

**Rescryl TC 310** is a clear, low viscosity two-component methyl methacrylate reactive resin which can be used as a fast-curing MMA topcoat, very low yellowing. It's designed for applications primarily to dry production areas in industrial floorings.

## TECHNICAL CHARACTERISTICS

**Rescryl TC 310** is very fast in curing and hardening. The application reduces the downtime and ensures a very quick return to service at the site.

**Rescryl TC 310** has high resistance to light and UV exposure which ensures a long service life.

**Rescryl TC 310** has high chemical resistance and can be used in different types of industries with dry surfaces.

**Rescryl TC 310** is offering high hardness and ensures good scratch and wear resistance to the surface.

**Rescryl TC 310** must have **Rescryl H3** catalyst hardener added before the application.

**Rescryl TC 310** complies with the principles defined in EN 13813 "Screeds and materials for screeds - Materials for screeds - Properties and requirements" which is the European Standard that specifies the requirements for screed material used in the construction of internal floors.

## WHERE TO USE

**Rescryl TC 310** can be used as a standard topcoat within our **Rescryl** range of products and is ideal for dry areas on industrial floorings in:

- Parking areas and garages.
- Workshops and mechanized warehouses.
- Food and beverage industries e.g., bakeries, poultries, dairies, slaughterhouses, breweries.
- Industrial kitchens, canteens, and cafes.
- Seafood and fish farming industry.
- Shops, showrooms, and public areas.
- Production areas in chemical and pharmaceutical industry.
- Industrial floorings in general.

## RECOMMENDATIONS

- Do not apply **Rescryl TC 310** with systems on damp substrates or on substrates with capillary rising damp (please contact MAPEI Technical Services).
- Do not dilute **Rescryl TC 310** with solvent or water.

- Do not apply **Rescryn TC 310** on dusty or crumbling substrates.
- Do not apply **Rescryn TC 310** on substrates with oil or grease stains or stains in general.
- Apply **Rescryn TC 310** on substrates after mechanically preparing them according to the recommendations below.
- Do not expose the mixed product to sources of heat.
- If rooms where the product is being applied need to be warmed up, do not use a gas or oil heater; the carbon dioxide and water vapour given off into the room will affect the shine and finish of the floor. Use only electric heaters with warm air blower systems which are placed in an external area.
- Remove aggressive chemicals as soon as possible after they come into contact with **Rescryn TC 310**.
- Use suitable specific cleaning equipment and detergent to clean the product, depending on the type of dirt or stain to be removed.
- Protect the product from water until the product is fully cured.
- Do not apply the product directly on substrates with a moisture content of more than 4% and/or with capillary rising damp (check by testing it with a sheet of polythene).
- The temperature of the substrate must be at least 3°C above the dew-point temperature.
- MMA resins are flammable liquids in their uncured state, which means that smoking, open flames or sparks should not be allowed during the application.
- Always store and transport resin and hardener separately.
- Follow the national health and safety guidelines for air quality at the location and it is recommended to ensure effective ventilation to minimize vapor collection in the surroundings.
- Protect or remove all types of food or unpacked goods in the area to avoid potential risk of contamination since the application of MMA will lead to a characteristic odour and smell at the site.
- Take notice on the recommended consumptions: a too high consumption of **Rescryn TC 310** may tend to flake and yellow, on the contrary a too low consumption may lead to insufficient hardness or lower water resistance.
- Tyre marks may appear on the surface due to the thermoplastic properties of MMA resins. These marks can easily be removed with suitable cleaning agents. It is, in general, advisable that fork-lift trucks are driven preferably with white tyres.
- Do not use **Rescryn TC 310** on very elastic coatings to avoid hairline cracks since the topcoat has high hardness.

## APPLICATION PROCEDURE

### Preparation of the substrate

The surface of concrete floors must be dry, clean, and sound and have no crumbling or detached areas. The compressive strength of the concrete used for the substrate must be at least 25 N/mm<sup>2</sup> and the pull off strength must be at least 1.5 N/mm<sup>2</sup>. It must always be suitable for its intended use and the types of loads to which the floor will be subjected to. The level of moisture in the substrate must be a maximum of 4% and there must be no capillary rising damp (check by testing it with a sheet of polythene). The surface of the substrate must be mechanically prepared with suitable equipment (e.g., shot-blasting or grinding with a diamond disk), to remove all traces of dirt, cement laitance, paint, oil, form-release compounds, and any other undesired material from the surface. Do also remove crumbling or detached areas in the floor to make the surface slightly rough and absorbent. Before applying any material, remove all dust from the surface with an industrial vacuum cleaner.

To repair deteriorated areas and joints, fill large hollows and to create or slightly modify the slope in confined areas, use **Rescryn Mortar**.

Please contact our Technical Department for support if needed.

### Preparation and mixing of the product

**Rescryn TC 310** must be carefully stirred prior to use to achieve a uniform distribution of the paraffin contained in the product.

Prepare approximately 5 kg to 10 kg batches of **Rescryn TC 310** and thoroughly mix them together with catalyst hardener **Rescryn H3** in accordance with the guidelines below. Use a low-speed, explosion proof drill, equipped with a helical spinner and use a clean metal pail at the mixing station. Pay attention that the

required amount of **Rescryl H3** to be added in percent of the weight of **Rescryl TC 310**, depends on the temperature.

Never dose the **Rescryl H3** below or above the recommended amounts indicated, as this will adversely affect the curing process.

At application temperatures below the minimum temperature in the table below, please consult your local technical service for advice.

Temperature	Hardener dosage	Pot-life	Hardening time for light traffic
+30°C	1% b.w.	Approx. 8 min.	Approx. 15 min.
+20°C	2% b.w.	Approx. 15 min.	Approx. 30 min.
+10°C	3% b.w.	Approx. 15 min.	Approx. 30 min.
0°C	4% b.w.	Approx. 17 min.	Approx. 40 min.
-5°C	5% b.w.	Approx. 25 min.	Approx. 60 min.

To convert in volume the quantity in grams of hardener use the following calculation:  
quantity in grams x 1.57 = volume in millilitres.

Only mix the amounts which can be applied within the pot life, at the application temperature.  
Before the application of any subsequent coat, the previous layer must have completed its curing.

### Application of the product

**Rescryl TC 310** should be used immediately after **Rescryl H3** has been stirred in the resin.

**Rescryl TC 310** is a multi-purpose topcoat mainly used for the following applications:

#### Topcoat for self-levelling MMA systems (**Rescryl M 210**)

After curing of the previous product, apply at least two layers of **Rescryl TC 310**. Pour the product onto the floor in stripes (do not apply directly out of the mixing pails) and distribute onto the coating with a short-pile paint roller. If **Mapefloor Flakes** coloured chips are used in the self-levelling layer to be covered, it is normally recommended to apply at least 3 layers of topcoat, and gently grind the surface before application.

#### Topcoat for broadcast systems with coloured quartz sands or MMA mortar screeds (**Rescryl M 200** or **Rescryl M 295**)

After curing of the previous product, remove any possible excess of quartz sand and apply at least two layers of **Rescryl TC 310**. Pour the topcoat onto the floor in stripes (do not apply directly out of the mixing pails) and distribute on to the coating with a short-pile paint roller. On textured coatings the topcoat can be spread with a rubber squeegee before rolling with a short pile roller.

For further details and methods of application of the above-mentioned products, please refer to the relative Products Data Sheets.

## CONSUMPTION

**Rescryl TC 310 (+ Rescryl H3)** ~ 0.4 – 0.5 kg/m<sup>2</sup>

Do not apply less than 0.4 kg/m<sup>2</sup> per layer.

If the consumption is more than 0.8 kg/m<sup>2</sup> the resin tends to flake and yellow.

The consumption rates mentioned above are theoretical values only and are influenced by the actual conditions of the surfaces to be coated, such as absorbency and roughness, ambient conditions, type of site, etc.

## CLEANING TOOLS

Tools and equipment must be cleaned immediately after use with acetone, thinner or other cleaning agents suited for MMA. Hardened product may only be removed mechanically.

## PACKAGING

20 kg cans.  
190 kg drums.

## STORAGE

9 months if stored in a cool, dry place in original packaging. The optimal storage temperature is +15°C and +20°C.

**Always store and transport resin and hardener separately.**

Keep out of direct sunlight.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website [www.mapei.com](http://www.mapei.com)

PRODUCT FOR PROFESSIONAL USE.

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Colour:	clear, dark purple
Appearance:	thin liquid
Density:	~ 1.0 g/cm <sup>3</sup>
Viscosity at +20°C:	60-180 mPa·s
Flash point (DIN 51755):	+10°C

### APPLICATION DATA

Mixing ratio:	see application procedure
Pot life / Working time at +20°C:	approx. 15 minutes (2% b.w. dosage <b>Rescryl H3</b> )
Application temperature range:	from +5°C to +35°C
Curing time at +20°C:	approx. 30 minutes set to light foot traffic

### FINAL PERFORMANCE

Essential characteristics	Test methods	Requirements according to EN 13813 for synthetic resin-based screeds	Typical values
Wear resistance:	EN 13892-4	< AR1	≤ AR0.5
Bond strength:	EN 13892-8:2004	> 1.5 N/mm <sup>2</sup>	≥ 1.5 N/mm <sup>2</sup>

Impact resistance:	EN 6272-1	> IR4	≥ IR4
Reaction to fire:	EN 13501-1	declared value	E <sub>FL</sub>

## WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website

[www.mapei.com](http://www.mapei.com)

## LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website [www.mapei.com](http://www.mapei.com).

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