

GEHOPON-EW10

2C-EP Hydro Topcoat for mineral wall and ceiling surfaces and steel structures

■ FIELDS OF APPLICATION

Durable, chemical resistant coatings for concrete, asbestos cement, plaster and, together with suitable primer coatings, for steel surfaces in warehouses, basements, industrial and food plants, conventional and nuclear power plants, nuclear installations, road tunnels and more.

Besides two-pack coatings it is possible to overcoat a multitude one-pack coatings with GEHOPON-EW10. Existing coating systems are improved by this measure.

As with all epoxy resin coatings, GEHOPON-EW10 will show chalking and discolouring when exposed to natural weathering and is therefore preferentially used indoor.

On steel parts and hot-dip galvanised steel parts a protective primer coating respectively a tie coat has to be applied under GEHOPON-EW10.

■ PRODUCT PROPERTIES

GEHOPON-EW10 is a two-pack, coloured coating material based on water-borne epoxy resin. Therefore the material is low in odour, non-flammable and not explosive and can excellently be decontaminated after curing.

Capacities

Cured layers of GEHOPON-EW10 are resistant against abrasion, petrol and oils as well as to a large extent resistant against chemicals.

Test certificates

Test report of the Research Centre Jülich on the decontamination capacity to DIN 25415, Part 1, Result: "good"

■ TECHNICAL DATA

GEHOPON-EW10

Curing agent

Product number

EW10-S.... (depending on colour)

EZ-40

Standard colour

EW10-S1013 pearl white RAL 1013
EW10-S7032 pebble grey RAL 7032
Other colours available on request

Degree of gloss

Satin glossy

Mixing ratio

5 parts by weight

1 part by weight

Shelf life

At least 12 months in original cans at normal temperature.
Store cool but frost-free.

Suitable thinner

Water (at least drinking water quality)

Theoretical parameters

GEHOPON-EW10, EW10-S1013

Density (g/mL)	Solid content (weight %)	VOC-content (weight %)	per 10 µm DFT* (g/m²)	Solid content by volume (%)	(mL/kg)
1.3	58	3.5	1.0	45.5	350
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
50	109	0.143		7.0	

Remarks

- All values are relevant for the mixture in case of two-pack materials
- DFT: Dry film thickness
- All values named are approximate values and relevant for the quality (colour).
The values may differ slightly for other colours.
- * baseline for calculation: consumption in g/m² at DFT 10 µm

**Notes referring to
Directive 2004/42/EC
„Decopaint-Directive“**

Subcategory as referred to in Annex IIA	VOC limit values (Phase II from 2010)	Max. VOC content of the product in its ready for use condition (including the max. amount of diluents as given in "Application methods")
J ("Two-pack reactive performance coatings") Type WB	140 g/l	< 140 g/l

■ **INSTRUCTIONS
FOR APPLICATION**

Substrate

Mineral substrates

Concrete, asbestos cement, plaster, if necessary with filling.

Surface preparation

The substrate must be clean, mineral substrates must have hardened. Brittle or sanding layers (e.g. cement slurry) have to be removed. Extremely absorbent surfaces must be primed with GEHOPON-EW10 thinned with 5 to 15 % water.

Before application on old coatings, dirt, grease, oil and similar contaminants have to be removed thoroughly. To achieve even and nonporous surfaces on fairfaced concrete or plaster, it is often necessary to fill it first. The filler layers must have hardened and be clean.

Steel surfaces (example):

Coating systems

Substrate	Steel	
Surface preparation	Blast-cleaning in preparation grade Sa 2 ½ in accordance with EN ISO 12944-4	
	Product	NDFT (µm)
Primer coating	GEHOPON-EW18-Metallgrund	80
Top coating	GEHOPON-EW10	80 in 2 working operations

Processing conditions

**Air and Surface
Temperature**

At least 10 °C

Optimal results can be achieved at 15 to 25 °C

Relative humidity Max. 80 % relative humidity.

Do not apply under conditions close to the dew point.

The surface temperature of the parts to be coated must be at least 3 °C above the dew point of the surrounding air throughout the application.
(see basic specification for corrosion protection EN ISO 12944-7)

Caution:

In insufficiently ventilated rooms, the relative humidity is increased by the evaporation of water from GEHOPON-EW10. In such cases, supplementary ventilation and maybe heating is necessary otherwise streaks or differences in the degree of gloss can occur.

Comments on processing

Mixing GEHOPON-EW10 is mixed with the attached quantity of the curing agent using a mechanical mixer, until a homogeneous mixture is produced. Then pour into another container and wait for approx. 10 minutes (pre-reaction time). After repeated stirring the material is ready for use.

An addition of water in order to adjust viscosity can be done during the second stirring process.

The application of the mixture from all containers should be done after the same pre-reaction time if possible. Larger differences in the pre-reaction time can result in small colour differences of the sealant.

Application methods

Means of application / parameters	recommended nominal dry film thickness per working operation	Addition of demineralised water
Roller coating / brush application	40 to 50 µm	-
In case of roller coating / brush application several working operations can be necessary to obtain a uniform layer thickness and appearance. Among other things this depends on the colour, the processing procedures and equipment, the ambient conditions and the geometry of the parts to be coated.		
Airless spraying Nozzle diameter: 0.33 to 0.38 mm Material pressure: approx. 160 bar	40 to 60 µm	2 to 5 %

Remarks • The values above are related to a temperature of approximately 20 °C and are recommendations respectively rough guides. In practice it may be necessary to make modifications.

Cleaning of equipment With water directly after use. If the coating works go on for a longer time, clean the equipment from time to time with water.

Cured material must be removed mechanically.

Pot life At 20 °C max. 1 hour 45 minutes. (Higher temperatures result in shorter pot life)

Caution:

Do not use the material after this period even if the mixture shows no perceptible change. After this period, the reaction capacity of GEHOPON-EW10 is no longer given.

Waiting period between working operations 16 hours

Drying and curing times Related to a temperature of 20 °C and a relative humidity of 60 %:

Ready for over-coating: after 16 hours

Cured: after 7 days

■ SAFETY MEASURES

GEHOPON-EW10 produces an alkaline reaction on skin and mucous membrane (eyes). Soiling must be avoided. In case of direct contact clean thoroughly with water and soap.

When application works are executed under bad ventilating circumstances (closed rooms, mines etc.) it is necessary to provide for good airing in order to remove the water evaporating from GEHOPON-EW10.

The relevant data concerning safety measures can be found in the material safety data sheet of this product.

The valid issue of the material safety data sheet is available from our website www.geholit-wiemer.de.

The statements made here are based on the present state of our knowledge. We do not assume liability for damages resulting from the use of the material or from any advice given by our employees. In this respect, any advice given by our employees has to be seen as not binding. The processor is responsible for the supervision of construction, the maintaining of process guidelines and the observation of the established rules of techniques, even if our employees are present at the time our material is being applied.

This information is subject to modifications due to technical improvements. The latest edition of this information replaces all previous issues.