

Mapecoat VE 810/815 AP System

Chemical– Resistance Novolac Vinyl Ester Laminate system

WHERE TO USE

Mapecoat VE 810/815 AP is a two-component modified Novolac Vinyl Ester polymer resin. This system is designed for areas that require high chemical-resistance such as chemical industries, electronic factories, pulp & paper mills, power plants etc.

SOME APPLICATION EXAMPLES

- Chemical tanks and waste water area of chemical processing and electronic industry;
- Waste disposal pits of power plants;
- Waste water tanks of pulp & paper mills;
- Storage tanks for solvents.

TECHNICAL CHARACTERISTICS

Mapecoat VE 810/815 AP system is glass mat Laminate system.

Mapecoat VE 810/815 AP system can be used for both horizontal and vertical surfaces.

Mapecoat VE 810/815 AP system have high chemical resistant, especially acids and solvents.

Mapecoat VE 810/815 AP system has good mechanical property and heat resistant up to 100°C.

Mapecoat VE 810/815 AP system has crack-bridging of up to 0.2mm static crack is possible.

Mapecoat VE 810 AP and **Mapecoat VE 815 AP** have very fast curing speed.

STANDARD COLOR

RAL7032 and other Grey colours in RAL color card is recommended.

Other color may affect the system chemical resistant performance.

RECOMMENDATIONS

- Because of the fast curing speed, for large application area it is recommended to carry out tests to pre-determine the required mixing ratios.
- Do not apply **Mapecoat VE 810 AP** on substrates which are either damp or porous (consult our Technical Assistance).
- Do not dilute **Mapecoat VE 810 AP** and **Mapecoat VE 815 AP** with solvents or water.
- Do not apply **Mapecoat VE 810 AP** on dusty or friable substrates.
- Do not apply **Mapecoat VE 810 AP** on substrates which have traces of oil, grease and dirt in general.
- During the application, always use protective gloves, goggles and respirators, ensure adequate air ventilation.

APPLICATION PROCEDURE

Jobsite condition

Concrete compressive strength: ≥ 25 MPa

Concrete pull-off strength: ≥ 1.5 MPa

Concrete moisture content: $\leq 4\%$ and with a vapour

Mapecoat VE 810/815 AP System

barrier

Air temperature: 10~30°C

Air humidity: ≤80%

Substrate temperature: ≥10°C and must be at least 3°C above dew point

Preparation of the substrate

Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve a profiled open textured surface.

Any cracks present in the surface must be repaired by using **Eporip**. Deteriorated areas of the concrete must be repaired with either **Mapefloor EP19** or a cementitious mortar from the Mapegrout range or **Mapecoat VE 810 AP** mixed with 0.5mm SiC.

Steel surfaces must be prepared mechanically using abrasive blasting. The level Sa 2 ½ according to ISO EN 12944-4 has to be achieved, and the surface must be clean and not have any oil or rust.

Before applying **Mapecoat VE 810 AP**, any dust present on the substrate must be completely removed.

Mixing

Use low-speed mixer

Mix **Mapecoat VE 810/815 AP** well mechanically. Before use accurately weighing the amount of mixed materials and then pour **Mapecoat VE Hardener AP** into **Mapecoat VE 810/815 AP**, according to the temperature and humidity, add 0%~2% **Mapecoat VE WAX AP**, continuously mixing for 2 minutes until a uniform mix has been achieved.

Application of Primer

Apply **Mapecoat VE 810 AP** by smooth spreader or long hair roller or brush on the prepared substrate.

Application of laminate layer

Before applying the laminate layer, the glass mat should be pre-cut to suitable sizes according the application area and shape. Ensure minimum 5 ~10cm overlapping between the glass mats.

Onto the fully cured primer (**Mapecoat VE 810 AP**), apply **Mapecoat VE 810 AP** by brush, roller or smooth spreader. Place a 1st layer of glass mat (450g/m²) onto the fresh **Mapecoat VE 810 AP** and compact the mat with roller to allow soaking.

Place a 2nd layer of Glass mat in the same way.

Place a surface fleece (30 g/m²) and compact it with laminate roller. Make sure that trapped air is released.

Top coat

Mapecoat VE 815 AP system have two final surface finishes.

Smooth surface:

Apply pre-mixed **Mapecoat VE 815 AP** by a V-toothed serrated trowel or long-haired roller on the cured laminate layer, roll twice and make sure that the roll strokes crisscross over each other to obtain a defect-free surface. Note that, the surface of cured **Mapecoat VE 815 AP** must be sanded before applying next coat.

Non-slip surface:

Apply pre-mixed **Mapecoat VE 815 AP** by long-haired roller on the cured laminate layer, Immediately after application, the fresh surface of **Mapecoat VE 815 AP** sprinkle with 0.5mm SiC (approx. 1 kg/m²) to guarantee perfect bonding of the successive resin dressing

When the **Mapecoat VE 815 AP** has hardened, remove the excess sand with a heavy-duty vacuum cleaner.

Apply the final coat use prepared

Mapecoat VE 815 AP with a smooth spreader or rake and pass over the surface with a long-haired roller, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface.

CONSUMPTION

• Primer

Mapecoat VE 810 AP 0.3~0.5kg/m²

• Laminate Layer

Mapecoat VE 810 AP 2.4kg/m²

Glass mat 450g/m² 1kg/m²

Glass mat 30g/m² 0.03kg/m²

• Top coat

Smooth surface:

Mapecoat VE 815 AP 0.6kg/m²

or

Mapecoat VE 815 AP 0.3kg/m²/layer

Non-slip surface:

First coat:

Mapecoat VE 815 AP 0.3kg/m²

SiC 0.5mm 1kg/m²

Final coat:

Mapecoat VE 815 AP 0.6kg/m²

TECHNICAL DATA (typical values)

PRODUCT DETAILS

	Mapecoat VE810 Resin AP	Mapecoat VE815 Resin AP	Mapecoat VE Hardener AP
Colour:	yellow to brown clear	grey	clear
Appearance:	liquid	liquid	liquid
Density (g/cm ³):	1.10	1.35	1.04
Viscosity at 23°C (mPa•s):	300	1300	-----
Hazard classification	irritant	irritant	dangerous, oxidizing
Shelf life:	6 months in its original, unopened packaging		

APPLICATION DATA at +23°C and 50% R.H.

Mixing ratio:	Mapecoat VE 810 AP Mapecoat VE 815 AP Mapecoat VE 810/815 Resin AP :Mapecoat VE Hardener AP =100:1~3 According to the temperature		
Colour of mix:	yellow to brown clear		grey
Consistency of the mix:	fluid		fluid
Density of mix (kg/m³):	1,10		1.35
Viscosity of the mix (mPa•s):	300		1300
Pot life at 20°C:	~15 min		
Application temperature range:	from +10°C to +30°C		
Waiting time * Before applying Mapecoat VE 810 AP or Mapecoat VE 815 AP on Mapecoat VE 810 AP allow:			
Substrate temperature°C:	30	20	10
Mim:	1h	2h	3h
Max:	1day	2days	3days

FINAL PERFORMANCES

Dust dry at 23°C and 50% R.H.:	2 h		
Step-on time at 23°C and 50%R.H.:	4 h		
Final setting time:	24 h		
Hardness (shore D):	82	GB/T 2411	
Compressive strength (MPa):	70	GB/T 17671	
Pull-off strength (MPa):	>1.5(concrete broken)		JC/T 907
Chemical resistant performance:	According the" chemical resistant guide"		ASTM C581
Heat resistant:	100°C (long time)		

N.B.: the examples described above are for indication purposes only.

The amount of **Mapecoat VE 810 AP** required may vary depending on the ambient temperature.

At low temperatures, the amount required may be less, while at higher temperatures, the amount required may increase.

CLEANING

Tools and equipment used to prepare and Apply **Mapecoat VE 810 AP** and **Mapecoat VE 815 AP** must be cleaned with ethanol immediately after use. Once it has set, the product may only be removed mechanically.

PACKAGING

Mapecoat VE 810 Resin AP = 20 kg;

Mapecoat VE 815 Resin AP = 25 kg;

Mapecoat VE Hardener AP = 4 kg.

Mapecoat VE WAX AP = 4 kg.

STORAGE

The product must be stored in its original packaging in a dry place, and at a temperature of at least +5°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapecoat VE 810 Resin AP and **Mapecoat VE 815 Resin AP** irritates, **Mapecoat VE Hardener AP** is oxidizing if it comes into contact with the eyes or skin may cause burns, serious damage to the eyes and rashes to those who are allergic to such substances. Always use protective gloves and goggles and protect respirators when handling and using the products. Use in well ventilated areas and from away vapours. If they come into contact with the skin or eyes, wash well with water and seek medical attention.

Mapecoat VE 810 AP and **Mapecoat VE 815 AP** dangerous to aquatic life: do not dispose the product to the environment.

PRODUCT FOR PROFESSIONAL USE ONLY.

More information about the safety and health please peruse "material safety data sheet" or contact with Mapei technical service.

WARNING

While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical Applications. Therefore, anybody who undertakes to use this product, must ensure beforehand that it is suitable for the intended Application and, in all cases, the user is to be held responsible for any consequences deriving from its use.

**All relevant references
of the product are available
upon request
www.mapei.com**



BUILDING THE FUTURE

马贝建筑材料（广州）有限公司

Mapei Construction Materials (Guangzhou) Co., Ltd.

工厂：广东从化经济开发区丰盈路6号

Factory: No 6, Fengying Road, Guangdong Conghua Economy Development Zone, China

E-mail: mapei-gz@mapei.com.cn

Website: www.mapei.com.cn

广州联络处：Tel: 020-83653489

Fax: 020-83653481

上海联络处：Tel: 021-62078088

Fax: 021-62077088