

**ONE COMPONENT ACRYLIC  
WATER & SOLVENT BASED**



**THERMOPLASTIC MATERIALS**



**2 COMPONENT  
COLD PLASTIC MATERIALS**





# ROAD MARKINGS

The group of horizontal marking materials includes all road marking materials of every type and color.

These materials are divided in categories, depending on their use, their endurance and their chemical status.

According to EN 1871 the main categories are the following:

- ✓ One component dissolved in esters
- ✓ One component dissolved in water
- ✓ Two component cold plastics
- ✓ Thermoplastics
- ✓ Prefabricated road markings


VERNICOL S.A. produces and applies all above sorts described in the European Norms, according with the requirements of ISO 9001 quality management system.

Above mentioned sorts are cross-tested in order to certify foretype road marking systems by achieving maximum endurance, luminosity, whiteness and night reflection even under rain conditions.




# VERNICRYL RMP 1020 QHS

**one component acrylic road marking material**



High solid one component road marking material, based on high quality acrylic binder in combination with special additional and enhancing materials, enriched with high quality non organic pigments and other aggregates, which offer unique characteristics of elasticity, hardness, whiteness, luminosity, endurance, adherence and antiskid resistance.



Suitable for type I and type II road markings and re-markings on highways, city and provincial roads, pedestrian crossings, airports, etc, where the circumstances demand quick and easy application, in combination with maximum endurance.

Certified by Greek and European bodies, produced according to the requirements of ISO 9001:2008 quality management system.

Tested on turntable according to DIN EN 13197 BAST (Federal Highway Research Institute in Germany) - Certificate nr. D.C. 2009 1DS 03.01).



## PROPERTIES

- ✓ According to EN 1871:2004
- ✓ According to EN 1436 class P6 for road markings type II on turntable (DIN EN 13197) certificate D.C. 2009 IDS 03.0 issued by BAST.
- ✓ Low solvent content
- ✓ Quick drying
- ✓ Elasticity for best fitting on all surfaces
- ✓ Very good restrain of glass beads
- ✓ High endurance in different weather conditions and in high temperatures
- ✓ Very good endurance under gases, oils, salt, special anti freeze chemicals etc
- ✓ Applied with air mix and airless machines

### TECHNICAL DATA

Properties	Acrylic 100% high quality binder
Gravity at 20° C	≈ 1.60 g./ml
Viscosity	≈ 1.500 mPa S {Haake Visk. VT02}75-80 Krebs/unit
Acidity	≈ 8 mg. KOH /g.
Molecular weight	≈ 60.000
Layer thickness	0,3-0,6 mm
Application quantity of wet layer	480 g/m <sup>2</sup> (0,3 mm) for TypeI, 960g/m <sup>2</sup> (0,6mm) for TYPE II
Drying time	25°C ( 400 µm.) = 17 min
Application temperature	5°C - 40°C
Storage	6 months in cool and dry place

### SUGGESTION

For road markings type I

<u>SPRAY</u>	<u>DROP ON</u>	<u>INJECTION</u>
<b>VERNICRYL RMP 1020 QHS</b>	<b>710 - 150 (3GR) SBP3</b>	<b>ECHOSTAR 30 SBP SRT</b>
<b>960 gr/m<sup>2</sup></b>	<b>500 gr/m<sup>2</sup></b>	<b>500 gr/m<sup>2</sup></b>

# VERNICRYL HS/PQ - RMP

## one component acrylic road marking material

High solid road marking material, based on high quality acrylic binder, enriched with high quality inorganic pigments and other aggregates, offering unique whiteness, luminosity, endurance, antiskid resistance and adherence.

Suitable for road markings and re-markings on highways, city and provincial roads, airports, parking areas, etc. For road markings type B2B.

B2B is a system which offers very quick drying without the requisite protection of the wet material with cones.

VERNICRYL HS/PQ - RMP offers great advantages like application speed, saving in transport and mechanical equipment, using less personnel, higher safety for the passing vehicles.

VERNICOL S.A. produces this material according to the requirements of ISO 9001:2008 quality management system.

Certified by Greek and European bodies.

Tested on turntable according to DIN EN 13197 by BASt (Federal Highway Research Institute in Germany) and AETEC (Association for the development of technologies for road equipment S.A.) in Spain.





## PROPERTIES

- ✓ According to EN 1871 :2004
- ✓ According to EN 1436 class P7 for road markings type I and II on turntable (EN 13197)
- ✓ Quick drying
- ✓ Very good restrain of glass beads
- ✓ High endurance in different weather conditions and in high temperatures
- ✓ Very good endurance under gases, oils, salt, special anti freeze chemicals etc.
- ✓ Applied with air mix and airless machines

## SUGGESTION

<u>SPRAY</u>	<u>DROP ON</u>	<u>INJECTION</u>
<b>VERNICRYL HS/PQ - RMP</b>	<b>ECHOSTAR 20 SBP SRT</b>	<b>ECHOSTAR 30 SBP SRT</b>
960 g/m <sup>2</sup>	450 g/m <sup>2</sup>	450 g/m <sup>2</sup>

# VERNICRYL RMP 933

## one component acrylic road marking material

Acrylic based, suitable for road markings and re-markings on asphalt or cement, for roads with average traffic conditions, inside and outside parking areas etc.

It has been designed according to the Greek Norms and Specifications and is mainly used by Greek Governmental Authorities.

Certified by Greek and other European bodies, as well as non European governmental authorities.

Tested on tum table according to DIN EN 13197 by BASt (Federal Highway Research Institute in Germany) and AETEC (association for the development of technologies for road equipment S.A. in Spain).

VERNICRYL RMP 933 has also been successfully tested several times by the Greek Governmental Institute of Public Works (K.E.D.E.), as well as by other Balkan institutes as in Bulgaria, Skopje, Serbia, etc.

Its high quality and its competitive price have nominated it as a typical competitive road marking product.



## PROPERTIES

- ✓ According to EN 1871:2004
- ✓ According to EN 1436 class P5 on turntable (DIN EN 13197), with BASt certificate nr. D.C. 2009 1DS 03.02.
- ✓ Quick drying
- ✓ Very good restrain of glass beads
- ✓ High endurance in different weather conditions and in high temperatures
- ✓ Very good endurance under gases, oils, salt, special anti freeze chemicals etc.
- ✓ Applied with air mix and airless machines
- ✓ Suggested layer thickness (wet): 450 - 500µm
- ✓ Suggested consumption: 720 - 800 gr/m<sup>2</sup>
- ✓ Suggested type of glass beads 710 - 150 (3GR) SBP3 - product of SOVITEC S.A.

### TECHNICAL DATA

Properties	Acrylic
Gravity at 20° C	≈ 1,55 g./ml (± 0,02)
Viscosity	≈ 75-80 Krebs/unit
Acidity	≈ 8 mg. KOH/g.
Layer thickness	0,3-0,6 mm
Application quantity of wet layer	480 g/m <sup>2</sup> (0,3 mm) for Type I, 960g/m <sup>2</sup> (0,6mm) for TYPE II
Drying time	25°C ( 400 µm.) = 17 min
Application temperature	5°C - 40°C
Storage	6 months in cool and dry place

### SUGGESTION

*For road markings type I*

<u>SPRAY</u>	<u>DROP ON</u>
<b>VERNICRYL RMP 933</b>	<b>710 - 150 (3GR) SBP3</b>
<b>500 gr/m<sup>2</sup></b>	<b>500 gr/m<sup>2</sup></b>



## **HIDROCRYL RMP - 65**

Following the global developments in the field of paint production, VERNICOL S.A. turned to the production of Eco - road marking paint **HIDROCRYL RMP - 65**.

This product is widely used and applied by all kinds of road marking machines.

Quick drying and high whiteness water based Eco - road marking paint, free of lead and aromatics.

Recommended for road markings on highways, parking areas, airports. Ideal for fresh asphalts which require immediate, quick drying road markings.

Mainly used for road markings type I. Also to be used for road markings type II, only with special coated glass beads.

Material certified on turntable according to DIN EN 13197, produced according to the requirements of ISO 9001:2008 quality management system, in white, yellow, red, blue. Packed in 30kg containers.



**ECO**



## **DEGAVER 500 / 590**

VERNICOL S.A. produces and applies class DEGA VER 500/590, which constitutes an innovation in the field of road markings.

For road markings type II (rain conditions), keeping their reflection even under rain conditions, providing guidance and high visibility, offering the drivers a secure, effortless and comfortable driving when needed.

These road markings are type II and are based on the creation of relief spots with 2,50-5,00mm thickness. DEGAVER 500/590 is offered for many types of relief road markings like:

- AGGLOMERATE (rain conditions)
- SPOTFLEX (created by company HOFMANN)
- DOTLINE
- PROFILE

All above are applied by special machines.

Agglomerate road markings are popular in Europe and are applied everywhere, because of their many advantages against the other, simple road markings.

These advantages are:

- ✓ High endurance in high traffic conditions
- ✓ The special design on the relief surface in spots or pixels give advantages like abruption of water, high whiteness in angles 45°, high endurance and reflection and an antiskid surface, providing security especially for pedestrians and cyclists.
- ✓ Drivers feel vibration and an acoustic signal when driving over.
- ✓ It can be perfectly composed with other road marking methods, giving the best results.





### **DEGAVER500:**

2 component cold plastic material, which contains two types of special coated glass beads and is mainly applied manually, but also mechanically, in proportion of basic material DEGA VER with hardener CPR- 50 rate 2%.

Ideal for relief road markings and agglomerate road markings with 2,5-5,0mm thickness.



### **DEGAVER500/590:**

3 component cold plastic material, comprised of: a) DEGAVER 500, b) DEGAVER590, c) hardener CPH-50.

DEGAVER 500 and 590 contain special coated glass beads and are applied with a special mixing system in proportion 1:1 of DEGAVER 500 and DEGAVER 590, since DEGAVER 590 has firstly been mixed with 4% CPH-50 hardener.

Ideal for layers of 2,5 - 5,0mm thickness.





# DEGAVER 600 / 690

## three component cold plastic road marking material

VERNICOL S.A. produces and applies in the class of 3 component cold plastic road marking materials DEGAVER 600/690.

It is a 3 component paint which is applied with special airless high pressure spraying machines.

These machines are equipped with specialized mixing systems and compound DEGAVER 600 with DEGAVER 690 in proportion 1:1.

Precondition is the well mixing of DEGAVER 690 with hardener CPH-50 in proportion 100:4.

DEGAVER 600/690 is ideal for road markings with high reflection and high endurance in different weather conditions and in high traffic conditions. It is applied in a thickness of 0,6 - 1,2mm, depending on the pavement.

It is recommended for type I and type II road markings, which keep their reflection even in rain conditions, offering the drivers a secure, effortless and comfortable driving when needed.

Certified according to EN 13197 on turntable. Produced according to EN 1871 and EN 1436 in: white, yellow, red. Packed in 25kg containers.





# DEGAVER 777 LV<sup>®</sup>

## two component cold plastic road marking material

DEGAVER 777LV is produced by VERNICOL S.A., and is a 2 component cold plastic system with low viscosity.

This material is not being mixed with any hardener but is mainly high pressure sprayed, in combination with drop on special reacting glass beads, coated with hardener.

This type of glass beads have been developed by SOYITEC S.A. - cooperator of VERNICOL S.A. - who offers two types of glass beads which are:

TECHNOPERL (600-125 BCP TECNO) coated glass beads for road markings type I and

ECHOSTAR 30 BCP TECNO SRT coated glass beads for road markings type II

DEGAVER 777 LV - an ideal paint for thin layers of 0,4 - 0,7mm thickness, certified according to EN 13197 on turntable.

Produced according to EN 1871 and EN 1436, as well as the requirements of ISO 9001:2008 quality management system, in white, yellow, red and blue.





## DEGAVER 9000 TC

DEGAVER 9000 TC is a unique 2 component cold plastic system designed by VERNICOL S.A.

Mainly used as a final layer for the improvement of mechanical attributes, the increase of whiteness, the endurance and the adhesion of the glass beads, as well as keeping a clean surface from dust and dirt.

This product has been designed by VERNICOL S.A. mainly for the application on pedestrian crossings.

Applied with roller.

Produced according to the requirements of ISO 9001:2008 quality management system, in white, yellow and red. Packed in 5kg containers.





## BICYCLE TRACKS' MATERIALS

*VERNICOL S.A. has designed various applying systems for bicycle tracks, offering a colored lane with high antiskid resistance providing safety to bicyclists, as well as high endurance in different weather conditions and high traffic congestions in cities.*

*The optimum material for this specific application, belongs to the category DEGAVER 400*



### **DEGAVER 400**

*It is a 2 component cold plastic material, applied with spatula, roller or a special 2component spraying machine. Sprinkle of antiskid aggregates follows on the wet surface, giving a relief, antiskid and high endurance surface.*

*Produced in blue, red, yellow and green, according to the European Norms and the requirements of ISO 9001:2008 quality management system.*

VERNICOL S.A. produces and applies a category of thermoplastic paints which is an innovation on road markings.

They are destined for road markings Type II (under rain conditions), meaning road markings which retain their reflectivity even under rain conditions, providing increased direction visibility, resulting mainly to safety and secondly to relaxed and comfortable driving, where other kind of road markings are inferior.

Those specific road markings are based on the creation of relief spots, with a thickness of 3,5 up to 4,5mm, in different forms like:

AGGLOMERATE (under rain conditions)

SPOTFLEX

DOTLINE

SPOTLINE

DROPLINE e.t.c.

VERNICOL S.A. is equipped with a fleet of vehicles, in order to apply this specific road markings and giving her cooperators the most modern results in Europe.



### **Advantages of road markings with Thermoplastic materials:**

- ✓ Resistance to heavy traffic conditions
- ✓ High visibility and skid resistance  
(the structured surface drains water away and has excellent whiteness)
- ✓ Causes audible signal when vehicles pass over  
(because of the thickness)
- ✓ Combines perfectly with other types of road markings, giving the best results.



# VERNITHERM A-500

## Description of the product

VERNITHERM A-500 is an oil and grease resistant, durable, thermoplastic pavement marking material. Maleic modifications to the base resin impart polar characteristics to the thermoplastic system which promote excellent retention of glass spheres over conventional aliphatic C-5 hydrocarbon thermoplastic systems. The cold flow properties of VERNITHERM A-500 impart resistance to freeze thaw cracking. VERNITHERM A-500 has an excellent color, fluidity and heat stability. VERNITHERM A-500 can be applied using special machines with agglomerate systems (DOT line, SPOT line e.t.c.)

## Recommended uses

VERNITHERM A-500 can be used on all bituminous pavement surfaces. Concrete or cementbound surfaces require the application of a primer/sealer prior to striping.

Recommended for countries with tropical climate.

### TECHNICAL CHARACTERISTICS

<b>Colour</b>	White
<b>Layer thickness</b>	2.0 -4.0mm
<b>Softening point</b>	>110°C
<b>Heat stability</b>	b>0,85
<b>Processing temp</b>	200 - 220°C
<b>Flash point</b>	>240°C
<b>Drop-on agent</b>	approx. 350g/m <sup>2</sup> ECHOSTAR TRM to be dropped on the hot, freshly applied line.



## Dosage

An adequate film thickness is obtained by a dosage among 4000 and 8000 g/m<sup>2</sup> of thermoplastic.

## Packaging

Bag of 25 Kg.

## Storage

Approx. 6 months (when protected against UV rays)



## Health and safety

Please refer to the labeling mentioned on the can. In case more information is needed refer to the Material Safety Data Sheet.



# VERNITHERM LV 700

## TECHNICAL DATA SHEET

VERNITHERM LV 700 is a low viscosity thermoplastic material for durable thin layer road warnings. VERNITHERM LV 700 has engineered for spray application by special equipped machines at temperature of 195 - 215°C with superior quality especially for hot climatic countries. The polarity of LV 700 impacts excellent adhesion for asphalt pavement and works perfectly with siliceous materials such as glass beads, quartz, corundum, e.t.c.. For concrete or cement bound surfaces requires the application of special primer by vernicol.



### TECHNICAL CHARACTERISTICS

<b>Colour</b>	White
<b>Layer thickness</b>	1-2 mm
<b>Softening point</b>	> 110°C Dosage: 2000-4000 g/m <sup>2</sup>
<b>Heat stability</b>	b > 0,88
<b>Processing temp</b>	195-215°C
<b>Flash point</b>	> 245°C
<b>Drop-on agent</b>	approx. 400 g/m ECHOSTAR 10 TRM to be dropped on the hot, freshly applied line by low pressure guns.

**Packaging:** Bag of 25 Kg.

#### Storage

Approx. 6 months (when protected against UV rays)

#### Health and safety

Please refer to the labeling mentioned on the can. In case more information is needed refer to the Material Safety Data Sheet.



# VERNITHERM E-600

## TECHNICAL DATA SHEET

### Description of the product

VERNITHERM is an oil and grease resistant, durable, spray thermoplastic pavement marking material. Maleic modifications to the base resin impart polar characteristics to the thermoplastic system which promote excellent retention of glass beads over conventional aliphatic CS hydrocarbon thermoplastic systems. The cold flow properties of VERNITHERM E-600 impact resistance to freeze thaw cracking. E-600 has an excellent color, fluidity and heat stability. E-600 can be applied using special machines for thermoplastic materials equipped with screed box or extrusion screw conveyor and can be applied over existing hydrocarbon and alkyd thermoplastic pavement markings.

### Recommended uses

VERNITHERM E-600 can be used on all bituminous pavement surfaces. Concrete or cementbound surfaces require the application of a primer/sealer prior to striping.



### TECHNICAL CHARACTERISTICS

<b>Colour</b>	White
<b>Layer thickness</b>	2.0 mm
<b>Softening point</b>	>110°C
<b>Heat stability</b>	b>0,85
<b>Processing temp</b>	195 - 205°C
<b>Flash point</b>	>240°C
<b>Drop-on agent</b>	approx. 400 g/m ECHOSTAR 20 TRM to be dropped on the hot, freshly applied line.

### Dosage

An adequate film thickness is obtained by a dosage among 4000 g/m<sup>2</sup>.

### Packaging

Bag of 25 Kg.

### Storage

Approx. 6 months (when protected against UV rays)

### Health and safety

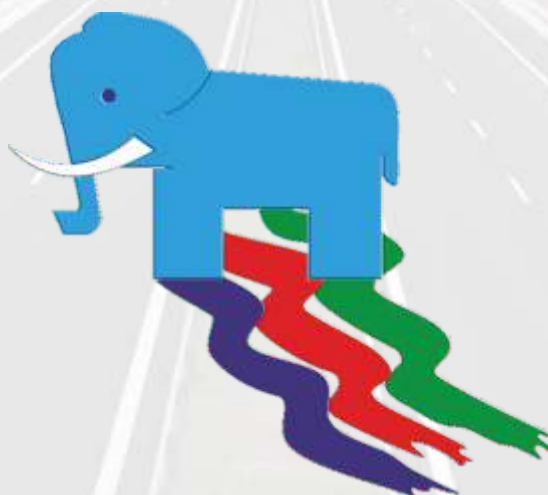
Please refer to the labeling mentioned on the can. In case more information is needed refer to the Material Safety Data Sheet.



# VERNICOL

S.A.

*A world of coatings*



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