SWARCO LIMBURGER LACKFABRIK GmbH

Road Marking Systems

Roller plastic RP 15

TECHNICAL INFORMATION

SWARCO I First in Traffic Solutions.

Roller plastic RP 15

Art.-No.: 579016 white

Special application - bicycle lane markings

Version: 2018-06-18

CONTENTS

1 Main characteristics / Field of application

Roller plastic RP 15…

- belongs to the group of solvent-free, pluri-component, reactive systems
- consists of two components (basic component and hardener) which – through chemical interaction – form a duroplastic compound and cannot be thermally plastified any more
- is formulated with particular elasticity and is used especially for large scale coatings and are strewed by Solid Plus drop on aggregates to get excellent night visibility.
- rolling application make a structured surface with skid resistance properties
- suitable for zebra stripes and similar markings visible at night giving more safety for pedestrians
- is suitable for both bituminous surfaces (e.g. mastic asphalt, asphalt concrete) and for concrete surfaces (primer required)
- application by roller technique
- has been tested and approved as Type I marking at the German Road Institute (BASt)
- tested according to EN 1871, standard colors (x,y), luminance factor (ß), UV-resistance (Δß) and elasticity (Shore D)

2 Technical Data

Color	Traffic white, approx. RAL 9016
Density	approx. 1.92 kg/l
Potlife	5 – 10 min., depends on hardener quantity, air- and material temperature
Solvent content	Solvent-free, don`t add solvent for applying
Solvent for cleaning	Special cleaner for marking machines Art.-No.: 3086
Storage stability	6 months, unmixed in sealed original packaging and sheltered from frost and direct sun exposure
Overrollability/ curing time	Approx. 30 – 40 minutes, depends on climate conditions (temperature, humidity, wind) material, layer thickness and road surface. In general, the markings` overrollablity must be checked before exposing them to traffic impact
Standard packaging	**Roller plastic RP 15:** tin foil container with10/15/25 kg filling weight **Hardener powder:** in PE-bags, filling weight corresponding to mixing ratio and container content **Liquid hardener**: plastic container, 20 kg filling weight Attention: all hardener types are organic peroxides – they must be separately packaged, transported and stored from the coldplastic in special containers (special cartons and boxes)
Identification	The regulations and instructions concerning appropriate transport, handling, storage, first aid measures, toxicology and ecology are stated in our material safety data sheet! The instructions stated on the product label and in the MSDS must be followed.
Processing temperature	min. + 5°C
Surface temperature	+ 5°C to + 45°C
Relative humidity	max. 75% (dew point spreadsheet has to be regarded)
Layer thickness	max. 2 mm
Theoretical consumption	approx. 3.84 kg/m², actual consumption depends on applied thickness and type and state of the surface.

3 Mixing ratios / Application techniques / Hardener

Product	Article-No.	Technique	Type of hardener
Roller plastic RP 15 traffic white Summer formulation Winter formulation	**579016** **579016W**	**Open mixing system** Manual application by roller	Hardener powder, Liquid hardener
Mixing ratio: **reactive component / base component** (Roller plastic RP 15)	:	**Hardener powder** = **100 : 1** **Liquid hardener** = **98 : 2**	
Between October and April Roller plastic RP 15 is delivered in winter formulations, due to weather conditions.			

4 Processing Data

4.1 Preparation of material and application instructions

Prior to application Roller plastic RP 15 must be stirred in its original container until of even consistency. Use only the quantity needed for the next marking job. The hardener powder is then added into the base component at the indicated mixing ratio and again stirred until of even consistency.

Coldplastic products (reactive systems) are solvent-free and must be applied without adding solvent (Optimizing of application properties see 4.2.).

Machines, tools and auxiliaries must be cleaned before the paint cures, using special cleaner for marking machines (Art.-No.: 3086).
It is important that the material must be spread evenly over the entire application.

Theoretical consumption of material is listed in table “Theoretical consumption of material and drop-on material” on our homepage in kg/m².

4.2 Optimizing of application properties of coldplastic

The application properties and reactivity of the material depend upon the temperature of the Coldplastic, air and surface. Proper storage conditions improve application conditions.

For optimizing Application properties, respectively reduction of viscosity, 1-2 % Condenser for coldplastic (Art.-No.: 3044) can be added when temperatures of material, air and surface are low.
Attention: Limit the material mixed with condenser of the needed quantity, otherwise viscosity or settle properties may changing.

5 Surfaces / pretreatment

5.1 General information

The surface must be dry, clean and free from grease, oil, loose gravel & other contaminations. The surface and any existing markings must be checked for their carrying capacity and compatibility with material to be applied. In case of doubt, application and adhesion tests are required. Ideally old markings should be removed with appropriate mechanical procedures.

5.2 Concrete or cement-bound surfaces

The pavement that prevent good bonding, especially on new concrete, as fine mortar layer, concrete slurries, concrete after-treatments as setting retarders, paraffins, impregnations on silicate basis etc. must be appropriately removed (e.g. with high pressure waterjet, fine millcuts or similar). We recommend conducting test applications in case of doubt communicate concerns in writing.

Before applying Roller plastic RP 15 on concrete or cement-bound surfaces they should be pretreated with primers:

a) by spray technique (paint spray machine) with 2-component EP-primer (Art.-No.: 8609000) or
b) manual (roller) with 2-component primer B71 for concrete (Art.-No.: 8010)

It is essential to have sufficient and uniform coverage with primer in order to obtain optimum bonding of the Roller plastic RP 15 and the concrete. Primer consumption may vary depending on the concrete's porosity. The humidity of the concrete must not exceed 4% when applying 2-component B71 concrete primer. Primers based on epoxy resins are suitable for residual damp surfaces.

5.3 Bituminous surfaces

Any loose components such as chippings must be removed. Special agents used in new pavement asphalt (e.g. fluxoils, adherents) are detrimental to good bonding of markings and can cause discoloration. Since these components are hardly removable mechanically, the surface should be exposed to traffic for 4 – 6 weeks.
For avoiding RP15 discoloring a thin layer of 2-comp. K809 (max. 200 µm) are recommended.

5.4 Cobbled pavement

Natural, artificial and compound stone pavements are loose surfaces that move. Basically, these are not suitable surfaces for Roller Plastic RP 15. No guarantee is given in cases of: crack formation, chippings caused by the movement of pavement parts, poor marking bonding (e.g. natural or artificial stones), penetration of moisture, wear of marking. It is assumed that marking bonding is sufficient. In case of doubt test applications are necessary.

Cobbled concrete pavement:
Before application of Roller plastic RP 15 takes place, 2-component primer B71 for concrete (Art.-No.: 8010) must be applied.

Cobbled pavement (natural or artificial stones)
First apply 2-component primer B55 for cobbled pavement (Art.-N.:8011). Secondly apply Pavement mortar (Art.-No.: 5232....) uniformly covering the area, (an even surface is required). The overhang of the Pavement mortar area compared to the Roller plastic RP 15 area should be 2-3 cm. After curing of the Pavement mortar the Roller plastic RP15 can be applied.

The actual consumption of the above-mentioned products depends on the type and state of the cobbled pavement.

5.5 Floor coatings

For markings on floor coatings our indoor marking products should be used.

6 Application techniques

Manually with scraper, trowel and roller. Roller plastic RP 15 mixed to an even consistency with hardener powder can be distributed uniformly with a scraper and adjusted to the required layer of thickness. A uniform, well-shaped surface structure is then created with a lamb's wool roller.

Attention: Due to limited potlife the Roller plastic RP 15 should be applied without any delay. Surface defects may occur if roller application is undertaken too late.

7 RPA - test reports / Euroconsult - results

7.1 Table 1: RPA – test reports by BASt (German Road Institute)

Test report –no.	Layer thick-ness	Consumption		Drop-on material (DOM)	Traffic technological properties	
	mm	Material	DOM	Identification (divergent identification possible - see relevant test report)	New condition	Used condition
		kg/m²	kg/m²			
Type I marking						
2015 1DK 05.13	2.0	3.84	0.50	Swarco Solid Plus 100 212-850 T18 M35	P7, ≥ S1, R5, Q5, T3	P7, S2, R5, Q5

7.2 Table 2: Euroconsult – results according to EN 1871

Report-no.	RAL no.	luminance factor ß	∆ß for UV	Shore D
EXP 2588/18-3574A1	9016	0.86	< 0.05	38