

TECHNICAL INFORMATION

LIMBOROUTE K815 FOR BICYCLE LANE MARKING



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Important Information:

Please consider our General Terms and Conditions and the general notes of the Technical Information Sheet! No liability is accepted for any errors! The information is provided to our best knowledge and experience. This information is, however, no warranty for any properties of the material. We provide this information without obligation, also regarding the rights of third parties. The user has to make sure that the material is appropriate for the respective application.

1 Main characteristics / Fields of application

LIMBOROUTE K815 for bicycle lane marking...

- is a low-solvent, aromatic-free, one-component high solid paint
- is formulated with particular elasticity and is especially suitable for large surface coatings (e.g. bicycle lanes)
- should mainly be applied where bicycle lanes run on street level parallel to the lanes for motorized traffic
- is not suitable for bicycle lane markings at intersections with high volume traffic impact
- is suitable for both bituminous surfaces (e.g. mastic asphalt, asphalt concrete) and concrete surfaces
- is not entirely suitable for concrete cobblestone pavements and is not suitable for natural cobblestone pavements
- is suitable for applications with airless and atomizing techniques

2 Technical Data

Color	traffic red approx. RAL 3020* traffic green approx. RAL 6024* other colors on request *The color coordinates correspond to the DSGS Hinweisen Markierungen von Radverkehrsanlagen edition 2018 and the recommendations of FGSV 330R edition 2021.
Density	approx. 1.55 kg/l +/- 0.04 kg/l depending on color
Solid content	min. 75%
Solvent content	max. 25%
Solvent for cleaning	Special cleaner for marking machines (Art.-No.: 3086)
Storage stability	1 year (unmixed), in sealed original packaging; protect from frost and direct sun light
Curing time / trafficability	Trafficability (curing time) depends on climate (temperature, humidity, wind), material and surface temperature and applied wet film thickness. The marking's trafficability must be checked before exposing it to traffic.
Standard packaging	Tin container of 6/15/40 kg filling weight, barrels of 80 kg filling weight
Drop-on material	To improve skid resistance: approx. 250 g/m ² colored quartz sand in the corresponding shade or colorless glass granulate are dropped onto the wet film.
Identification	The regulations and instructions concerning appropriate transport, handling, storage, first aid measures, toxicology and ecology are stated in detail in our material safety data sheets! The instructions stated on the product label and in the MSDS must be followed.
Processing temperature	min. + 5°C
Surface temperature	+ 5°C - + 45°C
Relative humidity	max. 75% (dew point spreadsheet has to be regarded)
Applied thickness	300 µm – 600 µm
Theoretical consumption	approx. 0.47 – 0.93 kg/m ² The actual consumption depends on the applied layer thickness, the application technique (spray equipment or roller technique) and the type and state of the substrate.

3 Processing Instructions

3.1 Preparation of material and application techniques

LIMBOROUTE K815 for Bicycle lane marking must be homogenously stirred in its original container before processing. The exact machine adjustments depend on the application conditions and the machine type and should be made according to the machine manufacturer's instructions. A uniform material spread of paint and drop-on material over the entire application surface must be observed.

Theoretical consumption of paint and drop-on material is listed:

- in the table "Theoretical consumption of material and drop-on materials" on our website in kg/m² as well as in kg/km of line to be marked depending on typical line width

Machine and equipment have to be cleaned with Thinner for high solid paints (Art. No. 3080) or with Special cleaner for marking machines (Art. No. 3086) before the material has dried completely.

3.2 Optimizing of application properties

The paint is ready for processing upon delivery. In general, it is not necessary to add thinner but for optimizing the material's spray properties approx. 2 % Thinner for high solid paints (Art. No. 3080) can be added. When processing LIMBOROUTE K815 for Bicycle lane marking at temperatures exceeding 25°C it is recommended to add max. 2 % Thinner for high temperatures (Art. No. 3160). Only thinner recommended by the manufacturer must be used.

4 Surfaces / pretreatment

4.1 General information

The surface must be dry, clean and free from grease, oil and loose gravel and other contaminations. The surface and potentially existing old markings must be checked for their carrying capacity and compatibility with the material to be applied. In case of doubt, test applications and bonding tests are required. Drying time of LIMBOROUTE K815 for bicycle lane marking may be prolonged when applied on old markings. Ideally old markings should be removed with appropriate mechanical procedures.

Colored markings' hue intensity can fade after some time of sun exposure, especially UV light, by water, dew, condensed water, and action of heat. This effect is called chalking. Permanent traffic impact can reduce chalking but cannot prevent chalking completely (see also: General notes on Technical Information sheets). If necessary, renew old colored markings.

4.2 Concrete or cement-bound surfaces

The pavement components (fine mortar layer, concrete slurries) that prevent good bonding must be appropriately removed (e.g. with high pressure waterjet, fine millcut or similar). When applying the material on concrete or cement-bound surfaces, the formation of bubbles is likely. In order to prevent bubble formation, the concrete should be pretreated with LIMBOROUTE K815 for Bicycle lane marking, blended 1:1 (primer) with Thinner for high solid paints (Art. No. 3080), consumption approx. 200µm. Once dried, a second, undiluted layer of LIMBOROUTE K815 for Bicycle lane marking can be applied. The humidity of the concrete must not exceed 4 % during application.

4.3 Bituminous surfaces

Any loose components such as chippings must be removed. Special agents used in new pavement asphalts (e.g. flux oils, abherents) are detrimental to good bonding of markings or can cause discoloration. Since these components are hardly removable mechanically, the surface should be exposed to traffic for 4 – 6 weeks. Before application takes place bonding checks are required.

4.4 Cobbled pavement

Natural, artificial and compound stone pavements are non-static surfaces. Basically, they are no suitable surfaces for bicycle lane markings. No guarantee is given in case of crack formation, chippings caused by the movement of pavement parts, poor marking bonding (e.g. on natural or artificial stones), penetration of moisture, wear of marking. It is assumed that marking bonding is sufficient. In case of doubt test markings / bonding checks are necessary.

5 Application procedure

With conventional marking machines (airless or atomizing technique), manually with hand spray gun, brush or roller. The use of colored quartz sand or colorless glass granulate as drop-on material to increase skid resistance is strongly recommended for bicycle lanes with larger colored surfaces.

Attention – when using brush, roller or spray gun (e.g. jobs with stencils) take note of the paint's fast skin forming time.

This skin formation can be delayed by using max. 2% of the Thinner for hot temperatures (Art. No. 3160).

Immediate broadcasting of drop-on material is absolutely essential. Otherwise, the drop-on material will not be embedded properly, leading to poor skid resistance under wet conditions. Two application layers can be an advantage (first paint layer + drop-on material, second paint layer + drop-on material).