

### Product Description

**PlastiRoute® FP** is a paste-like, solvent-free cold plastic material for road marking, which cures by addition of peroxide initiator. It is recommended as permanent marking for very high trafficked roads on asphalt as well as on concrete via primer.

By using our verified fine or coarse drop on beads and/or agglomerate techniques, **PlastiRoute® FP** will yield Type I or Type II markings, as accredited by many certificates, see below.

3 different viscosities are available to match all common application techniques: processing with screed-box, extrusion application as well as regular or stochastic agglomerate techniques.

The available low / medium / high viscosities with our distinct suffixes are:

**PlastiRoute® FP / PlastiRoute® FP Spotflex® / PlastiRoute® FP Spotflex® V3.**

Whereas White as well as Traffic Yellow are available for any viscosity, we offer almost any colour tone for our low viscosity **PlastiRoute® FP**, see below.

Some application machines demand a split into two main components plus peroxide initiator (98:2 → 49:49:2). For such kind of equipment **PlastiRoute® FP** is offered in a 3 component (also known as 1:1) version, too.

Furthermore all our **PlastiRoute® FP-2Component 98:2** versions additionally are offered in special qualities for very hot as well as very cold temperatures with lower, respectively higher reactivities, see below. In case of **FP-3Component** qualities different reactivities are simply achieved by changing the mixing ratio of the two main components, see below.

#### **PlastiRoute® FP-2C / -3C**

is low viscous. It automatically achieves good adhesion to the ground due to its good flow-ability. To be used for full lines and stochastic agglomerates (like rotating bar with pins). It is the perfect choice for hand application, too. Primarily requested qualities are:

<b>PlastiRoute® FP-2C White 10</b>	item no. 493906xx
<b>PlastiRoute® FP-3C White 10 Component A</b>	item no. 494904xx
<b>PlastiRoute® FP-3C White 10 Component B</b>	item no. 495904xx
<b>PlastiRoute® FP-2C Traffic Yellow 1023</b>	item no. 493138xx
<b>PlastiRoute® FP-3C Traffic Yellow 1023 Component A</b>	item no. 494134xx
<b>PlastiRoute® FP-3C Traffic Yellow 1023 Component B</b>	item no. 495134xx

#### **PlastiRoute® FP-2C / -3C Spotflex®**

is quite viscous. Therefore in order to achieve good adhesion to the road it should be centrifuged/thrown or shot onto the ground. To be used for stochastic agglomerates (like rotating bar with pins), regular agglomerates (dot-shooting) and vibration/noise bars. Primarily requested qualities are:

<b>PlastiRoute® FP-2C Spotflex® White 10</b>	item no. 493909xx
<b>PlastiRoute® FP-2C Spotflex® Traffic Yellow 1023</b>	item no. 493139xx

#### **PlastiRoute® FP-2C / -3C Spotflex® V3**

is very viscous. Therefore it needs to be shot onto the road, e.g. by the **SpotLine®** - technique. To be used for regular agglomerates (dot-shooting) and vibration/noise bars. Primarily requested quality is:

<b>PlastiRoute® FP-2C Spotflex® V3 White 10</b>	item no. 493909xx
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### Application

#### Surface Preparation

Before applying, the surface should be dry, clean and free of dust, salt and grease or oil. The surface must be adhesive; old coatings must be checked. New bituminous surfaces should be weathered at least 4 to 8 weeks before final application. Concrete surfaces have to be prepared with

<b>PlastiRoute® THAN Adhesive Primer L 1K (~ 0.1 kg/m²)</b>	item no. 44000099
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#### Application Equipment

All common application equipments for paste-like cold-plastic-material are supported. E.g.: hand or machine application via screed-box, extruding, agglomerates: rotating bar with pins or dot-shooting.

**Application continued**

<i>Surface Temperature 2-C</i>	5 – 15 °C	→ choose <b>WI-Quality</b>	
	15 – 35 °C	→ choose <b>NO-Quality</b>	
	35 – 55 °C	→ choose <b>SO-Quality</b>	
<i>Surface Temperature 3-C</i>	5 – 15 °C	→ Mixing Ratio:	initiated Component A : Component B ≈ <b>15 : 85</b>
	15 – 35 °C	→ Mixing Ratio:	initiated Component A : Component B ≈ <b>50 : 50</b>
	35 – 55 °C	→ Mixing Ratio:	initiated Component A : Component B ≈ <b>70 : 30</b>

*Max. Relative Humidity*      85 % H<sub>rel</sub>

*Film Thickness – Flat Line*      1.5 – 5 mm

*Initiator / Mixing Ratio*      Liquid Peroxide 1.5 – 2.0% wt  
    Powder Peroxide 1.2 – 1.6% wt

*Pot-Life: FP-2C*                      2 parts Peroxide + 98 parts FP-2C  
    → Pot-life at room temperature ≈ 8 minutes – higher temperature reduces pot-life.

*Pot-Life: FP-3C*                      2 parts Peroxide + 49 parts FP-3C Component A → initiated Component A  
    → Pot-life at room temperature ≈ 48 h – higher temperature reduces pot-life.

51 parts initiated Component A + 49 parts FP-3C Component B  
    → Pot-life at room temperature ≈ 8 minutes – higher temperature reduces pot-life.

Note: The chemical reaction starts irreversible as soon as **peroxide** gets in contact with  
**FP-2C**      or      **FP-3C Component B**

*Viscosity / Liquefier*              Due to 3 different available viscosities **PlastiRoute® FP** is ready for processing when delivered. Only for special setups, reactive liquefier may be needed to optimize flow-ability. For this purpose only use our acrylate-based thinner which will constitute a beneficial part of the final cold plastic when cured:

**PlastiRoute® Reactive Liquefier RV 2080**                      item no. 52912719

*Application Process: FP-2C*                      The material must be stirred until homogeneous. FP-2C is mixed directly with ≈ 1.4 % wt powder-, respectively ≈ 1.8 % wt liquid-peroxide initiator. As soon as peroxide initiator is added, the curing process starts immediately. → Pot-life at room temperature ≈ 8 minutes – higher temperature reduces the pot-life. Whenever the application is stopped, the equipment has to be cleaned from the reactive cold spray plastic mixture immediately.

*Application Process: FP-3C*                      The material must be stirred until homogeneous. FP-3C Component A is mixed with 2.8 % wt powder respectively ≈ 3.6 % wt liquid peroxide initiator, first. The storage time of this initiated Component A is limited. → Pot-life at room temperature ≈ 48 hrs. – higher temperature reduces pot life significantly.

As soon as initiated Component A is combined with Component B the curing process starts immediately. → The pot-life for this mixture at room temperature is about 8 minutes – higher temperature reduces pot-life. Whenever the application is stopped, the equipment has to be cleaned from the reactive cold spray plastic mixture immediately.

*Drop On Beads*                      Drop on beads need to be added immediately after applying **PlastiRoute® FP** onto the road. Due to its paste-like consistency especially small beads are a good choice for easy embedding. Please make sure that the beads are embedded into the cold plastic mass to about 50 %, to maximize retro reflection as well as bead-adhesion. To achieve this embedding for higher viscosity qualities like **FP Spottflex®** and **FP Spottflex® V3**, or for big beads we recommend to use an air driven bead dispenser or a centrifugal bead dispensing device. A decisive factor for bead adhesion is the proper bead coating. Therefore only for our own beads we can give a guaranty for a good bead-adhesion.

### Application continued

#### Consumption

All Viscosities / All Qualities – White 10, Traffic Yellow 1023:

1 mm film-thickness = 1 l/m<sup>2</sup> ≈ 1.81 kg/m<sup>2</sup>

Typical consumption for a full line of 1000 m length:

Width	Thickness	Quantity for Full Line	Quantity for Agglomerates; 2.2 [kg/m <sup>2</sup> ]	Quantity for Drop On Beads 0.45 [kg/m <sup>2</sup> ]
12 cm	2 mm	240 l ≈ 430 kg	150 l ≈ 264 kg	54 kg
15 cm	2 mm	300 l ≈ 540 kg	180 l ≈ 330 kg	68 kg

#### Pass-Over-Time

Independent of film thickness and Version: < 20 min at 20°C.

#### Cleaning Of Equipment

Use **PlastiRoute® Cleaning Agent**.

item no. 58819991

#### Application – General

Without the consent of the manufacturer the product may not be used for any other than the intended purpose.

### Technical characteristics

#### Binding Agent

Pure acrylic polymer resin, dissolved in acrylic monomers

#### Dry Residue

All Viscosities / All Qualities / All Colours ≥ 99 %

#### Colour

All Viscosities / All Qualities : White 10 and Traffic Yellow 1023

Our low viscosity **PlastiRoute® FP** material is available in very many colours, e.g.:

<b>PlastiRoute® FP-2C Signal Yellow</b>	<b>1003</b>	item no. 493142xx
<b>PlastiRoute® FP-2C Ochre Yellow</b>	<b>1024</b>	item no. 493182xx
<b>PlastiRoute® FP-2C Traffic Red</b>	<b>3020</b>	item no. 493318xx
<b>PlastiRoute® FP-2C Oxide Red</b>	<b>3009</b>	item no. 493398xx
<b>PlastiRoute® FP-2C Tomato Red</b>	<b>3013</b>	item no. 493338xx
<b>PlastiRoute® FP-2C Traffic Green</b>	<b>6024</b>	item no. 493648xx
<b>PlastiRoute® FP-2C Yellow Green</b>	<b>6018</b>	item no. 493618xx
<b>PlastiRoute® FP-2C Traffic Blue</b>	<b>5017</b>	item no. 493578xx
<b>PlastiRoute® FP-2C Traffic Black</b>	<b>9017</b>	item no. 493873xx
<b>PlastiRoute® FP-2C Traffic Grey A</b>	<b>7042</b>	item no. 493723xx
<b>PlastiRoute® FP-2C Traffic Grey B</b>	<b>7043</b>	item no. 493732xx

#### Density

White 10 and Traffic Yellow 1023 ≈ 1.81 ± 0.05 kg/l

Other colours may have slightly deviating densities, see MSDS for exact density!

#### Viscosity

**PlastiRoute® FP** / **PlastiRoute® FP Spottflex®** / **PlastiRoute® FP Spottflex® V3**  
80 - 100 dPas / 100 - 125 dPas / 130 - 160 dPas

#### Additional information

See MSDS

### Storage

6 months unbroken, under proper storage conditions:

Store in tightly closed original containers in a dry, well-ventilated room at temperatures between +5 °C and +30 °C, not directly on the floor and not in the vicinity of heating radiators.

Please note that the material can show a tendency towards sedimentation during transport and storage. After having been stirred-up homogeneously, the material will be ready for use again.

### Packaging

Metal bucket with 8, 16, 25, 38.8 kg and steel container with 1.350 kg net wt.

### Accreditations

Germany BASt-Certificate	System		Traffic Properties According to EN 1436						
	Description	Type	P	SRT	R <sub>L</sub>	R <sub>Lwet</sub>	Q <sub>b/B</sub>	T	
2004 1DK 08.07	Full Line 2 mm	II	P 7	S 1	R 3	RW 4	Q 5	T 3	
2005 1DK 10.07	Agglo	II	P 7	S 1	R 4	RW 4	Q 5	T 3	
2005 1DK 10.09	Agglo	II	P 7	S 1	R 4	RW 4	Q 5	T 2	
2002 1DK 06.11	Agglo	II	P 7	S 2	R 4	RW 3	Q 4	T 3	
2002 1DK 06.08	Agglo	II	P 7	S 1	R 4	RW 4	Q 5	T 3	
2004 1DK 08.06	Agglo on CSP	II	P 7	S 3	R 5	RW 3	Q 5	T 2	
2004 1DK 08.09	Agglo on HSRoute®	II	P 7	S 2	R 5	RW 3	Q 5	T 3	
2004 1DK 06.10	Agglo on HSRoute®	II	P 7	S 2	R 4	RW 4	Q 5	T 2	
2004 1DK 08.08	HSRoute® on Agglo	II	P 7	S 2	R 4	RW 3	Q 5	T 3	
2005 1VK 10.10	Agglo: Yellow 1023	II	P 7	S 1	R 4	RW 4	Q 3	T 2	
2009 1DK 10.06	Agglo on POX-Outdoor	II	P 7	S 1	R 4	RW 6	Q 5	T 3	
2009 1DK 10.07	Agglo on CSP-InjectLine®	II	P 7	S 1	R 5	RW 6	Q 5	T 3	

Country / Certificate	System Description	Type
Belgium - ATG-Certificate: ATG 08/2753	No Texture Spec	I/II
France - NF-Cert: NF-2 1H1129S3	No Texture Spec	I/II
Czech Republic - SILNIČNÍ VÝVOJ – ZDZ – Certificate: 208/C5/2007/18.1	Full Line	II
Poland – IBDiM – Certificate: AT IBDiM nr. AT/2006-03-2057	No Texture Spec	I/II

### SpotLine® – Technique



The **SpotLine®** application technique has been developed for road marking systems where very high traffic loads occur and increased night-time visibility at wet conditions is required. **SpotLine®** is a regular Type II agglomerate marking, combining **PlastiRoute® FP Spottflex®**, fine drop-on beads and a sophisticated application technique. Using **SpotLine®** a thick layer of structured road marking texture is applied of which some parts of its bead-covered-texture always will stick out of a water/rain film. The strong drainage effect of **SpotLine®** ensures superior retro-reflection at rainy conditions. Please ask our sales staff for the **SpotLine®**- brochure with more information about this technique.

