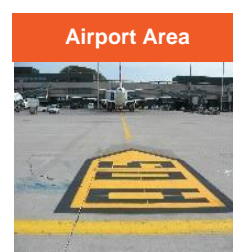
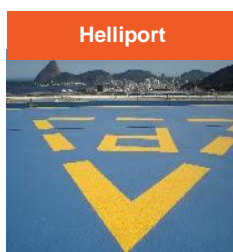
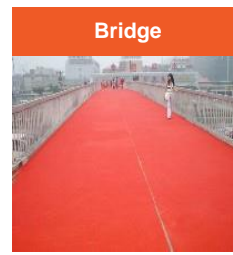
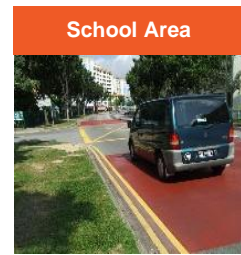
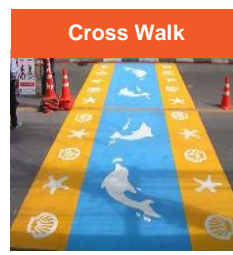


Plexicoat One Coat Anti-Skid and Area Marking Systems



SYSTEMS:

1. PLEXICOAT One Coat Medium Duty areas,

System description, e.g. bicycle, walk ways

- 1.1. Priming (not needed for asphalt substrates, optional for cementitious substrates)
- 1.2. One layer system (cementitious and asphalt substrates)
- 1.3. Two layer system (cementitious and asphalt substrates)

2. PLEXICOAT One Coat Heavy duty areas,

System description, e.g. bus lines, toll gate entry, roundabouts,

- 2.1. Priming (not needed for asphalt substrates, optional for cementitious substrates)
- 2.2. One layer system (cementitious and asphalt substrates)
- 2.3. Two layer system (cementitious and asphalt substrates)

3. PLEXICOAT One Coat High friction areas,

System description, e. g. hazardous locations

- 3.1. Priming (not needed for asphalt substrates, optional for cementitious substrates)
- 3.2. Two layer system (cementitious and asphalt substrates)

SFC / Plexicoat Resin Descriptions

Plexicoat One Coat Flexible product for use on concrete and asphalt substrates

Plexicoat MMA Primer (optional for cementitious substrates)

Plexicoat Area Marking Systems

Priming

PLEXICOAT One Coat Systems **don't need primer at asphalt surface.**

If primer is required (e. g. concrete substrates) apply Plexicoat MMA Primer (for more detailed info see tech. data sheet). Typical primer consumption ranging from 100 to 500 g/m² depending on the absorption of the concrete (puddle formation must be avoided in any case).

1. Plexicoat Medium Duty areas

System description

e.g. bicycle, walk ways,...



1.1. One layer system (cementitious and asphalt substrates)

Mix Plexicoat One Coat with the correct quantity of BPO. Then add app. 10 kg of hard angular aggregate (up to app. 1.5 mm in size) into the 10kg of One Coat.

Mix for one to two minutes, then apply app. 3 kg per square meter (1.5 mm nominal thickness – using up to 1.5 mm aggregate). Pour the mixture onto the substrate and spread with a pin rake set to the maximum grain size of aggregate, rounded up to the nearest mm. Lightly back roll with a medium pile roller to finish.

Please note: Material consumption rates will vary depending on the texture of the substrate (especially on asphalt).

The surface will be more textured (and less consistent) than would typically occur using a two coat broadcast system.

To obtain the best surface finish, please spread using consistent pressure on the rake and ideally, rake in one direction and then again at a 90 degree angle to the original direction.

1.2. Two layer system (cementitious and asphalt substrates)

Mix the required quantity of Plexicoat One Coat with hardener.

Apply at app. 1.0 kg to 1.5 kg per square meter depending on substrate type and texture (asphalt substrates will normally require more Plexicoat One Coat). Pour the mixture onto the substrate and spread with a toothed squeegee or pin rake to a depth of app. 0.6 to 1.0 mm.

Fully broadcast with an angular aggregate of up to 1.5 mm in size (at app. 2.5 kg to 3.0 kg per sqm).

The surplus aggregate has to be removed after the curing and before application of second layer. This material could be used again.

Apply a second coat of Plexicoat One Coat at app. 0.8 kg per sqm using a straight edged rubber or foam squeegee. Lightly back roll with a medium pile roller to finish.

Please note: Material consumption rates will vary depending on the texture of the substrate (especially on asphalt).

2. Plexicoat Heavy duty areas

System description

e.g. bus lines, toll gate entry, roundabouts,



2.1. One layer system (cementitious and asphalt substrates)

Mix Plexicoat One Coat with the correct quantity of hardener. Then add app. 10 kg of hard angular aggregate (up to app. 3.0 mm grain size) into the 10 kg of One Coat.

Mix for one to two minutes, then apply app. 5 kg per square meter (3.0 mm nominal thickness – using up to 3.0 mm aggregate). Pour the mixture onto the substrate and spread with a pin rake set to the maximum grain size of aggregate, rounded up to the nearest mm. Lightly back roll with a medium pile roller to finish.

2.2. Two layer system (cementitious and asphalt substrates)

Mix the required quantity of Plexicoat One Coat with hardener.

Apply at app. 2.0 kg to 3.0 kg per square meter depending on substrate type and texture (asphalt substrates will normally require more One Coat). Pour the mixture onto the substrate and spread with a toothed squeegee or pin rake to a depth of app. 1.5 to 2.0 mm.

Fully broadcast with an angular aggregate of up to 3.0 mm in size (at app. 3.0 kg to 4.0 kg per sqm).

The surplus aggregate has to be removed after the curing and before application of second layer. This material could be used again.

Apply a second coat of Plexicoat One Coat at app. 0.8 kg per sqm, using a straight edged rubber or foam squeegee. Lightly back roll with a medium pile roller to finish.

Please note: Material consumption rates will vary depending on the texture of the substrate (especially on asphalt).

The surface will be more textured (and less consistent) than would typically occur using a two coat broadcast system.

To obtain the best surface finish, please spread using consistent pressure on the rake and ideally, rake in one direction and then again at a 90 degrees angle to the original direction.

3. Plexicoat High friction areas

System description

e. g. hazardous locations,



3.1. Two layer system (cementitious and asphalt substrates)

Mix the required quantity of Plexicoat One Coat with hardener.

Apply at app. 1.5 kg to 2.5 kg sqm depending on substrate type and texture (asphalt substrates will normally require more One Coat). Pour the mixture onto the substrate and spread with a toothed squeegee or pin rake to a depth of approx. 1.0 to 1.5 mm.

Fully broadcast with a high friction angular aggregate (bauxite, corundum, flint, etc.) up to 3.0 mm in size (at approx. 5 to 7 kg per sqm).

The surplus aggregate has to be removed after the curing! This material could be used again.

Apply a second coat of Plexicoat One Coat at app. 0.8 kg per sqm, using a straight edged rubber or foam squeegee. Lightly back roll with a medium pile roller to finish.

Please note: Material consumption rates will vary depending on the texture of the substrate (especially on asphalt).

4. Preparation of Substrate

General

The examination, assessment and preparation of the substrate is **essential** in order to ensure good adhesion of Plexicoat systems. The substrate must be solid, free from loose particles and contamination, dry and free from dust or oil etc.

Dryness of the substrate

Testing of the moisture content is intended to show whether the substrate exceeds the permissible humidity levels. If the test result is satisfactory the substrate is considered suitable for all Plexicoat types, unless other defects are established.

The following values of permissible moisture content should be used as a basis for assessing whether the application of Plexicoat systems is advisable.

Type of Substrate	Permissible moisture content
Armoured concrete substrate	2.0 – 3.0 %
Asphalt	3.0 – 4.0 %
Cementitious substrate, depending on mixing ratio	1.5 – 3.0 %
Porous concrete substrate, cement-bound	2.5 – 3.5 %

Strength of the substrate and surface

The compressive strength of the substrate is best established by means of the concrete testing hammer (Schmidt model). It must not be less than 22.5 N/mm². The shear bond strength must be more than 1.5 N/mm². Testing of the surface hardness is performed by means of scratching using a chisel or nail.

To ensure adequate adhesion to the substrate the following procedures are recommended:

Mechanical preparation at concrete – The use of shot-blasting equipment, diamond grinding, or a vacuum assisted mechanical surface planer are acceptable methods of substrate preparation. Any dust, which occurs in the process, is to be vacuumed off (sand-blasting will remove layers of laitance).

Existing cracks and cavities in the substrate = concrete, cementitious based

Cracks can be highlighted by visual inspection, cavities by tap testing the substrate. Fine crazes and small cavities can be remedied through the application of Plexicoat Crack Sealer. It is worthwhile to establish the cause of any cracks. Shrinkage cracks, stress or elongation cracks and settling cracks usually occur through deficient structural elements or incorrect construction. These defects must be remedied before coating commences.

Surface polluting

The surface to be coated must be completely free from foreign substances which impede or exclude the adhesion of Plexicoat coatings. The following materials are particularly prohibited: silicone resins, oil paints and lacquers, emulsion paints, whitewash, animal, vegetable and mineral oils and fats, waxes and paraffin's, water, existing foreign impregnations, seals or coatings. Testing is performed quite simply by applying several drops of water and observing their ability to penetrate the substrate, or by dripping on hydrochloric acid, which must result in immediate effervescence of the concrete substrate. The safest test method is however to carry out adhesion tests. The cleaning method largely depends on the degree and type of soiling. Degreasing, de-oiling or de-waxing can be performed chemically by means of industrial detergents, emulsifiers and caustic soda (NaOH), but this should be avoided. We recommend cleaning with steam-jet or shot-blasting. Small oil and fat stains can be removed as follows: mix a suitable industrial detergent with water as directed and distribute the mixture uniformly over the surface to be cleaned, using a squeegee. This cleaning fluid is then worked in well using a rotating wire brush or hard pad. It should be left to act for about 10 minutes, after which the surface must be washed with clean water and the water removed as far as possible by means of a rubber blade or vacuum cleaner. The substrate should be dried thoroughly before installation.

Ambient and substrate temperatures

Great care should be taken when installing Plexicoat systems at temperatures in excess of +35°C (depend on Plexicoat type), as you will experience very short pot-life with the mixes. Applications below 0°C require special instructions. When applying a Plexicoat system, the substrate temperature must be at least 3°C above dew point. Protect from direct sunlight during application.

Compatibility between Plexicoat coatings and substrate

Concrete Chemical additives to concrete may impede the curing of coating systems. Adhesion and curing tests should always be performed.

Asphalt Plexicoat One Coat have been designed specifically to overcoat asphalt substrates (i.e. roads, footpaths, playgrounds and car parks). Due to varying grades and qualities of asphalt, it is recommended that an adhesion test be carried out at several points (test patches) to check whether the resin will cure without tack and whether adhesion is obtained. If the surface is new, it should be left for a period of time (depending on asphalt quality) prior to coating (coating should only proceed once an acceptable bond test has been completed).

Application of adhesion (bond) tests – cementitious substrates

Bond/adhesion tests must be carried out on clean prepared surfaces. Test patches must be applied in several areas across the subfloor. As a rule, apply one test patch to every 100 sqm.

Weigh out 500 grams of Plexicoat MMA Primer, add correct amount of hardener for the installation temperature, mix thoroughly, add 1.5 kg of quartz sand 0.1 to 0.3 mm mix thoroughly with a mixing drill and paddle, apply as a 5 to 15 mm thick "pancake", app. 100 mm wide, apply in several areas across the substrate. Once the test patch has fully cured and cooled down to the concrete temperature it is removed at an angle of approx. 45° by means of a hammer and chisel. The substrate should adhere to at least 60% of the surface of the test patch. The site of breakage should show cohesive fracture of the concrete substrate, concrete-stones must be broken and not pulled out.



Application of adhesion (bond) tests – asphalt based substrates

Bond/adhesion tests must be carried out on clean surfaces. Test patches must be applied in several areas across the substrate. As a rule, apply one test patch to every 100 sqm.

Weigh out 500 grams of Plexicoat One Coat, add correct amount of hardener for the installation temperature. Apply as a 5 to 15 mm thick “pancake”, app. 100 mm wide, apply in several areas across the substrate.

Once the test patch has fully cured and cooled down to the substrate temperature, it is removed at an angle of approx. 45° by means of a hammer and chisel. The substrate should adhere to at least 60% of the surface of the test patch.

The importance of Dew Point (please refer to the chart over page)

The dew point is the point at which dew forms, and ultimately happens when the floor temperature is lower than the air temperature. Dew point can be a real issue that may lead to blooming / whitening of resin finishes or even failure.

To correctly assess whether dew is likely to be an issue, you will need to take three readings (air temperature, humidity and floor temperature).

Substrate temperature can be taken by using a thermometer.

Please see highlighted sample over page:

Humidity 75 %

Air Temperature 15 °c

Use these two readings to find your dew point reading on the SFC dew point chart; in this case it is 11.

THE FLOOR TEMPERATURE READING MUST BE AT LEAST 3 °C ABOVE THE DEW POINT READING.

In this example this means that the surface temperature must be 14 °C or higher.

If the surface temperature is below the recommended level, there is a high chance that dew may be present and that installation issues may occur. In this situation, please do NOT install a system until an acceptable environment can be achieved, by increasing airflow to reduce air temperature / humidity, or by heating the area to warm the surface.



Air Temp. [°C]	Dew Point Temperature [°C] at a relative atmospheric humidity of															
	10%	20%	30%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
-25	-45	-40	-36	-34		-32		-30		-29		-27		-26		-25
-20	-42	-35	-32	-29		-27		-25		-24		-22		-21		-20
-15	-37	-30	-26	-23		-21		-19		-17		-16		-15		-15
-10	-34	-26	-22	-19		-17		-15		-13		-11		-11		-10
-5	-29	-22	-18	-15		-13		-11		-8		-7		-6		-5
0	-28	-20	-15	-12		-9		-7		-5		-3		-1		0
1	-27	-19	-15	-11		-8		-6		-4		-2		0		1
2	-26	-19	-15	-10	-8	-7	-5	-4	-3	-3	-2	-1	0	0	1	2
3	-26	-18	-13	-9		-6		-4		-2		0		2		3
4	-25	-17	-12	-9		-5	-4	3	-2	-1	0	1	2	2	3	4
5	-23	-15	-11	-7		-5		-2		0		2		3		5
6	-23	-15	-10	-7	-4	-3	-2	-1	0	1	2	3	4	4	5	6
7	-22	-14	-9	-6		-3		0		2		4		6		7
8	-22	-14	-9	-5	-3	-2	0	1	2	3	4	5	6	6	7	8
9	-21	-13	-8	-4		-1		2		4		6		7		9
10	-19	-11	-7	-3	-1	0	1	3	4	5	6	7	8	8	9	10
11	-20	-11	-6	-2		1		4		6		8		9		11
12	-19	-10	-5	-1	0	2	3	4	6	7	8	9	10	10	11	12
13	-18	-9	-4	0		3		5		8		10		11		13
14	-17	-9	-3	1	2	4	5	6	8	9	10	11	12	13	13	14
15	-16	-7	-3	1	3	5	6	7	9	10	11	12	13	14	14	15
16	-16	-7	-2	2	4	6	7	8	9	11	12	13	14	15	16	16
17	-15	-6	-1	3	5	6	8	9	10	11	13	14	15	15	16	17
18	-14	-5	0	4	6	7	9	10	11	12	13	15	15	16	17	18
19	-13	-5	1	5	7	8	10	11	12	13	14	15	16	17	18	19
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21	-12	-3	3	7	9	10	12	13	14	15	16	17	18	19	20	21
22	-11	-2	4	8	10	11	13	14	15	16	17	18	19	20	21	22
23	-10	-1	5	9	10	12	13	15	16	17	18	19	20	21	22	23
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25	9	1	6	10	12	14	15	17	18	19	20	21	22	23	24	25
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27	-7	2	8	12	14	16	17	19	20	21	22	23	24	25	26	27
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30	-6	3	10	14	17	18	20	21	24	24	25	26	27	28	29	30
31																31
32					19	20	22	23	25	26	27	28	29	30	31	32
33																33
34					20	22	24	25	27	28	29	30	31	32	33	34
35	-2	8	14	18		22		25		28		31		33		35
36					22	24	26	27	28	30	31	32	33	34	35	36
37																37
38					24	26	27	29	30	32	33	34	35	36	37	38
39																39
40	1	11	18	23	26	28	29	31	32	33	35	36	37	38	39	40
45	4	15	22	27	30	32	34	35	37	38	40	41	42	43	44	45
50	8	19	26	32	35	37	38	40	42	43	44	46	47	48	49	50

Substrate (floor) temperature must be 3°C over the dewpoint!



5. Plexicoat Systems ~ General Notes

PLEASE READ CAREFULLY BEFORE START THE APPLICATION

General – Aggregates – broadcast material

E.g. bauxite, cristobalite, corundum, flint, granite, quartz sand, broken glass (colored)
(Hardness of aggregates should be related to traffic load and requirements)

Type of application

Depending on project / type of area marking typical types of application could be:

- roller (manual)
- trowel (manual mold application)
- with rake
- with draw box
- with spray equipment

General – Preparation

The substrate based on **concrete** must be dry, clean and free from contamination. Any oil, grease or dirt must be removed by degreasing and scrubbing. Followed by shot blasting, mechanical substrate preparation, flame drying, grinding or washing (for tiles).

The substrate based on **asphalt** must be dry, clean and free from contamination. Any oil, grease or dirt must be removed by degreasing and scrubbing.

It is recommended that adhesion / bond tests be carried out prior to installation.

It is advisable to always prime the concrete / cementitious substrates. However, in certain circumstances, it may be possible to apply Plexicoat One Coat directly to a concrete substrate without the need for mechanical preparation. An adhesion / bond test must always be carried out to assess adhesion.

It is not necessary to prime asphalt substrates, as Plexicoat One Coat has been designed for direct application to these substrates.

Moisture within cementitious substrates must be below 4 %.

Moisture within asphalt substrates must be below 4 %.

In order to achieve a full cure, ensure sufficient ventilation with fresh air.

No naked flames or other sources of ignition must be present in the area during installation.

The hardener/BPO percentage must be adapted to the application temperature, see individual systems.



The hardening process (also depending on different Plexicoat types, for more detailed info see tech data sheets) should take place in the temperature range between +5°C and +45°C (Accelerator 50 is used: between -10°C and +5°C – see guidance note). Please note that paraffin wax/resins will have a higher viscosity at low temperatures (i.e. they will become less fluid). The reason for this is that at low temperatures the paraffin wax will go out of solution and will need to be brought up to temperature to allow it to disperse evenly.

It is therefore recommended to store material at +20 to 25°C and not below +15°C over a long period. It should also be noted that storage in excessive temperatures i. e. +20°C to 25°C could have the reverse affect (for example - leaving aggregates outside in direct sunlight can warm up the aggregates causing the mix to have a shorter pot life).

Inclusion of unauthorized additives in the substrate, resin or fillers can result in non-curing and failure of the system.

Do not mix different resin types!

Before decanting One Coat must be thoroughly mixed to ensure the paraffin wax has dispersed evenly throughout the resin.

When mixing materials, remember Plexicoat resins first, this includes any resin additives, then hardener and finally aggregates.

Please **DO NOT** use solvents, except for cleaning tools. Excess cleaning solvent **MUST** be removed from tools prior to use. Solvents must **NEVER** come into direct contact with uncured Plexicoat resins.

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.



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