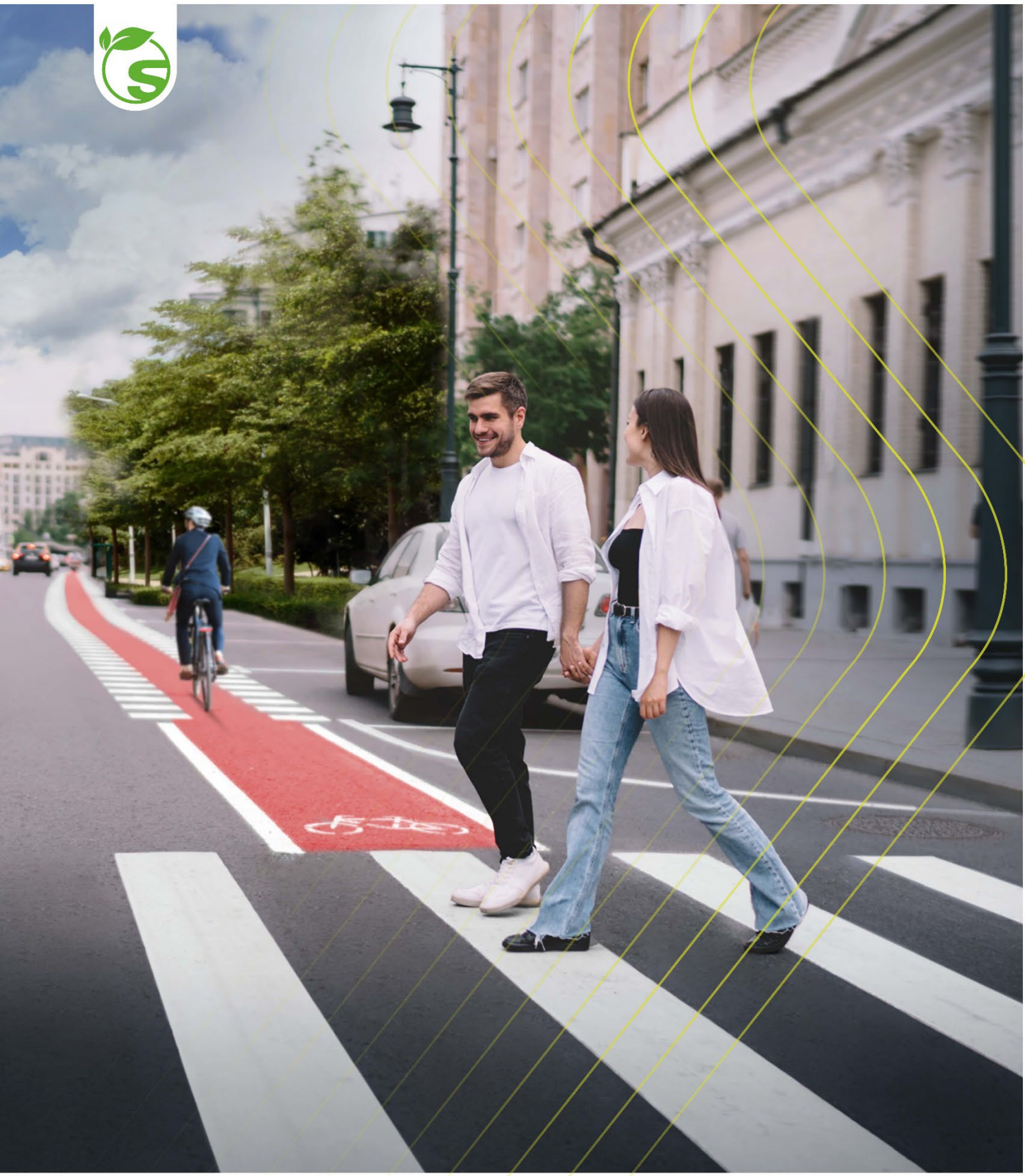
TECHNICAL INFORMATION

SWARCOTHERM ECO RAINSAFE



swarco

Road Marking Systems

SWARCOTHERM ECO RAINSAFE

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

- Type 2 structured / profiled road marking system designed to provide superior levels of wet and dry retoreflectivity.
- The unique profile provides improved drainage over other Type 2 systems and further enhances visibility during treacherous dark and wet weather conditions.
- Excellent durability - designed to maintain the profiled structure and high retroreflectivity levels throughout the products functional life.
- Can be used for both machine and hand applied markings, ensuring there's a uniform Type 2 structured marking system for all lane markings and symbols on any scheme.
- High performance formulation for superior levels of colour and daylight visibility.
- Hand applied product can be used for enhanced speed enforcement markings
- Provides a low level noise and vibratory alert to warn the driver of lane transgressions
- Fast installation and curing times for minimal traffic disruption

2 Technical Information

	SWARCOTHERM ECO RAINSAFE Grades
Grade	**RAINSAFE**
Colour	White
Min. Luminance (EN class)	0.80 (LF6)
Min. on the road luminance (EN Class)	0.40 (B3)
Min. softening °C (EN class)	95 (SP3)
Min. SRV (EN class)	55 (S3)
Retroreflectivity value (EN class) mcd/m²/lux	150 (R3)
Retroreflectivity wet (EN class) mcd/m²/lux	50 (RW3)

3 Surface Preparation

Preparation of the road surface is crucial in ensuring good adhesion of the product. This applies to application on both new road surfaces and renewal over existing markings.

Surfaces and existing markings should be sound and in good condition to avoid cracking or possible premature debonding of markings. If the existing marking is of significant thickness, then the old markings must be removed prior to application of the new material. If the surface aggregate is visible, removal of the old line is not usually necessary.

Surfaces must be completely dry and free from any dirt or de-icing salts. Dirty substrates should be cleaned thoroughly prior to application to ensure the formation of a strong bond between the new line and the existing line/road surface.

Damp surfaces should be completely dried with high velocity driers. Insufficient drying will allow moisture to wick back towards the line and reduce adhesion accordingly.

Removal of old lines should be carried out by suitable means such as thermal lance, mechanical apparatus or hydro-blasting.

The texture of the existing surface should always be taken into consideration. An allowance for extra material usage must be made when lining on new surfaces with a rugous or negative texture such as surface dressing, porous asphalt or SMA. This also applies to lines laid onto textured anti-skid surfaces.

A suitable Primer should be used when lines are to be applied on concrete, extremely smooth substrates or where the stone has become polished. Newly laid concrete surfaces should not be lined for at least 4 weeks to avoid reactions with the concrete curing agents. Curing agents not removed by traffic action should be removed from the surface of the concrete prior to application of plastic. A primer should also be used when applying the material on top of paint.

The air/ground temperature should be 5°C and above when lining to ensure full adhesion of the product. High velocity driers should be used in cool weather conditions to ensure a physical bond forms between line and substrate before material cooling occurs. However, it should be noted that application at temperatures below 5°C is not normally recommended due to the risk of adhesion failure, additional costs and reduced output rates.

4 Material Handling and Preparation

Operatives must have suitable safety training prior to handling hot materials and take the necessary care when using pressurised gas systems. Operatives should wear personal protective equipment (PPE) as per a company risk assessment. It is suggested that PPE should include the following; leather safety shoes, long trousers/jacket or coveralls, a high visibility vest, safety goggles or visor, and heat resistant gauntlet gloves. Particular caution is required during material transfer processes, when the use of a face visor and heat resistant gauntlet gloves are strongly recommended.

5 Application Equipment

Ensure the pre-heater is totally empty prior to working with a different grade or quality of material. Any contamination may have a serious detrimental effect on the performance.

Place entire bags (contents and Meltpack bag) into the pre-heater. Initially load bags until the pre-heater is approx. 30% full, heat and stir until the material has become molten. Progressively add bags to the desired charge.

Allow the contents of the pre-heater to fully melt and reach application temperature, ensuring that all components have homogeneously mixed, dispersed and that there are no lumps present. The material should then be allowed to mix for a further 30 minutes before use.

Ensure the material is within the correct application temperature range of 180 – 200°C for screed or extrusion grades and 190 – 210°C for spray material. This is to ensure that the beads

will embed sufficiently for good retroreflectivity and retention and that any required profile can be fully formed.

It is important to check application temperatures. Use a calibrated hand held probe submerged in the material to obtain accurate temperature readings as pre-heater thermostats and infra-red thermometers do not always give a reliable indication of application temperature.

Do not overheat the material – the maximum safe heating temperature is 230°C. Overheating will lower the luminance of the product and prolonged overheating degrades the binder system, causing material discolouration and adversely affect the material's performance.

There are three main application methods:

- Extrusion by machine
- Manually applied screed
- Spray application by machine

Extrusion or Spray equipment is generally used for larger works to apply longitudinal markings. Screed equipment is generally used for smaller works and to apply letters
symbols, junction markings etc.

6 Certifications

SWARCOTHERM ECO RAINSAFE is compliant with BS EN 1871 Physical properties (Kitemark Licence KM 93503) and BS EN 1436 Road marking performance for road users. It been assessed for durability at BSI Road Trails to BS EN 1824.

The management system of SWARCO HITEX LTD has been assessed and registered as meeting the requirements of BS EN ISO 9001 and BS EN ISO 14001.