

TECHNICAL INFORMATION
SWARCO PREFORMED



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Important information:

Please note our general terms and conditions and general notes on technical information. No liability is accepted for errors and misprints. The information contained herein is based on our best knowledge and experience. However, the information does not constitute a guarantee of properties. The information is provided without obligation, including with regard to any existing industrial property rights of third parties. The user is responsible for checking the suitability for the intended purpose before use.

1 Main characteristics / area of application

- Thermoplastic marking material, suitable for a wide range of applications, including as road marking material with certified traffic engineering properties, as playground markings for school playgrounds and nurseries and many other pictogram variations.
- The special formulation of SWARCO PREFORMED thermoplastic guarantees very user-friendly processing.
- Specially selected colour pigments ensure high colour stability and UV resistance.
- SWARCO PREFORMED can be driven over and walked on within a few minutes.
- Thanks to the precise manufacture of the preformed parts, the products fit exactly and are easy to process.
- The sturdy packaging guarantees safe handling and storage of the materials and is 100% recyclable.

2 Technical data

Colour tone	White or coloured
Solvent content	solvent-free
Storage stability	12 months in closed original packaging; Protect from frost, moisture and direct sunlight
Storage	Please store the boxes horizontally and do not put them down horizontally
Roll-over capability / cooling time	A few minutes after application, depending on the air and surface temperature. The markings must be tested for rollability before being opened to traffic.
Standard packaging	PREFORMED: In recyclable cardboard boxes with separating paper for better handling Post-spreading material: Paper bags with PE liner, 25 kg filling weight
Labelling	The applicable regulations and instructions for proper transport, handling, storage, first aid, toxicology and ecology can be found in the safety data sheet
Processing temperature	at least + 5°C

3 Processing instructions

3.1 Substrates / substrate pre-treatment

The substrate must be dry, clean, free of dust, oil and grease and free of loose particles and other impurities. The substrate must be tested for load-bearing capacity and compatibility with the marking material to be applied. In case of doubt, test markings / adhesion tests must be carried out. Old markings must be removed using suitable mechanical methods.

To ensure good adhesion, it is advisable to carefully heat the substrate using a hand torch.

Attention: Adhesion problems may occur:

- when preheating the surface with an open flame due to overheating and damage to the surface layer or rising moisture from the structure of the substrate caused by capillary action.
- due to condensation forming between the surface and the applied thermoplastic material depending on the temperature and humidity.
- An adhesion check is absolutely essential in the above-mentioned cases. Moist substrates cause severe blistering in the applied thermoplastic, which can cause the marking to flake off and be destroyed by the effects of weather (moisture and frost).

3.1.1 Concrete or cementitious substrates

Before applying SWARCO PREFORMED, the concrete surface must be pretreated with a primer for thermoplastic. Sufficient wetting of the concrete surface with the primer must be ensured in order to achieve optimum adhesion of the preformed thermoplastic.

3.1.2 Bituminous substrates

All loose components, such as chippings, must be removed. The chemical additives present on the area of new bituminous surfaces (flux oils, oil-based release agents for rollers, etc.) are generally detrimental to adhesion for subsequent coats and can lead to discolouration of the marking. Many years of practical experience have shown that thermoplastics are suitable for application on new bituminous surfaces due to the similar physical and chemical properties of the binders of thermoplastics and bituminous surfaces. In order to rule out possible residual risks (e.g. discolouration), test markings are recommended if necessary. If the result is negative, the new surface should be exposed to traffic for 4-6 weeks before SWARCO PREFORMED is laid.

Older, worn bituminous substrates may need to be pretreated with a primer for thermoplastics to improve adhesion.

3.1.3 Paving substrates

Cracking and adhesion problems may occur at the joints of paving stones, as the primer only acts as an adhesion promoter on solid substrates. It may be advisable to pretreat the paved surfaces (sealing the joints).

3.1.4 Synthetic resin floors

Thermoplastics are not suitable for application on synthetic resin floors. Suitable products must be selected under the section "Indoor markings".

3.2 Primer application

The consumption of primer depends on the porosity of the substrate and may vary; if necessary, repeat the application process. The primer should have sufficient time for the solvents to flash off before the final application of SWARCO PREFORMED. The flash-off time depends on the amount of primer used. Depending on the weather conditions, a flash-off time of at least **15 minutes** should generally be observed.

If the flash-off time of the primer is undercut or too much primer is used, the preformed thermoplastic may not cure, resulting in deformation and adhesion problems after application. The application temperature range is between 5°C and 40°C.

3.2.1 Primer application recommendations

Underground	Primer	Quantity
Concrete surfaces, old asphalt	PRIMAJET	150g/m ² - 200g/m ²
Concrete surfaces, old asphalt, cobblestones	HT Primer	200g/m ² - 400g/m ²
Concrete surfaces, old asphalt (for small areas up to max. 1m ²)	HiTack Primer, aerosol	200ml/m ² - 400ml/m ²
Concrete surfaces, old asphalt, cobblestones, no flash-off time necessary	GS 245 2 K Primer	200g/m ² - 400g/m ²

4 Application of SWARCO PREFORMED

4.1 Cleaning the substrate

Clean the area to be applied with a road brush or blower. Old markings, chewing gum residue or similar must be removed mechanically.

4.2 Apply primer

Carefully remove SWARCO PREFORMED from the packaging and apply to the desired location. Mark the outline on the substrate using a chalk or wax pencil. Pick up SWARCO PREFORMED again and put to the side. Depending on the type of container, shake or stir the primer vigorously until the contents are homogeneous. Apply the primer to the pre-marked area using a paint roller or spray can and allow to flash off.

4.3 Burning on SWARCO PREFORMED

Lay out SWARCO PREFORMED at the desired location. If there are several parts, make sure that the edges are close together. The preformed thermoplastic is now heated evenly using a hand torch. Ensure that the transitions between the individual parts merge so that there are no gaps. A slight formation of bubbles indicates that the temperature has penetrated to the substrate, thus ensuring good adhesion.

4.4 Re-spreading the SWARCO PREFORMED application

The post-moulding agent is applied to the hot preformed thermoplastic by hand or using a hand spreader. This prevents soiling of the marking after application. SWARCO PREFORMED Playground materials achieve increased grip.

For markings made of preformed thermoplastic, which are subject to traffic-related properties, the type and quantity of the rescattering agent can be found in the respective certificate. For SWARCO PREFORMED Playground applications, we recommend the addition of 350g/m² glass granules.

5 Warranties / test certificates

5.1 Warranties

Warranty only if the relevant technical information is observed. A guarantee of the traffic-related properties in practice is granted within the framework of the respective valid ZTV M and the respective national regulation, and only applies under typical traffic loads caused by free-rolling traffic and when using the systems recommended and tested by SWARCO Road Marking Systems.

Due to the material properties, SWARCO PREFORMED can be plasticised again at high air and ceiling temperatures (heating). Resulting imprints, e.g. from tyre treads of parked vehicles in the marking, do not constitute a defect in terms of the warranty.

The following aspects lead to the exclusion of the warranty:

- Exceptionally high wear and tear of the marking on roads with extremely high traffic loads (DTV) due to rolling traffic, e.g. in conurbations
- Extraordinary mechanical loads due to: Winter road maintenance, tracked vehicles, agricultural traffic and other heavy military equipment, increased radial forces, e.g. in curved areas
- Increased load due to changes in traffic routing, e.g. at roadworks
- Inadequate structural condition of a road
- Inadequate cleaning of substrates caused by environmental influences (see "General notes on technical information")
- When processing the marking materials in deviation from the specifications of the technical information and recommendations of SWARCO Road Marking Systems
- Application of other marking materials over the existing SWARCO PREFORMED application
- Outside the warranty period
- Non-observance of other specifications (e.g. selection of marking systems, etc.)