

Overview

HPS - Trowel Screed conveniently combine state-of-the-art Methyl Methacrylate resins with premium pigments and hardwearing aggregate to deliver an extremely durable, highly visible and colour stable transverse marking treatment that meets the non-slip requirements needed for pedestrians, cyclists and vehicles. HPS - Trowel Screed is mixed onsite and is distributed on to the substrate by using hand trowels, squeegees or hand screed boxes. Material curing is reliable in a wide range of temperatures with predictable back to traffic times of 20-60 minutes after application.



Storage: Avoid extreme storage temperatures. Keep materials in dry, protected areas, between 5°C – 35°C. Keep out of direct sunlight and protected from open flame. Use within six months of receipt.

PPE: The following PPE equipment is needed during the different stages of application. Operators must fully understand the SDS' (available from www.ennisflintapac.com) prior to works beginning.



Safety Precautions: HPS - Trowel Screed is a Flammable, Hazardous material. Applicators must review and understand SDS' for all products being used prior to application.



Equipment:

Surface prep & layout	Mixing	Installation	Clean up
<ul style="list-style-type: none"> Stiff broom Blower Measuring tape Chalk line Marking crayons Masking tape 	<ul style="list-style-type: none"> High speed / torque drill (with power source / spare batteries) Mixing paddles Electronic Scales / Measuring cup Small tarp Utility knife Generator & Extension cord 	<ul style="list-style-type: none"> Straight hand trowels (broad knife) Screed boxes 	<ul style="list-style-type: none"> Solvent resistant gloves Safety glasses Gunwash Large cleaning tub Solvent resistant brushes Cloth rags

General Requirements: HPS - Trowel Screed can be applied on stable, well compacted asphalt or non-bituminous concrete surfaces, such as Portland Cement Concrete. New substrates should be allowed to age harden or cure for minimum 28 days before installation. Pavement surface must be completely free of dirt, debris, moisture, curing compounds and other contaminants that can affect adhesion. Chemical contaminants such as vehicle fluids must be completely removed well in advance using a degreasing solution and power washer, ensuring all residues are removed. Existing pavement markings within the application area may be removed by gently sandblasting, shot-blasting, water-blasting or grinding making sure that minimal damage is done to the substrate. Aged surfaces containing reflective cracking should be repaired, or reflective cracking should be expected to re-appear after installation.

HPS-TROWEL SCREED

Temperature: Ambient and surface temperatures for installation should be between 4-35°C and should be 5°C above the dew point temperature (and not falling). There must also be less than 75% relative humidity when installing any EF MMA product.

APPLICATION INSTRUCTIONS

1. **Surface Prep:** It is critical for the surface to be clean and prepared appropriately. All surfaces must be dry, free of any dust and loose debris and at the proper temperature prior to application. Even though the surface may appear dry, it is best to check for sub-surface moisture to improve bond. Using a moisture meter, (ensure surface moisture is below 6%). Clean the intended application area thoroughly. All loose particles, dirt, sand dust, etc. must be removed. Concrete surfaces must be wire brushed, at minimum, but high-pressure water blasting, mechanical surface grinding, blasting or combination of techniques is recommended. Use a power blower or compressed air to remove any dust. Areas containing chemical contaminants such as vehicle fluids must be cleaned using a degreasing solution. Proper removal of contaminants and degreasing solution are necessary well in advance of the application.

2. **Prime Coat: (if required)** All concrete, wooden & metal surfaces must be primed with either EF HPS-P2 (concrete primer), HPS-P5 (Universal Primer) or HPS-P6 (Sprayable Primer)

NOTE: Do not apply onto new asphalt or new concrete. Allow a minimum of 28 days of traffic use on the new surface before the application of any EF HPS Coating

- After marking out, tape up area to be primed
- Apply Primer as directed in relevant Primer Application Sheet – If using HPS-P2 or HPS-P5 ensure appropriate amount (2%) of BPO powder is used. If using HPS-P6 Spray Primer, ensure appropriate amount (2%) of BPO is mixed in “B” drum.
- Apply primer at a rate of 3m² per litre

NOTE: Do not mix more material than you’re immediately going to use

DO NOT APPLY MATERIAL UNTIL THE PRIMER HAS COMPLETELY CURED

3. **Masking:** Measure and mark out the area to be coated and using masking tape and roofing paper (if required), mask off perimeter area, as well as any object not to be coated such as manhole covers, drains and existing markings. This is to ensure clean and straight edges when the job is completed. .

- *Tip: Masking tapes should be used for taping up. Masking tape will cling better to the contours of the surface, compared to thicker, more rigid tapes. Using a dry paint roller on a roller pole is a good way to apply even pressure to the masking tape to ensure it adheres properly. Autoplus masking tape is available from your Ennis-Flint representative.*

4. **Mixing:** Break the security seal on the HPS-Trowel Screed pail and stir the material at high speed for approx. 1 minute or until product is of a smooth, homogeneous. Accurately measure the required amount of BPO Hardening Powder and add directly into the pail of material and stir intensively for 30sec to 1 minute using a high speed, high torque drill until the BPO is folded through thoroughly. Over mixing can affect during rates. After mixing the BPO Hardening Powder, the material will start curing and must be applied to the pavement immediately. There will be 5 to 10 minutes working time, which is temperature dependent. Higher temperature reduces Pot-Life.

DO NOT MIX IN THE BPO POWDER UNTIL YOU ARE READY TO APPLY THE BASE COAT. ONCE THE E/F BPO IS ADDED, THE CURING PROCESS BEGINS IMMEDIATELY, AND CAN NOT BE REVERSED

HPS-TROWEL SCREED

Measure the required amount (≈2% by weight) of E/F BPO hardener powder to be used.

Ambient Temperature	Material amount	E/F BPO Powder
< 25°C	20 kg Pail	300 gms
>26°C	20 kg Pail	270 gms

- *NOTE: Curing times will be affected greatly by humidity levels, ambient and surface temperatures. Ennis-Flint recommends using 2.0% EF BPO Hardener by weight to MMA products in all acceptable surface temperature ranges between 5° - 60°C. Adjustments may be made on site, depending on surface & atmospheric conditions to adjust curing times.*
- *Using less EF BPO will increase cure times, and possibly negatively impact the success of the application, or cause the product to not cure.*

5. **Trowel Application:** After mixing, work quickly to pour the material onto the pre-marked work area. Coverage will vary depending on application requirements, type of surface and surface texture, but typically Trowel Screed provides approx. 4kg/m² for a 2mm coverage. Work the material evenly across the pre-marked area with a hand trowel until required thickness is obtained, the finish off with a final, quick cross over with the trowel to remove any trowel marks left behind. Often 'less is more' when working the material. Over working the material can result in premature curing and screed marks on the surface. Immediately apply E/F glass beads to the surface of the marking at a minimum rate of 440 gms/m²*

- **Check with your local, state or asset owner specifications for specific retroreflective requirements*
- *Tip: To ensure consistency in thickness of the material across the work area, pour the materials in strips across the marked area. This will reduce the effort needed to spread the material around the entire work area and therefore, cut down the application time. Emptying the pail completely onto the road surface over a short period of time also provides optimal working time and even curing.*

6. **Remove Tape:** As material gels, but before it cures, remove masking tape. It is very difficult to remove the tape once the material has set. Typically, the material pot life is ≈15min but this time is affected by the ambient temperature, surface temperature and humidity during application.

- *TIP: when removing the masking tape carry the empty pail containing the product residue and place the tape straight into the pail to prevent any loose bits landing in the wet surface.*

7. Allow the material to set. Do not allow any pedestrian or vehicle traffic onto the work area, as any disturbance during the curing process can adversely affect the durability of the product. The base coat should cure in 25-45minutes depending on the temperature of the road.

8. **Clean up:** Clean all tooling in Gun Wash before material is cured. Clean in well ventilated areas to reduce fume build-up and worker exposure. Do not come into direct contact with solvents - use proper personal protective equipment. Gun Wash is extremely flammable; take proper handling measures to reduce static discharge and combustion. Dispose of all contaminated materials in accordance with all applicable federal, state and local laws and regulations.

9. **Opening to traffic:** HPS-Trowel Screed must be 100% cured, which will be a hardened solid state, before traffic is permitted. Curing is based on temperatures and amount of EF BPO added, but typically takes 30-50 minutes. Once cured the surface can be opened to traffic.

Common Application Issues:

- Concrete:** Direct application to concrete is not recommended without the use of a primer (HPS2 or HPS5 primers available from Ennis-Flint are recommended). **New concrete needs at least 28 days** to set prior to application. It is recommended to mechanically abrade all concrete surfaces before application, by high-pressure water blasting, milling, mechanical surface grinding, shot blasting or combination of techniques is recommended. Moisture content within the concrete must be below 6% before coating. See Ennis Flint Surface Preparation note (#1) above for more details.
- Temperature:** Application temperatures greater than 35°C and less than 5°C should be avoided as it may result in faulty hardening of the material. Below 5°C application is possible; please contact an Ennis-Flint representative for specialty methods of application.
- New Asphalt:** Application on newly laid asphalt roads is not recommended. A 28-day curing period is recommended to rid the surface of contaminants and excess bituminous oil. In cases where it is unavoidable, risk of adhesion failure may be reduced by blasting the surface with high pressure water and allowing thorough drying before any works are carried out.

Important: Please read the complete **Safety Data Sheet** and any precautions on product label before use. **Safety Data Sheet** is available on the Ennis Flint website:
www.ennisflintapac.com.au



Scan this image
For easy access to
Safety Data Sheet

Follow all directions and warnings fully and carefully, otherwise do not use this product.

The product application data offered herein is, to the best of our knowledge, true and accurate, but all recommendations are made without warranty, expressed or implied. Because the conditions of use are beyond our control, neither Ennis-Flint nor its agents shall be liable for any injury, loss or damage, direct or consequential, arising from the use or the inability to use the product described herein. As Ennis-Flint has neither control over the installation of product described herein nor control of the environmental factors the installed markings are subjected to, there is no guarantee as to the durability of any marking system applied. No person is authorised to make any statement or recommendation not contained in the Product Data or application instructions, and any such statement or recommendation, if made, shall not bind the Corporation. Further, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents, and no license under the claims of any patent is either implied or granted.