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## HELP GUIDE

### **SURFACE PREPARATION & MATERIAL SELECTION**

A wide variety of line marking materials are available and confusion can sometimes arise when trying to decide on the most appropriate type to use. Generally speaking the type of surface onto which the material is to be applied will be the major factor in deciding what to use.

### **ASPHALT / BITUMEN**

For asphalt and bitumen surfaces the most widely available material is thermoplastic. This is a hot applied material which forms a very strong bond with all bitumen surfaces. The material is durable and quick-drying and is maintenance free over its lifespan. When used for road markings you should expect a life span of 2 years or so in high traffic areas. When used in low traffic areas such as private car parks, thermoplastic can be expected to last 5+ years.

A drawback of thermoplastic is the requirement for hot-works. The material and equipment must be kept at a high temperature for the duration of the works. The risk is managed by keeping equipment in good condition and ensuring that only qualified staff are allowed to handle the materials and machinery.

In fire-critical areas it may not be permissible to use thermoplastic because of the requirement for hot work.

A fairly new material which has excellent durability is MMA (Methylmethacrylate). This material is applied in a variety of ways without the need for hot works. It can be considered as "Cold applied thermoplastic".

Water, Epoxy and solvent based paints can also be used on asphalt but they will not have the same durability as thermoplastic and MMA. Water based paint technology is improving all the time and as new resins become available the durability of water based paint will improve.

### **CONCRETE**

All materials can be successfully applied to concrete surfaces. The most important aspect of applying markings to concrete is good surface preparation.

New concrete frequently has been treated with curing compounds which must be fully removed prior to painting or failure is assured. Laitance is also a problem. Laitance is the weak surface layer which can form on concrete surfaces during the curing process. This weak layer must be removed in order to prevent it crumbling and flaking. During freezing conditions especially, concrete is prone to damage.

Markaline Ltd. recommend that all concrete surfaces which are to be marked should be shotblasted first. This process removes weak, friable material from the surface and leaves it clean, dry and ready to mark immediately.

Highly polished concrete surfaces will need to be shotblasted in order to provide a textured surface to which the line marking material can adhere. No material will adhere properly to a polished surface.

As regards material selection for use on concrete the following information will be useful.



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Thermoplastic should really only be applied on top of a suitable primer (generally tack-coat is used). There is a type of thermoplastic (hydrocarbon) which is better suited to application on concrete but we would still recommend that a primer be used. If the correct surface preparation is carried out and a good primer coat is applied, thermoplastic is a suitable material for concrete. It should be noted that thermoplastic requires weathering in order to keep it clean. It is not suitable for indoor applications for this reason.

MMA is also suitable for application to concrete as long as the same surface preparation methods are carried out. MMA is durable without the use of primers but it can be applied over a primer to increase its lifespan further.

Solvent, Epoxy and water based paints are well suited to concrete. No primers are required and markings can be applied very quickly using specialist equipment. The durability of these materials can be further improved by applying protective clear lacquers over the paint.

To further enhance the lifespan of paint markings it may also be advisable to apply a concrete hardening material after surface preparation but before painting.