

EVERYTHING ASPHALT

Micro-Surfacing



"Micro-surfacing has proven effective in filling ruts, reducing the amount of original rutting by 40%, and substantially increasing the friction characteristics of the pavement."

Transportation Research Record No. 1392

Effective Pavement Preservation

Micro-surfacing is an effective preventive maintenance application that seals and waterproofs the surface while correcting minor defects, filling non-working ruts and improving skid resistance and appearance. The thin surface is an excellent choice for city streets and airports as well as high traffic volume roads. The high-performance surface treatment is a mixture of fine dense-graded aggregate, polymer modified asphalt emulsion, water, mineral fillers and additives. The aggregate is 100% crushed, and meets stringent requirements for clay content, soundness and abrasion. The components are mixed and placed on the road using a single machine. Micro-surfacing can be placed on both asphalt and concrete pavements.

The system is formulated with polymers and chemistry for a very quick cure and traffic return, as well as durability on high traffic pavements. Since micro-surfacing cures quickly, it can be placed thicker than other emulsion surface treatments and used to fill ruts and for minor re-profiling. Special equipment allows the filling of ruts up to 1.5 inches. The chemically-controlled break also makes micro-surfacing ideal for night paving. Typically, traffic can be returned within one hour.

Type II uses a crushed, high quality aggregate and is generally used for general street re-surfacing and medium volume highways. Type III, formulated with a coarser aggregate, is used on freeways, high speed roads, industrial applications, runways and where rut-filling or re-profiling is required.

Martin Asphalt Product for Micro-Surfacing

CSS-1hP | The grade used for micro-surfacing is specifically formulated for the project aggregate. Additional additives are also employed to control the breaking or setting of the emulsion.

Micro-Surfacing Benefits

- Micro-surfacing seals small cracks and surface imperfections, waterproofs the surface, and protects the pavement structure of both asphalt and concrete pavements.
- The high quality, crushed aggregate improves skid resistance.
- The mat provides an attractive, smooth black surface which aids in lane delineation.
- The very thin surfacing (3/8 to 5/8 inch) is ideal where curbs and overhead clearances need to be preserved.
- The micro-surfacing emulsion reduces user delay by allowing traffic in about an hour after construction.
- The quick setting micro-surfacing is suitable for night application on heavy-traffic streets, highways and airfields.
- Micro-surfacing fills depressions, small cracks and ruts, and provides some surface leveling.
- Micro-surfacing is a cost-effective pavement preservation technique.

Surface Preparation and Construction

Laboratory designs determine the optimal emulsion and additive rates for the project aggregate with instrumentation developed to determine emulsion curing time. A continuously run machine is used for mixing the components on the project. The material flow rates are continuously monitored as the components are fed into the pugmill where they are thoroughly mixed. The mix is then placed by the machine at a predetermined depth. For rut-filling, a special rut box may be used to place a scratch course before a finishing course. Traffic is returned once the seal has cured, typically within one hour.

Martin Asphalt Makes It Easy

There are a variety of treatments available for effectively keeping "good pavements good". Choosing the right treatment can make the best use of funds and give taxpayers smooth and safe roads while avoiding costly reconstruction and extended road closures. Through Martin Asphalt, you get **Everything Asphalt**—a full range of products for your pavements. In addition, you receive technical assistance in selecting the right materials and application. The company's AASHTO Certified Laboratory makes sure the products meet your specifications. And your products are delivered both on spec and on time via Martin's Gulf Coast network of production plants, storage facilities and transportation fleet including ocean-going and inland barges, rail cars and tanker trucks. Contact us for help in selecting the right materials for your projects.

