



# RHINOPHALT® PROCESS OVERVIEW

## Process Overview for the Rhinophalt Process

### DESCRIPTION

Rhinophalt is a unique, cost-effective and sustainable method of protecting and preserving bituminous bound surfaces. It is based on a chemically engineered formulation of Gilsonite\* ore, specially selected plasticisers and dilutents designed for the preservation and subsequent protection of bituminous materials.

Rhinophalt successfully reverses the effects of ageing and oxidation by penetrating into the surface and restoring the chemical balance of the bitumen binder. The entire surface is then protected with a highly durable Gilsonite seal to prevent water ingress and resist further oxidation.

The Rhinophalt process consists of the cold spray application of a liquefied Gilsonite restorative sealer and the spreading of Blackrhino Grit, a selected fine grade aggregate which provides enhanced initial skid resistance.

Rhinophalt complies with the requirements of SRV and texture depth on high speed roads.

\*Gilsonite is a naturally occurring, 99% pure mineral asphalt that is extremely resistant to oxidation.

### FUNCTION

The Rhinophalt process is designed to significantly extend the serviceable life of bituminous bound surfaces.

This preventative maintenance measure can be re-applied every 4-5 years to further extend pavement surface life.

When used in conjunction with our Rhinopatch process, Rhinophalt is a highly effective method of ensuring the longevity of heat welded surface repairs.

### ADVANTAGES

- Significantly extends functional life of all bituminous bound pavement
- Creates NO waste material
- Resists water ingress
- Reduces bitumen 'bleed' on surface dressing
- 94% fewer CO<sub>2</sub> emissions than a resurfacing alternative
- Quick and easy to apply
- Fast cure process minimises site occupation
- Low cost and sustainable
- Minimises the need for aggregate extraction
- No adverse effects to Highways safety measures
- HAPAS/BBA approved

### USES FOR RHINOPHALT

Rhinophalt can be used on all types of bituminous surface course. Accordingly Rhinophalt is suitable for all classifications of road, motorway, footways, airport runways and taxiways, car parks, cycle ways, railway platforms and pedestrian areas etc..



## HOW RHINOPHALT WORKS

### Ideal Time of Application

- Before degradation takes place in bituminous bound surface.
- Alternatively, at any stage in the life of a pavement when extended functional life is beneficial.

### On Application

- Rhinophalt cold spray is applied to surface.
- Rhinophalt carrier agent softens the surface to allow Gilsonite to penetrate the surface course.
- A thin layer of fine grit is applied to the surface simultaneously in order to retain the required SRV.
- Surface is immediately blackened by Rhinophalt material.
- Gilsonite restores the integrity of the existing binder and provides a protective membrane.

### 1-3 Hrs After Application

- Carrier agent evaporates from surface and Rhinophalt cures in 1-3 hours.
- Road can be re-opened to traffic after 1-3 hours.
- Penetration depth of Gilsonite depends on porosity of surface material, average penetration depth of between 2mm – 8mm.
- Surface retains its blackened appearance.

### 3 Months After Application

- Grit works with vehicle movements to abrade Rhinophalt off the surface aggregate and to restore original SRV, PSV and texture properties.
- Surface gradually returns to its original aggregate colour.
- The Gilsonite membrane continues working below the surface protecting the newly preserved binder and sealing the treated pavement against the effects of oxidisation, trafficking and water damage.

## THE APPLICATION OF RHINOPHALT

