TECHNIC DATA SHEET

HIGH-PERFORMANCE FUEL-RESISTENT ASPHALT COATING
TractionShield®

The TractionShield® High-Performance Fuel-Resistant Asphalt Coating is a plural, reactive asphaltic sealer, manufactured from modified asphalts with high molecular weight polymers. TractionShield® R.A.A.D RC is designed to fully integrate with existing pavement, sealing asphalt surfaces on airports, roads, and highways. TractionShield® R.A.A.D RC is an eco-friendly, water-based application that contains no solvents and does not require heating during preparation or installation.

System Benefits.

- Resistant to aircraft fuel (Jet A JP-8), oil, and lubricants.
- Unique reactive system that chemically attacks oxides present on exposed aggregate surfaces.
- Day and night drying and curing.
- Practically zero VOC (volatile organic compounds).

Recomended uses.

- Areas exposed to fuel and oil spills.
- Locations with restricted working schedules (shopping centers, urban zones, airports).
- Protects asphalt surfaces from oxidation caused by environmental factors.
- Rejuvenates the riding surface.
- Protects against water absorption in microcracks.
- Pavements showing wear.

Application.

Safety and protection signs must be installed according to applicable regulations. Perform prior work such as pothole repair, leveling, crack sealing, or other necessary treatments. Allow previous treatments to fully cure before applying the product. The surface must be completely dry.

Product may be applied as a filler sealer and can be applied as an R.A.A.D Type S using high volume equipment (distributor truck).

Precautions.

TractionShield® R.A.A.D RC cures quickly to become a waterproof membrane. Water or moisture may blister the new surface. Concrete substrates are particularly susceptible; metal and asphalt do not absorb moisture and usually do not require a primer. If using primer, do not allow traffic on it.

Transport, Storage and Handling.

- Keep out of reach of children.
- Do not allow to freeze before application.
- Do not mix with other products.
- Avoid prolonged skin contact.
- Keep containers tightly closed when not in use.
- Store covered, not exposed to sun, in a cool dry place.
- If stored for more than 30 days, mix every 2 weeks.
- In case of accidental ingestion, do not induce vomiting and call a doctor immediately.

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PROPERTIES

Characteristic	Value
Crushing, %, minimum	100%
Sand equivalent, %, minimum	55%
Plasticity index, %, maximum	Non-plastic
Methylene blue, mg/g, maximum	12
GRADIATION	
Sieve Designation	Percent Passing
#16	99-100

BINDER

Emulsion Characteristics	Value
Saybolt-Furol viscosity at 25°C; s	25-500
Settlement in 5 days; % difference, maximum	1
Settlement in 3 days; % difference, maximum	5
Asphalt cement content by mass, %, minimum	58
Naphtha content, %, maximum (distillation residue)	1
Base Asphalt Characteristics	**Value**
Penetration at 25°C, 100g, 5s; 10^{-1} mm	8-20
Softening point, °C, minimum	70
Dynamic shear rheology modulus at 86°C (G*/Send); kPa, minimum	1

MIX

Characteristic	Value	Standard
Water absorption	< 4%	ASTM D-570
Weight per gallon	9.0 – 12.0 lb/gal	ASTM D-1475
Cured layer thickness, gal/100 s.f.	9.0 – 11.0 mil	ASTM C-836
Solids content, %	57 – 70	
Fuel resistance	Pass	ASTM D2399
Wet abrasion test (6 days)	< 30 g/sf	ISSA A-105, T-100
VOC (volatile organic compounds)	< 10 g/l	BAAQMD Vol. 3 Lab 22

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GENERAL APPLICATION RECOMENDATIONS

Although material proportions and application rates may vary depending on the specific project, the following may be used as a practical guideline, provided that prior test sections are executed and subsequently approved by the contracting authority.

Mixture preparation.

- Prior to use, the asphalt concentrate must be thoroughly mixed in the container until fully homogenized, using manual mixers with extensions that reach the bottom.
- The recommended volumetric proportions to facilitate field measurements are:

- These components must be completely mixed prior to application.
- The quantities of aggregate and water may be slightly adjusted to achieve better consistency and ease of application, with aggregate not less than **300 L** and water not greater than **220 L**.
- If there is leftover mixed material, it may be kept in the application equipment for use over the following 1 to 5 days, mixing daily.

Dossage.

For airport platforms, aircraft holding areas, and parking bays, a dosage of **1.0 to 1.2 L/m²** is recommended. These quantities may be higher depending on the texture of the asphalt surface.

Application.

- Prior work such as pothole repairs, leveling, and crack sealing must be completed in advance so they can fully cure and dry, ensuring there is no oil exudation or moisture present.
- The surface must be completely dry.
- Fine cleaning must be performed to remove any foreign agents that may affect product adhesion, such as dust or loose particles; in areas with fuel or oil spills, a degreaser should be used.
- The product may be applied in one or two coats to achieve the required drying times and uniform coverage.
- Spraying equipment is recommended to maintain pavement macrotexture, particularly on runways.
- Mechanical or manual rubber squeegee equipment may be used for minor repairs or in areas where restoration of lost fine aggregate is required.

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