

**Airstrip DUST/BLOKR® Technical Specification**

	<b>DUST/BLOKR®</b>
Creates Smooth Running Surface	✓
Reworkable Surface	✓
Free of Heavy Metals	✓
Low Road Closure Time	✓
No Environmental Toxicity	✓
Chloride Free	✓
Hydrocarbon/Petroleum Free	✓
Conforms to Boeing (D6-17487)	✓
Increase in CBR Value	✓
Surface Longevity	✓
Freeze-Thaw Stable	✓
Dust Mitigation	✓
Supports Low and High Traffic	✓

**What is DUST/BLOKR®**

DUST/BLOKR® is specifically designed as a non-corrosive and environmentally friendly alternative to road salts, such as magnesium chloride and calcium chloride, oil-based, and cement/lime-based dust suppressants offering superior road dust control results. DUST/BLOKR® is very cost-competitive with traditional dust suppressants, while effectively eliminating unwanted fugitive dust from unpaved roads of almost any soil type.

**Dust Reduction Performance**

The product must provide at least 70% dust reduction of PM10, PM2.5 and PM1 particulate.

**Criteria:** Minimum of 70% Dust Reduction

**Stabilization Performance**

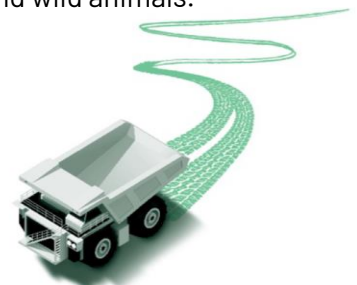
The product must provide increased bearing strength (CBR) and light surface stabilization.

**Criteria:** CBR Gain

**Petroleum Distillates**

The product must not contain any petroleum distillates. The ingestion or inhalation of, or skin contact with, petroleum, petroleum condensate, gasoline, diesel fuel, kerosene, crude oil, or other hydrocarbon mixtures may cause illness and occasionally death in domestic and wild animals.

**Criteria:** 0% Petroleum Distillates



### Chloride Content

The product must contain less than 1% sodium chloride, calcium chloride, and/or magnesium chloride.

**Criteria:** Less than 1% chloride content

### Reworkable Surface

The product must render the surface re-workable. If the surface is disturbed, the treated surface material can be recovered, rehydrated and recompactd with a minimum loss of effectiveness.

### Post Application Surface Watering

Surface water treatment must not be required post application

### Aquatic Toxicology

The following testing standards shall be used to determine the aquatic toxicity of the product.

- EPS 1/RM/13, 2nd Ed. Dec. 2000, with 2007 and 2016 amendments, Environment Canada
- EPS 1/RM/9, May 1996 with May 2007 amendments, Environment Canada

The test uses certified, disease-free rainbow trout (*Oncorhynchus mykiss*) that are exposed to several concentrations of a sample, including full strength, under static conditions in order to estimate the median lethal concentration (LC50) - the concentration of the sample in water that is estimated to be lethal to 50% of the test organisms within a 96-hour exposure period. The product shall demonstrate a non-lethal impact after 96 hours.

**Criteria:** 96-hour LC50 v/v (%): Non-Lethal.

### Physical properties

#### **Product physical state**

The product must be supplied in a concentrated liquid form.

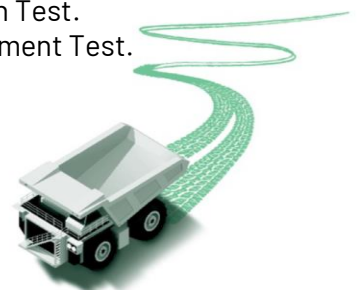
#### **Composition**

The product must contain less than 1% calcium, magnesium, and/or sodium chloride.

### Non-corrosive properties

The product must be non-corrosive and conform to the following test methods:

- Conforms to ASTM F1110 Standard Test Method for Sandwich Corrosion Test.
- Conforms to ASTM F519 Standard Test Method for Hydrogen Embrittlement Test.
- Conforms to ASTM F84 Standard Test Method for Acrylic Cracking.



## General Airstrip DUST/BLOKR® Technical Specification

### 1.0 Supply of Product

#### 1.1 Management of Airside Surfaces and Dust Mitigation

- The supply of an airside or airstrip dust mitigation agent (dust control agent) as well as any follow up/maintenance applications on the airstrip including the runway, taxiway, and apron.
- The product must be delivered in caged plastic IBS totes; each tote containing 1000 L. The information included on each tote must include the name of the product, manufacturers name, weight, and relevant regulatory information.

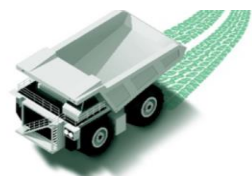
#### 1.2 Application of Airside Surfaces and Dust Mitigation

- The product supplier must provide documentation outlining all application procedures and requirements; including recommended application rates and maintenance processes.
- The provided documentation must outline a typical application method and must be followed all project representatives including on site operators, technical representatives, engineers, and foreman.
- The product manufacturer must have a technical representative available or present during the product application to ensure conformance to all provided documentation on proper procedural practices.
- The product must be shipped and delivered FOB to project site/location.

### 2.0 Product Characteristics

#### 2.1 Environmental requirements

- The supplied product must meet current environmental requirements and acceptable levels for environmental and aquatic toxicity.
- The supplied product must contain less than 1% petroleum distillates, and chloride content.
- The product must not have any ecological constraints or negative environmental impacts.
- The product must not be a hazardous material or have transportation requirements that affect the handling, shipping, or storage of the product.
- The product will require no response/cleanup requirements in the event of a spill within the environment or body of water.
- Third party analytical data must be provided to demonstrate that the product is not environmentally detrimental and that no chemical substances are present within the product above the recommended limits. The laboratory tests that must be provided include:
  - EPA Safer Choice
  - Chloride and Petroleum Content below 1%
  - EPS 1/RM/13, 2nd Ed. Dec. 2000, with 2007 and 2016 amendments, Environment Canada



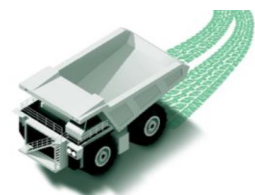
- EPS 1/RM/9, May 1996 with May 2007 amendments, Environment Canada
- ASTM F1110 Standard Test Method for Sandwich Corrosion Test.
- ASTM F519 Standard Test Method for Hydrogen Embrittlement Test.
- ASTM F84 Standard Test Method for Acrylic Cracking.

## 2.2 Physical requirements

- The product must be supplied in a concentrated liquid form.
- The product will not require any specialized equipment, response methods, or cleanup requirements should a spill occur.
- The product in its tote must be freeze thaw stable, meaning it is capable of open exposure in storage air temperatures as low as -50°F with no effect on quality or meeting other product-based requirements.
- The product must be semi-soluble to ensure that it will not completely solubilize, wash out of the surface, and lose its effectiveness due to rainfall or directly enter waterways, lakes, and other local bodies of water.
- The applied product must create a reworkable strafe where if the surface is disturbed the treated, surface material can be graded and re-compacted with minimum loss in efficiency.

## 2.3 Technical requirements

- The product supplied must be in accordance with Boeing specification BSS7432 (formally known D6-17487). The product must be safe for applications on and around aircraft surfaces, as well as non-corrosive.
- The product must be verified by a spectroscopy-based testing methodology that it is able to provide a minimum of 70% PM10 dust reduction with reasonable maintenance for one at least one year after an application.
- The product must act as a binder to further prevent and reduce any loss of material and particulate matter.
- The product must provide increased bearing strength (CBR) and light surface stabilization.
- The product manufacturer must have a technical consultant available or present during the product application to ensure conformance to proper procedures is taking place.
- The product in its tote must be freeze thaw stable, meaning it is capable of an indefinite period of open exposure in storage air temperatures as low as -50°F with no effect on quality or meeting other product-based requirements.
- The product effect must be semi-permanent. Reapplication must not be required to maintain a deficiency within a 6-12-month period.
- Further product application must only be required as a maintenance application process and at reduced application rates after which no further application shall be required.
- Surface water treatment must not be required post application.



### 3.0 Quality Control & Quality Assurance

#### 3.1 Performance

- The vendor must guarantee that all supplied product meets the technical specifications and requirements indicated for the project and the above specified obligations.
- New and unopened product that is stored in the recommended conditions must have a shelf life of no less than 24 months from the date of shipment.

#### 3.2 Composition of product

- The supplied product must be a standard product offering of the manufacturer, and in complete compliance with industry standards, environmental regulation, and toxicology.
- Manufacturer must keep record of product quality and traceability

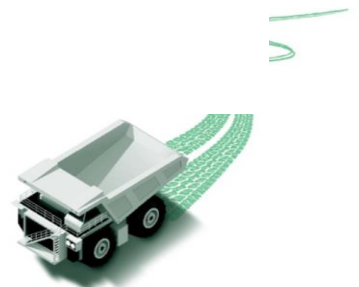
### 4.0 Delivery

#### 4.1 Delivery of product

- The product must be delivered FOB to site.
- All necessary precautions, including product packaging must be completed and demonstrated by the vendor to prevent damage of the materials during transportation to the delivery site.
- All necessary labeling and documentation for the product must be completed and included by the vendor.
- All products must be loaded and transported in a manner that prevents any risk to personnel or to the quality of the product during loading and unloading.
- The product must be clearly identified with the following information:
  - Product name
  - Product information
  - Product volume/weight
  - Site Information

#### 4.2 Required documentation

- Vendor must include the following documents:
  - Packaging list including:
    - shipping release request
    - all items/products
    - shipping dimensions and weight
  - Handling procedures
  - Storage and warehouse requirements
  - SDS Documentation



## 5.0 Project proposal

Documents required with application proposal include:

- Bid and price form
- Application guidelines including rates and maintenance recommendations
- All certifications associated with the product
- Product information including SDS documentation
- Quality assurance, quality control, standards, testing, or required certification

