Must be non-soluble liquid palliative

• Specification
  • Non-soluble in water
  • May not require water to be added
  • Freeze point below -55

• Reasons
  • Non-soluble products have performed better than soluble products
  • Material must be shipped in a year in advance and stored in unheated facilities.
Expected Performance and Measurements

• Expected to be effective for two years

• Dust measurements performed
  • UAF will measure dust using Dust-M no less than 7 days and no more than 30 days after placement
  • The average reduction measured by the Dust-m shall be no less than 85% of when compared to the adjacent untreated surface for no less than 85% of the surface
  • If the specified dust reduction is not met, the bidder/supplier will provide additional palliative product to the airport and no additional cost to DOT&PF.
  • DOT will apply the product.
UAF-DUSTM

Off-the-shelf aerosol monitor

Intake

Alaska University Transportation Center

University of Alaska Fairbanks
Dust Palliative Products must be non-corrosive

  - Aluminum Corrosion (section 7)
  - Acrylic Crazing (section 9)
  - Paint Softening (section 13)
- Failure to supply documentation will result in disqualification
Environmental Requirements (1/3)

• No environmental constraints or negative impacts associate with palliative use.
  • No hazardous-materials transport requirements
  • No specialized response or clean-up requirements on either land or water

• Minimum Laboratory Analysis
  • Bulk Analysis must indicate there are no environmentally detrimental chemical constitutes at levels which cause negative environmental or human health impact. Common tests include:
    • EPA Method # 8260 – Volatiles, priority pollutants
    • EPA #8270 – Semi-volatiles, priority pollutants
Environmental Requirements (2/3)

• Toxic Characteristic Leaching Procedure
  • EPA method #1311 must be provided and show product does not contain any constituents exceeding TCLP regulatory levels for metals, volatiles, semi-volatiles, pesticides and herbicides
Environmental Requirements (3/3)

• Aquatic Toxicity
  • Must be tested by a reputable laboratory
  • Must have been tested and proven to have an EPA toxicity rating of “slightly toxic” (LC$_{50} >$ mg/L) or better.
  • Acute and Chronic toxicity test following EPA guidelines for three or more of the species listed
    • Cladoceran (ceriodaphnia dubia), fathead minnow (pimephales promelas), mysid shrimp and 7-day rainbow trout (onchorynchus mykiss)

• Bidder/supplier must provide documentation along with bid materials.

• Failure to supply documentation will result in disqualification of bid
Palliative Application Process (1/2)

• Must not require specialized training or extensive workman experience

• No more than 100 man-hours required including foreman to complete an airport once the process can be started.
  • This does not include prep time

• Application rates
  • 30 square feet/gallon for non-soluble liquid palliative without binder*
  • 40 square feet/gallon for non-soluble liquid palliative with binder
  • * Central Region modified this to specifically allow 40 square feet/gallon for Durasoil

• Product is to be delivered in 275 gallon totes at the specified airport
Palliative Application Process (2/2)

- Palliative must be applied and word effectively as a topical, prepared-surface application.
- Surface will be scarified and graded with a motor grader, watered, shaped and compacted to a reasonably well-crowned surface.
- Product is expected to hold the surface in that conditions for a minimum of two years.
- Daily temperatures during application can range from 45 to 85°F.
- Rain may be expected within 24 hours of application.
- Winter surface temperatures may be as low as 55°F.
DOT&PF Responsibility*

• Unusual weather
• Inappropriate vehicle-related damage
• Reapplication of product under this waiver is the responsibility of ADOT&PF

• Waiver will apply only if manufacturer’s maintenance guidelines and product’s application guidelines are provided to ADOT&PF with bid.
General Product Information Required

• MSDS
• General composition of product
• Primary characteristics
• Uses
• Delivery Options
• Application Rates
• Temperature limitations
• Environmental acceptability (Does not replace required documentation)
Detailed Information

- Product preparation
- Mixing
- Surface Application
- Routine Maintenance instructions
- Warnings about improper application, temperature, or weather events that may caused reduced performance.
- Cleanup procedures for equipment
- Guidelines for circumstances when the product application has been compromised.