

# MILLIGAN BIOFUELS (2018)

Processing Canola that Doesn't Make the Grade

## Road Preparation and Application Expectations.

- The following outlines the expectations Milligan Biofuels CFI Dhas in place for the topical application of RDS.
- Failure to follow these steps may void any warranties in place. We stand behind our product, but improper road preparation and application hampers a successful dust suppression program.
- Milligan Biofuels RDS has proven to be an effective, quality, long lasting road dust suppressant over the past few years. However the product does not 'fix' a poorly constructed or maintained road, but we certainly control dust. We do not normally recommend for new road construction, the surface needs to be very well packed and solid.

### Preparation

- Unpaved roads that will have RDS application must be in good overall condition.
- Good crown and shoulder drainage. Poorly designed drainage will allow water to float finer particles to the surface which will then be pumped / flushed out by vehicle traffic.
- Provide a firm surface with a proper mix of small sized gravel and sufficient fines for binding. Ravelling can occur where there is a deficiency of fine material, poor particle size distribution and inadequate compaction.
- Potholes, washboards, frost boils and soft spots must be graded out, filled with a suitable aggregate mix and properly compacted before application. These blemishes will show up later if not handled correctly prior to application.

### Grading

- Blade approximately 2 centimeters of road surface into a windrow on the side of the road to accumulate gravel / fines mix.
- Blade the gravel / fines mix back onto the road surface evenly to create a smooth 2 centimeter thick layer that will absorb the RDS upon application.

### Application

- Applied neat. No diluting or mixing.
- Applicator truck / unit will apply RDS at 1 liter per square meter (for normal traffic volumes).
- Product is to be applied to the entire road surface. Most effective when application is "grass to grass". Untreated edges can cause issues as moving vehicles and wind disperse valuable fines. Just a reminder to 'measure' accordingly when requesting a quote.

### Curing

- RDS product is most effective when allowed to soak into the road surface with restricted traffic. Constant high speed traffic will not allow surface to cure evenly.
- Following application, even better results can be attained by compacting the surface with the use of "pneumatic packers" or "wobbly wheel" equipment. If RDS product is sticking to equipment you will need to give it more time.

## Resumption of traffic

- No further traffic restrictions.
- Graders should not be used on treated sections of road, until preparations are being made for the following season. If you need to grade sections of the road, grade lightly and penetrate only to the depth of RDS in the road surface without introducing untreated aggregate into the mix. Adding a light application of RDS ½ liter per meter will maximize cohesion.

## Heavy Traffic Senario

- Use the following steps if vehicle traffic is primarily heavy truck and equipment use. This would include heavy oil truck, gravel truck, mining equipment and other traffic patterns heavier than grid roads normally experience.
- To accomplish this we use a total volume of 1.5 liters per square meter.
- Preparation of road surface must be at the same standards as outlined earlier.

### Alternative Grading

- Tight blade the unpaved road moving the top 2 centimeters of road surface to one shoulder. This should be done just prior to application.

### Alternative Application

- RDS will be applied at a rate of ¾ liter per square meter covering entire road surface.
- Grade the windrow evenly back over the road surface.
- RDS second application will follow at ¾ liter per square meter covering the entire road surface, making sure to overlap the center lane.
- Allow for product to disperse and compact surface as outlined above.
- The goal of our suppressant is to retain “fine particles” within the road surface, providing extra stability of the road surface which will reduce road deterioration.



## Limitations:

- RDS works well when following the steps outlined above. Unstable or soft road surfaces are not ‘repairable’ with our product, these compromised surfaces need to be addressed prior to application.
- We will work together with our customers to get the best expected results for your particular project. Results can vary as road make-up is not consistent from region to region.