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ACL-BSARA

BIOSOL ARA**ASPHALT RELEASE AGENT****TECHNICAL DATA****GENERAL DESCRIPTION:**

BioSol® ARA represents the leading edge in synthetic hydrocarbon technology. It offers real advancements in terms of economy, user-safety and environmental integrity. Many of the asphalt release agents currently in use contain petroleum solvents, diesel fuel or consist primarily of simple soaps. Products of these types may be effective in some unmodified asphalts, but tend to fail when used in conjunction with various polymer-modified asphalts now being used. The use of solvents and fuels has also come under significant pressure due to the environmental and personnel safety hazards associated with their use.

PERFORMANCE:

BioSol® ARA is a versatile, easy to use and cost effective product that performs well on all types of asphalts. It is specially developed for polymer modified materials, such as Polymer, SMA, PMA, Smurf, Smack, Modified D-Mixes, Crumb Rubber, Perm flex and Fiber. Still, it performs equally well when used with conventional hot mix. The unique film-forming ability of BioSol ARA protects all types of equipment used in road paving and construction including spreaders, dump trucks, sprayers, preparation tanks and tar handling equipment.

PERSONAL SAFETY:

BioSol ARA is virtually non-toxic, as demonstrated by its excellent toxicological and ecological profiles. It is not carcinogenic, will not burn exposed skin and is non-flammable. The product does not contain benzene, toluene, xylene, chlorinated solvents or other such components that can impair employee reaction time, function and comfort. Personal protection equipment such as face shields, respirators and chemical suits are not required. Safety glasses and gloves are recommended only as a precaution against dry skin with prolonged exposure.

ENVIRONMENTAL ATTRIBUTES:

The solvent and additives in BioSol ARA are not petroleum, aromatic or chlorinated distillates and demonstrate practically no toxic effects in either mammalian or aquatic testing. It also contains no VOC's (Volatile Organic Compounds) per guidelines of the California Air Resources Board (CARB). As such there is no potential for ozone-depletion or global warming. Oxygen uptake data indicates that BioSol ARA can be classified as being biodegradable according to the CFR 40 method and SCAS test. It is also phosphate-free, non-flammable, non-corrosive, and does not produce hazardous fumes or hidden toxins.

DIRECTIONS FOR USE:

Clean the surface to be sprayed thoroughly. Diesel fuel, fuel oil, acids and many surfactant systems will impede the product's ability to perform properly. The product can be diluted with up to 25-parts water depending on type of asphalt being used. For polymer modified asphalts, dilute 1-part BioSol ARA with 10-parts water. Higher dilutions are possible when protecting surfaces from conventional hot mixes. Apply evenly using a light spray with overlapping strokes. Mechanical-feed sprayers are recommended. When applied with a pressurized pump canister it is necessary to shake well prior to each application as the product breaks from water very quickly.

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BIOSOL ARA**ASPHALT RELEASE AGENT****TECHNICAL DATA****BioSol ARA: Unparalleled Profile, Unprecedented Performance!**

Most asphalt release agents are based on solvents, fuel oil or simple soap type formulations. These types of products may work in some unmodified asphalts but are not very effective in the various polymer modified asphalts now being used. Blended in Canada, BioSol ARA is competitively priced with the surfactant (soap) based products but can often be used at lower concentration levels with improved performance. This results in a lower overall cost and helps to rationalize inventory. The use of solvents and fuel oil has also come under significant pressure due to the environmental and occupational health and safety hazards associated with them.

The formulation utilizes Evergreen Solutions unique, new synthetic hydrocarbon technology which possesses outstanding toxicological and ecological profiles. Though the Release Agent was specifically developed for use with polymer modified asphalts, it also performs exceptionally well on conventional hot mix. BioSol ARA's outstanding toxicological and ecological profiles, along with its unique film forming properties and other features, make it ideal for use in this application. It also has Zero VOC (Volatile Organic Compounds) per the guidelines of the California Air Resources Board (CARB). Oxygen Uptake data indicates that BioSol ARA may be classified as biodegradable according to modified version of the CFR 40 method and a SCAS test

Performance Features & Benefits:**Tested and proven.**

- * 100% biodegradable
- * Reduces risk, improves worksite safety
- * No phosphates, acids or distillates
- * Not regulated under dangerous goods
- * 100% active ingredients
- * No special handling requirements
- * No chlorinates, butyls or halogens
- * No carcinogens or hidden toxins
- * Not regulated under DOT guidelines
- * Non-Flammable, Non-corrosive

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BIOSOL ARA**ASPHALT RELEASE AGENT****TECHNICAL DATA****Product Applications:**

With a performance-proven track record to its credit, doesn't your crew deserve *BioSol ARA*?

- * Paving equipment, vehicles & machinery
- * Polymer, SMA, PMA, Smurf, Smack
- * Asphalt mixing equipment
- * Modified D-Mixes, Crumb Rubber
- * Road construction, tar removal
- * Perm flex, Fiber, Conventional asphalts
- * Mining equipment
- * Transportation vehicles
- * Spreaders, dump trucks
- * Asphalt spraying equipment

Directions for Use:

For best results, clean equipment thoroughly before applying release agent. The product should be diluted 10 to 30 parts water (depending on the type of asphalt) to one part of the release agent. For example, when dealing with a typical polymer modified asphalt, a dilution of 10:1 will be effective. Apply by fine mist or light spray covering all areas completely (avoid pooling). The recommended method of application is by use of a mechanical sprayer or any other compatible spray method. For use in a pump sprayer, it is necessary to shake or mix well in the sprayer before use.

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