



## Recommended products

### Asphalt Applications Americas

#### Selection of Adhesion Promoters for Hot Mix

AkzoNobel Asphalt Applications offers a broad range of technologies and solutions including adhesion promoters, emulsifiers and technologies for the road construction and maintenance.

Product	Liquid at Low Temperatures	Concentrates	High Performance	Low Odor
Perma-Tac®Plus	Shaded			
Perma-Tac®99	Shaded	Shaded		
Kling® Beta2700		Shaded		
Redicote®C-2914				Shaded
Redicote®82-S				Shaded
Kling®Beta2550HM		Shaded	Shaded	
Kling®Beta2912		Shaded	Shaded	Shaded
Wetfix®312		Shaded	Shaded	Shaded
Redicote®E-6		Shaded	Shaded	Shaded

- Liquids at low temperature: Low viscosity products, pumpable at 5-10C. Heated storage tanks are not required. The products contain diluents and are typically used at 1.0% by weight of asphalt.
- Concentrates: Products contain no or low levels of diluents and are typically used at 0.5%. Bulk stores may require heat.
- High performance: Products typically are effective at the very lowest use levels and with difficult aggregates.
- Low odor: Products have low volatility at hot mix temperatures.

**Selection of Adhesion Promoters for chip seal (hot applied), patch mixes and emulsions**

Product	Chipseal	Patch Mixes	Emulsions	Siliceous aggregates	Limestone aggregates
Redicote®82-S					
Kling®Beta LV					
Kling®Beta LL					
Kling®Beta NE					
Redicote® AP					
Kling®Beta 101AP					
Redicote®C-150AP					

These products provide “active adhesion ” – the ability of the asphalt to displace water from wet aggregate, needed for applications where the aggregate is cold.

Rapid and medium-setting Cationic Emulsions most often have good adhesion to siliceous aggregates, but anionic emulsions may require the addition of adhesion promoters. Kling Beta 101AP and Redicote C-150AP have been specially formulated for use in anionic emulsions.

**Selection of Bitumen emulsifiers**

Application	Product	Description
<b>Cationic Rapid Set(CRS)Chip Seal</b>	Redicote®E-4819	Pasty product. Provides high emulsion viscosity
	Redicote®E-64R-E	Liquid product. Provides high emulsion viscosity
	Redicote®EM24	100% active liquid product. Provides high emulsion viscosity
	Redicote® E-9	Pasty product. Provides Average Emulsion Viscosity
	Redicote® EM44-A	Liquid product. Provides low emulsion viscosity. Suitable for asphalt that build high emulsion viscosity
	Redicote®RM-007A	100% active liquid product. Provides high emulsion viscosity
<b>Emulsion additives for CRS emulsions</b>	Redicote®E-15	Liquid product. Used as a co-emulsifier with regular cationic emulsifiers increases emulsion viscosity
	Redicote®E-33	Pasty product. Used as Co-emulsifiers with other CRS emulsifiers to give further boost to emulsion viscosity
	Kling®Beta LV	Semi liquid product. Additive for faster curing and setting
	Redicote®AP	Liquid product. Asphalt additive to improve adhesion, emulsion quality and polymer compatibility.
<b>Cationic Slow Set (CSS) slurry seal</b>	Redicote®E-11 E	Liquid product. Suitable for CSS emulsions to be used with medium and reactive aggregates.
	Redicote®E-4868	Liquid product. Suitable for CSS emulsions to be used with reactive aggregates and at higher than normal field temperatures



<b>Cationic Quick Set (CQS) slurry seal and micro-surfacing</b>	Redicote®C-471	Liquid product. Suitable for aggregates with a Methylene Blue (MB) value below of 3 (ISSA method).
	Redicote®C-450	Liquid product. Suitable for standard and reactive aggregates and hot weather conditions.
	Redicote®C-500	For all aggregates and hot weather conditions. Also gives quick cohesion build up.
	Redicote®E-7000	Liquid product. For anionic quick-set slurry.
<b>Cationic Quick-Set slurry and micro-surfacing using phosphoric acid</b>	Redicote®C-320	Liquid product. CQS emulsions made with phosphoric acid suitable for all aggregate types. Compatible with cationic latex.
	Redicote®EM44-A	Liquid product. CQS emulsions made with phosphoric acid suitable for all aggregate types. Compatible with cationic latex.
<b>Break retarders for quick-set slurry seal and micro-surfacing</b>	Redicote®C-450	Liquid product. For slurry seals and micro surfacing based on Redicote C-471, Redicote C-450 and Redicote C-404. Easy to disperse in pre-wet water.
	Redicote®E-11	Liquid product. For slurries based on Redicote E-11 or for other slurries in extreme hot conditions, including phosphoric acid based slurries. Readily water soluble.
	Redicote®E-11HF-1	
<b>Open graded cold Mix (CMS)</b>	Redicote®E-4819	Pasty Product. Produces emulsions with high viscosity. Provides good stability and coating ability.
	Redicote®E-5	Liquid emulsifier for cationic medium-setting and slow-setting asphalt emulsions. Quick curing.
	Redicote®E-11 E	Slower-setting emulsions based on Redicote E-11 are suitable for semi-dense mixes and allow some reduction in solvent content, when a long stockpile life is not required.
<b>Dense Graded Cold Mix (CSS)</b>	Redicote®E-4868	Liquid product. Emulsions provide extended workability time to dense mixes. Emulsions can be combined with cement or lime for improved strength and water resistance.
	Redicote®E-11 E	Liquid product. Gives good quality emulsions with good stability
	Redicote®E-7000	Liquid product. Slow-setting anionic emulsions based on the Redicote E-7000 emulsifier offer an alternative because of its excellent adhesion properties.
<b>Soil Stabilization (CSS)</b>	Redicote®E-4868	Liquid Product. Very slow setting emulsifier for mixes with very reactive aggregates or high fines content.



<b>Cold Recycling (CSS)</b>	Redicote®E-11 E	Liquid product. Gives good quality emulsions with good stability
	Redicote®E-4868	Liquid product . Emulsions can be combined with cement or lime for improved strength and water resistance.
<b>Asphalt Peptizer</b>	Redicote®AP	Liquid product. Asphalt additive improves emulsification, improves adhesion and polymer compatibility.
<b>Anionic prime coat (SS)</b>	Redicote®E-7000	Prime coat emulsions without solvent or the least amount of solvent.
<b>Anionic RS-2, HFMS-2 and MS-2</b>	Redicote®E-62	Emulsifier for anionic rapid and medium-setting asphalt emulsions, Including high-float emulsions.
<b>Asphalt based Seal-coats (CSS)</b>	Redicote®E-4868	Liquid product. CSS emulsions made with Redicote E-4868 are compatible with various fillers used in seal-coat formulations.
<b>Asphalt based Seal-coats(SS)</b>	Redicote®E-7000	Liquid product. Anionic SS emulsions made with Redicote E-7000 are compatible with various fillers used in seal-coat formulations.
	Redicote®E-47	Liquid product. Nonionic emulsifier for the production of nonionic and anionic slow setting asphalt emulsions.
	Redicote®E-6900	Brown Powder. Co-emulsifier and stabilizer for slow-setting anionic emulsions used along with Redicote E-7000 or Redicote E-47.
<b>Seal coat additives</b>	Redicote®I-249	Liquid product. The asphalt or coal tar coatings or seals derived from clay-based emulsions can show water adsorption and re-emulsification tendency. Treatment of the emulsion or sealer with Redicote I-249 markedly reduces water adsorption and re-emulsification.
	Redicote®85TX	Pasty Product. Emulsifier for coal tar sealers. Adhesion promoter for cutback asphalts and binders for patching mixes.

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