

InnRoad™ Protect

Innovations for Road

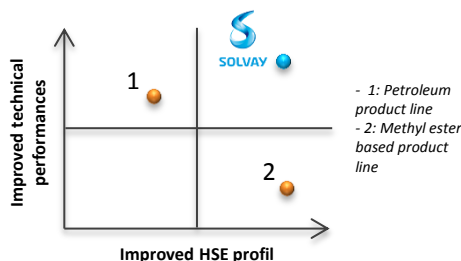


SOLVAY
asking more from chemistry®



A new fluxing agent, highly differentiating compared to the current technologies:

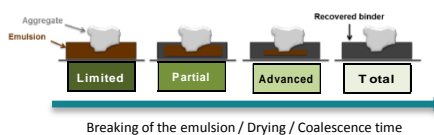
- **Efficient:** Quicker cohesion build-up and faster bitumen properties recovery
- **Versatile:** Can be used in all road technics which use fluxing agents
- **Safe:** No labelling, compared to petroleum based fluxing agents



Efficiency of InnRoad™ Protect

Surface dressing with fluxed modified emulsion

	Emulstyr		Emulvia S		Emulvia Sm	
	Mineral Fluxing agent	InnRoad Protect	Mineral Fluxing agent	InnRoad Protect	Mineral Fluxing agent	InnRoad Protect
Content by weight	X	X - 17%	X	X - 25%	X	X - 22%
Penetrability at 25°C (1/10 mm) NF EN 1426	58	45	44	41	47	42
Softening point (°C) NF EN 1427	56,8	59,2	56,4	57,6	54,2	55,2
Fraass Breaking Point (°C) NF EN 12593	-	-	-12	-12	-12	-13



	Emulstyr		Emulvia S		Emulvia Sm	
	Mineral Fluxing agent	InnRoad Protect	Mineral Fluxing agent	InnRoad Protect	Mineral Fluxing agent	InnRoad Protect
TO + 3h						
TO + 6h						
TO + 1j						

- Better fluxing power (~ -20%), whatever the dosage of polymer in the emulsion
- Faster bitumen properties recovery
- More homogeneous and evident emulsion breaking → Flexibility in the laying

Microsurfacing

Fluxing agent	Mineral fluxing agent	InnRoad Protect
Content by weight (%)	X	X - 40%



Technical validation in-situ performed in october 2017

- Quicker breaking of the emulsion, while maintaining the good workability
- Accelerated curing, leading to a quicker cohesion build-up, and a limitation of the gravelling
- Easier to lay at the end of the season

Additional benefits

- Faster cohesion build-up: better performances at the young age and thus, durability is improved
- Quicker bitumen properties recovery: less bleeding during hot peak season
- Better fluxing power e.g., -45% for microsurfacing
- Extend maintenance seasonality to benefit from the last year credit
- Works for several road technics (with fluxed bitumens and fluxed emulsions)
- Can be stored in mobile asphalt plant
- Biodegradable
- Excellent safety profile for both workers and environment