

ADDITIVE FOR WARM MIX PRODUCTION (WMA)

APPLICATIONS

iWARM-T is an innovative additive designed to elevate the performance and sustainability of asphalt mixtures. This cutting-edge solution enables the production of asphalt mixtures at much lower temperatures than traditional hot mix asphalt (HMA), while increasing workability for laying in more challenging climatic conditions.

iWARM-T doesn't change physical and rheological characteristics of bitumen (penetration degree, softening point – R&B temperature).

iWARM-T ensures high-quality and durable pavements without compromising on performance and is suitable for a wide range of projects, including highways, urban roads, and airport runways.

ADVANTAGES

- 1. Reduced Energy Consumption:** iWARM-T allows an asphalt production at temperatures 20-40°C lower than HMA, resulting in significant energy savings during the production process, leading to cost savings and a smaller carbon footprint.
- 2. Improved Workability:** iWARM-T enhances the workability of asphalt mixtures, making it easier to handle and compact at lower temperatures, reducing the rework or mix rejection, which extend the paving season.
- 3. Enhanced Compaction:** iWARM-T allows for optimal compaction at temperatures as low as 90°C, ensuring a dense, durable pavement structure that boosts road longevity and performance.
- 4. Moisture Resistance:** By improving adhesion between bitumen and aggregates, iWARM-T enhances the moisture resistance of the asphalt mix, minimizing water damage risks and prolonging pavement lifespan.
- 5. Longer Haul Distances:** The ability to lay and compact WMA at lower temperatures allows for longer haul distances without the mix cooling too rapidly. This means that materials can be transported from greater distances, which can reduce the need for local production facilities and their associated environmental impacts.
- 6. Lower Emissions:** WMA production generates less smoke and odor compared to traditional methods, making it more suitable for use in populated areas where air quality is a concern.
- 7. Recyclability:** WMA can incorporate higher percentages of recycled asphalt pavement (RAP) without compromising performance.
- 8. Sustainability:** By cutting energy use, emissions, and waste, iWARM-T supports sustainable construction practices, aligning with efforts to minimize the environmental footprint of infrastructure projects.

METHOD OF USE

The application of iWARM-T is very similar to use of traditional antistripping agents. iWARM-T should be added into a bitumen. The high thermal stability of iWARM-T allows it to be added in to the storage tank, equipped with a mixers, at temperature 170°C, notwithstanding keeping its capabilities and power intact in time. To obtain an optimal efficiency of the product, it is preferable to dose in line on the asphalt mixing plant.

DOSAGE

iWARM-T dosage can vary from 0.35% to 0,5% by bitumen weight according to the type of bitumen used and surrounding conditions (environmental conditions, temperatures of mixture to ensure, percentages of voids to obtain, etc.).

COMPOSITION

Solution of phosphates in vegetal oils.

PHYSICAL-CHEMICAL CHARACTERISTICS

Appearance	Viscous	liquid	Pour point	-6 °C
Colour		From light to dark brown	Flash Point	>180°C
Density at 15°C		0,9-0,95 g/cm ³	Solubility in water	no

STORAGE

iWARM-T can be stored for 36 months in its original, sealed packaging. Depending on the storage temperature the product may assume a different consistency, however the quality of the product will not be compromised. In that case before using it should be carefully remixed.

PACKAGE

The product supplied in 1000 kg IBC tank or 200 kg drums.

WARNING

The dispersion of the pure product into the soil or water must be avoided. For the manipulation of iWARM-T, it is recommended to use security gloves, clothes and protective glasses. For further information on the classification, protection measures and measures in case of fire, please refer to the safety data sheet, available at request.