Eco-Melter LN

Technical Data Sheet (Ref 11/2023)

Product description

Eco-Melter® LN is an environmentally friendly liquid de-icer and anti-skid material. Its applications include roads, real estates, parking areas, industrial areas, ports, mines, etc. Eco-Melter® LN is particularly well suited for applications where good de-icing capability is required, and corrosion and environmental impact are minimized.

Eco-Melter® LN solution contains an optimized composition, therefore it is especially suitable for removing rime and frost and preventing black ice. Suitable for use mainly in mild winter conditions, for example during late autumn and spring.

Appearance	Clear/yellowish liquid
Density (20 °C)	1.13-1.17 kg/dm^3
Viscosity (20 °C)	3 mPas max.
Viscosity (0 °C)	5 mPas max.
pH	10 max

Environmental and toxicological information

Eco-Melter® LN is readily biodegradable and consumes less oxygen than most other de-icers during its decomposition in soil or water system. This enables application even in the most sensitive environmental areas such as groundwater areas.

BOD_5	5 g O_2/l
COD	163 mg O_2/g
EC_{50} (Daphnia magna)	> 2000 mg/l
LD_{50} (mouse, oral)	> 2000 mg/kg

Storage and handling

Eco-Melter® LN is delivered ready to use. It should not be diluted, nor should it be concentrated further. It can be stored in relatively low temperatures (-16 °C)

Eco-Melter® LN is available in bulk tankers and 1000 l IBCs. We recommend storing the product in its original packaging and protected from sunlight to ensure no sign of deterioration even when stored for a long period of time.

Eco-Melter® LN is compatible with most known materials, both related to equipment for storage and equipment for applying the product. Common metals, plastics and rubbers are compatible with Eco-Melter® LN. In connection with carbon steel and cast iron, it must be noted that Eco-Melter® LN maintains moisture on surfaces and affects these materials like rainwater.

Non-compatibility of materials

Eco-Melter® LN shows moderate corrosive effect on zinc, galvanised material (esp. electro-galvanised), soft solders and silver. These materials should therefore be avoided in the longterm contact.

For porous materials (e.g. low-grade concrete), the mechanical stress caused by the general freeze-thaw cycle must be considered.

Application

Eco-Melter® LN is well suitable for both rime and frost removal and preventing black ice during late autumn and spring. The product can also be used for wetting of granular Eco-Melter® S.

When used in advance, Eco-Melter® LN effectively prevents rime and frost formation and reduces snow/ice adhesion to the surfaces. Additionally, the accumulated snow is easier to remove from the surfaces.

Before applying Eco-Melter® LN, mechanical removal of ice and snow is recommended. Therefore, less product is needed for efficient de-icing operation.

Eco-Melter® LN can be used with all known existing spreading equipment for liquid de-icers.

Suggested application rates

Suggested application rates can be found in the table below. It is however important to take into consideration factors like surface material, surface structure, application-method and current weather situation when using the product.

The figure below is therefore only a guide for application and must not be regarded as recommended dosage. Kemion Oy will upon request give advice on application for the respective operator.

	Dry conditions Ice thickness <1mm Light frost		**Wet conditions** Ice thickness <1mm Heavy frost		**Wet conditions** Snow Packed snow		**Wet conditions** Freezing rain Ice thickness 1-3 mm	
Temperature (°C)	Anti-icing	De-icing	Anti-icing	De-icing	Anti-icing	De-icing	Anti-icing	De-icing
0 - (– 5)	25 g/m²	30 g/m²	30 g/m²	40 g/m²	45 g/m²	60 g/m²	50 g/m²	70 g/m²
-5 - (– 10)	30 g/m²	45 g/m²	40 g/m²	55 g/m²	55 g/m²	70 g/m²	60 g/m²	80 g/m²

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