

Technical Data Sheet

Clearway® 6S

Application/Uses

- Airport runway de-icing

Product Description

Eastman's de-icers are marketed under the brand name Clearway. Clearway is acknowledged as one of the leaders in airport runway de-icing and the product range has been developed and expanded to include both liquid and solid formate-based and acetate-based products.

Based on sodium acetate, Clearway 6s is an effective solid runway de-icer with low environmental impact. It has a moderately corrosive effect on zinc, galvanized material, solder and soft solders. We therefore recommend that these materials be avoided.

Clearway 6s melts ice by depressing the freezing point of water and is active at temperatures to -15°C. The irregular-shaped granules will remain where spread. We advise to use the product pre-wetted in combination with corresponding liquid Clearway de-icers to obtain a rapid initial de-icing effect; it can also be applied alone to give a long residual anti-icing effect under extreme weather conditions. The product not only meets all the relevant environmental and ecological requirements but also the AMS 1431 standard. Clearway 6s is classified WGK1* both for its biodegradability and because of its low aquatic toxicity.

When applied with the mechanical facilities of airport maintenance departments, Clearway 6s allows snow and ice to be removed quickly and economically.

* WGK is a German method of classifying chemicals into three (1-3) Water Hazard Classes. Following several tests the Clearway products have been classified as Class 1: low hazard to waters.

Typical Properties

Property	Typical Value, Units
Appearance	White, irregular granule
Bulk Density	600-700 kg/m ³
Particle Size	>2 mm (min 90%) <5 mm (min 90%) <0.5 mm (max 3%)
pH	8.0-11.0

Packaging

Clearway 6s is available in 500 kgs big-bags and 25 kgs bags. Clearway 6s has been specially formulated to prevent caking in the bags.

Storage

We advise to store Clearway 6s in its original bags. When stored properly the shelf life of the product is minimum 2 years from the packaging date.

Handling Precautions

Clearway 6s is delivered ready to use. In dry conditions Clearway 6s can be used pre-wetted with one of the liquid Clearway products.

Clearway 6s is compatible with most known materials used at airports, both related to equipment for storage and equipment for applying the product.

Clearway 6s shows moderate corrosive effect on zinc, galvanized material, solder and silver, and these

materials should therefore be avoided.

The table below list materials that have been shown to be compatible with Clearway 6s.

METALS:

- Stainless Steel
- Carbon Steel
- Aluminium alloys (bare & anodized)
- Magnesium alloys (wrought, dichromate treated and epoxy coated)
- Titanium
- Cadmium plated steel
- Copper (acid pickled)
- Bronze (copper/tin)

POLYMERS:

- Polyethylene Plastics
- Glass fiber reinforced polyester (high pH resistant resin)
- Polymethacrylate
- Acrylic plastic
- Polychloroprene
- Silicone
- Vulcanized butadiene-acrylonitrile
- Vulcanized butadiene-propylene
- Painted surfaces
- Bitumen

Environmental & Toxicology

All tests are conducted according to international guidelines and specifications, and are performed by test institutes recognized by the industry as one of the leaders in their field of expertise. Clearway 6s is assigned as Class 1 (WGK), which means it is in general not water endangering.

BOD5		320 mg O ₂ /g
COD		561 mg O ₂ /g
Acute toxicity to Daphnia Magna	EC50 (48 h)	> 2.000 mg/l
Acute toxicity to Fish	LC50 (48 h)	> 2.000 mg/l
Acute oral toxicity	LD50 (rat)	> 2.000 mg/kg

Applications

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. We will give advice upon request on application for the respective airport.

In the event of freezing rain, a preventive treatment of runways, ramps and taxiways is highly recommended. Applying Clearway 6s before the start of a light snow or ice event prevents frozen precipitation from accumulating. Since Clearway 6s is both an anti-icing agent as well as a deicer, timely application of Clearway 6s is essential to the continued use of operative surfaces.

Careful monitoring of meteorological conditions will keep you ahead of storm events, and guide you in preventive application of the product.

Clearway 6s can be used with all known existing spraying equipment for solid deicers.

To achieve maximum performance, Clearway 6s can be pre-wetted with 25-50% w/w liquid Clearway deicer.

Mechanical removal of ice and snow in front of the de-icing operation will reduce the amount of Clearway 6s needed for an efficient operation.

SUGGESTED APPLICATION RATES

	No mechanical snow clearing			After / During mechanical snow clearing	
	Frost or Freezing rain	Frost / Thin Ice	Frost/Snow	Wet conditions	Heavy wet conditions
Temperature (°C)	Anti-Icing	De-Icing	De-Icing	De-Icing	De-Icing
0 to - 18°C	30 gr/m ²	30 gr/m ²	60 gr/m ²	45 gr/m ²	60 gr/m ²

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