

Technical Data Sheet - Clearway® SF3 Runway Deicer

Product description

Clearway® SF3 is an environmentally friendly solid sodium formate based runway deicer. Due to its irregular shape, it has excellent de-icing properties either it is used by itself or in combination with liquid Clearway products. The product meets the requirements of the AMS1431B specification.

When applied with the mechanical facilities of airport maintenance departments, Clearway® SF3 allows snow and ice to be removed quickly and economically

Clearway® SF3 melts the ice by depressing the freezing point of water, and will be active at temperatures down to – 15°C

Appearance	White, irregular granule
Bulk density	700 – 800 kg/m ³
Particle size	1.5 – 4 mm
PH (10% solution)	8.0 – 11.0

Environmental and toxicology information

Tests have been performed according to the AMS 1431B standard by Scientific Material International (SMI) in USA. Further test are currently performed according to OEDC guidelines by the Hygiene Institute des Ruhrgebiets in Germany.

BOD₅		<100 mg O ₂ /g
COD		210 mg O ₂ /g
Acute toxicity to Daphnia Magna	LC ₅₀ (48 h)	6.250 mg/l
Acute toxicity to Fish	LC ₅₀ (48 h)	4.125 mg/l
Acute oral toxicity	LD ₅₀ (mouse)	11.200 mg/kg

Storage and handling

Clearway® SF3 is delivered ready to use. Under dry conditions Clearway® SF3 can be used pre-wetted with one of the liquid Clearway products. Clearway® SF3 is available in 500 kg big-bags and 25 kg bags. Clearway® SF3 has been specially formulated to prevent caking in the bags. We advise to store Clearway® SF3 in its original bags.

Clearway® SF3 is compatible with most known materials used at airports, both related to equipment for storage and equipment for applying the product.

The table below list materials that have been shown to be compatible with Clearway® SF3

<p>METALS</p> <ul style="list-style-type: none"> 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) 	<p>POLYMERS</p> <ul style="list-style-type: none"> Polyethylene Plastics Glass fiber reinforced polyester (high pH resistant resin) Polymethacrylate Acrylic plastic Polychloroprene Silicone Vulcanized butadiene-acrylonitrile Vulcanized butadiene-propylene Painted surfaces Bitumen
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Material non-compatibility

Clearway[®] SF3 shows moderate corrosive effect on zinc, galvanized material, solder and silver, and these materials should therefore be avoided.

Application

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. Kemira will upon request give advise 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[®] SF3 before the start of a light snow or ice event prevents frozen precipitation from accumulating. Since Clearway[®] SF3 is both an anti-icing agent as well as a deicer, timely application of Clearway[®] SF3 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[®] SF3 can be used with all known existing spreading equipment for solid deicers.

To achieve maximum performance, Clearway[®] SF3 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[®] SF3 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
	Anti-Icing	De-Icing	De-Icing	De-Icing	De-Icing
0 to - 15°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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