PRODUCT DATA SHEET

Xtra85 Calcium Chloride

High concentration calcium chloride

DESCRIPTION

Xtra85 Calcium Chloride is a purified, concentrated inorganic salt (83-85%). It is designed to melt ice and snow rapidly at temperatures as low as -32 °C (-26 °F). Its high concentration ensures strong performance, while the solid form allows for easier handling, storage, and dosing. Xtra85 Calcium Chloride meets or exceeds ASTM D98 and AASHTO M144 requirements (Type S, Grade 1, Class A).

USES

- Ideal for ice and snow melting on on roads, sidewalks, driveways, and parking lots. It generates heat for faster melting at temperatures as low as -32 °C (-26 °F). It can be mixed with rock salt, sand, or gravel to improve their performance.
- It can be used as dust suppressant on unpaved surfaces, by absorbing moisture and binding dust particles.
- When used in solution, it is effective for tire weighting, brine refrigeration, and as an ingredient in pesticide formulations.

FEATURES

- High-purity, calcium chloride for efficient performance
- Allows lower application rates than conventional 77–80 % flakes
- Releases heat for faster ice and snow melting across a wide temperature range
- Absorbs moisture to suppress dust on unpaved surfaces.

CERTIFICATES AND TEST REPORTS

Xtra85 Calcium Chloride meets or exceeds ASTM D98 and AASHTO M144 standards (Type S, Grade 1, Class A).

PRODUCT INFORMATION

Composition

Characteristic	Typical Value
Calcium chloride assay	> 83 %
Flake size distribution	
Smaller than 0.6 mm (0.024 in)	< 5 %
From 0.6 mm (0.024 in) to 4.8 mm (0.2 in)	> 75 %
Larger than 4.8 mm (0.2 in)	< 20 %
ASTM D98 purity requirements*	
Total alkali chlorides (as NaCl)	< 6 %
Total magnesium (as $MgCl_2$)	> 0.5 %
Calcium hydroxide	> 0.2 %

*On an active ingredient basis

Packaging	20 kg (44 lb) bag 35 kg (77 lb) bag
Shelf life	3 years
Storage conditions	Solid calcium chloride is hygroscopic and deliquescent, it can absorb moisture from the air, potentially converting to liquid brine. To maintain product quality, store in a dry area and protect from excessive moisture. Opened bags should be tightly resealed after each use. For full safety and handling information, refer to the current Safety Data Sheet (SDS).

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LIMITATIONS OF USE

- Although calcium chloride can accelerate and enhance concrete hydration, Sika does not recommend its use or that of any chloride-containing admixture in concrete. Such use is strictly prohibited in reinforced or prestressed concrete.
- For ice melting applications, do not use Xtra85 Calcium Chloride on concrete less than one year old, precast or pre-stressed concrete, masonry, exposed aggregate, or deteriorated surfaces. Avoid use on wood, metal, or leather articles. Melting water may refreeze in porous concrete, causing internal pressure and potential scaling or cracking.
- For solution preparation, always add Xtra85 Calcium Chloride to water, never pour water onto the product. Dissolving Xtra85 Calcium Chloride in water generates a significant increase in temperature, which may cause burns. Handle with care and use appropriate protective equipment.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

- **Ice melting:**

For best results, remove loose snow before spreading. Apply Xtra85 Calcium Chloride at 0.07–0.14 kg/m² (0.014–0.029 lb/ft²) on asphalt or concrete surfaces designed for freeze–thaw conditions. Avoid excessive application, as it may create slippery surfaces.

- **Dust control:**

Apply Xtra85 Calcium Chloride at 0.5–0.7 kg/m² (0.10–0.14 lb/ft²), depending on surface and weather conditions. For best results, apply after light rainfall or light surface watering. Avoid use on paved areas, as the surface may become slippery when wet.

- **Tire Ballast:**

Used as liquid ballast, calcium chloride improves traction and extends tire life.

- **Solution preparation:**

Xtra85 Calcium Chloride releases heat when it is dissolved. Make sure that the dissolving vessel is appropriately constructed for handling hot solutions. Fill the vessel with cool water less than 26 °C (80 °F), then slowly add Xtra85 Calcium Chloride while continuously stirring. Solids kept in motion will dissolve quickly; however, solids that sit motionless on the vessel bottom may form a hard cake that will dissolve more slowly.

Making 100 Liters of solution from Xtra85 Calcium Chloride*:

% $CaCl_2$ Target	Specific Gravity at 26 °C	Density at 25 °C (kg/L)	Weight of Product to Dissolve (kg)	Water Volume (L)	Expected Temp. Rise (°C)	Solution Freeze Point (°C)
26	1.251	1.247	38	87	34	-35
28	1.275	1.271	42	86	37	-43
30	1.298	1.294	46	84	40	-47
32	1.322	1.318	50	82	43	-27
34	1.345	1.341	54	81	44	-12
36	1.369	1.365	58	79	49	-1
38	1.392	1.388	62	77	48	+9
40	1.416	1.412	67	75	49	+16
42	1.439	1.435	71	73	49	+21

Making 26.4 US Gallons of solution from Xtra85 Calcium Chloride*:

% $CaCl_2$ Target	Specific Gravity at 79 °F	Density at 77 °F (lb/US Gal)	Weight of Product to Dissolve (lb)	Water Volume (US Gal)	Expected Temp. Rise (°F)	Solution Freeze Point (°F)
26	1.251	10.41	83.8	22.98	93.2	-31
28	1.275	10.61	92.6	22.72	98.6	-45.4
30	1.298	10.80	101.4	22.19	104	-52.6
32	1.322	11.01	110.2	21.66	109.4	-16.6
34	1.345	11.19	119.1	21.4	111.2	+10.4
36	1.369	11.39	127.8	20.87	120.2	+30.2
38	1.392	11.58	136.7	20.34	118.4	+48.2
40	1.416	11.78	147.7	19.81	120.2	60.8
42	1.439	11.98	156.5	19.28	120.2	+69.8

*To make up solution volumes different from those used as the basis above, simply adjust the “Weight of Product to Dissolve” and the “Water Volume” numbers in the tables by the ratio of the desired solution volume to 100.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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