

DIN EN 16811-2:2016-10 (E)

Winter service equipment and products - De-icing agents - Part 2: Calcium chloride and Magnesium chloride - Requirements and test methods

Contents		Page
European foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Requirements for calcium chloride and magnesium chloride	7
4.1	Chemical requirements	7
4.1.1	Calcium chloride	7
4.1.2	Magnesium chloride	8
4.2	Sieve analysis	8
4.2.1	Calcium chloride	8
4.2.2	Magnesium chloride	9
4.3	General requirements	9
4.4	Packaging and marking	10
4.5	Material safety data sheet and product description	11
5	Requirements for solutions of calcium chloride and magnesium chloride	11
5.1	Chemical Requirements	11
5.1.1	Calcium chloride	11
5.1.2	Magnesium chloride	11
5.2	General requirements	12
5.3	Marking, material safety data sheet and product description	13
6	Requirements for blends of calcium chloride and magnesium chloride with sodium chloride and/or potassium chloride	13
6.1	General	13
6.2	Chemical requirements	13
6.2.1	General	13
6.2.2	Solid blends	13
6.2.3	Liquid blends	13
6.3	Sieve analysis	14
6.4	General Requirements	14
6.5	Packaging, marking, material safety data sheet and product description	14
7	Sampling	14
8	Test methods	15
8.1	General	15
8.2	Calcium chloride	15
8.3	Magnesium chloride	15
8.4	Other chlorides	15
8.4.1	Other chlorides (magnesium chloride, potassium chloride, sodium chloride) in calcium chloride	15
8.4.2	Other chlorides (calcium chloride, potassium chloride, sodium chloride) in magnesium chloride	15
8.5	Sodium chloride	16

8.6	Potassium chloride	16
8.7	Sulfate	16
8.8	Water insoluble matter	16
8.9	Sieve analysis	16
8.10	Heavy metals	16
8.11	Hydrocarbons	16
8.12	Total organic carbon (TOC)	16
8.13	pH	17
8.14	Bulk density	17
8.15	Density	17
Annex A (normative) Product descriptions		18
A.1	Product description for calcium chloride	18
A.2	Product description for magnesium chloride	20
A.3	Product description for blends of calcium chloride and magnesium chloride with sodium chloride and/or potassium chloride	23
Annex B (normative) Sampling		26
B.1	Solid form	26
B.1.1	Package shipments	26
B.1.2	Bulk shipments	26
B.2	Liquid form	26
B.3	Labelling and distribution of samples	26
B.4	Sampling report	27
Annex C (normative) Analytical methods -- Determination of calcium chloride by complexometry ...		28
C.1	Scope	28
C.2	Principle	28
C.3	Reagents	28
C.4	Apparatus	29
C.5	Procedure	29
C.5.1	Solid samples	29
C.5.2	Liquid samples	29
C.5.3	Titration	29
C.6	Calculation	30
Bibliography		31