

Pacific Northwest Snow Fighters (PNS) Qualified Product List - PRODUCTS
Date of Listing: October 11, 2011

Category 1 - Corrosion Inhibited Liquid Magnesium Chloride

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
Magnum*	America West	17	29%	5/19/1998
Iceban 200*	Earth Friendly Chem.	8.4	26%	8/15/2002
Meltdown - Shield LSW*	Envirotech Services Inc.	23.5	30%	10/8/2002
Caliber M1000 AP	Envirotech Services Inc.	20.8	28%	8/2/2004
Meltdown with Shield AP	Envirotech Services Inc.	25.9	30%	8/2/2004
Meltdown Wendover AP	Envirotech Services Inc.	25.9	29%	6/22/2005
Hydro-Melt Green	Cargill	24.3	28.5%	8/1/2005
Meltdown APEX with Shield AP	Envirotech Services Inc.	25.1	30%	1/25/2006
FreezGard CI Plus	North American Salt	12.2	30%	8/28/2006
Ice B'Gone II HF	Sears Ecological Appl.	28.6	25%	8/9/2007
FreezGard LITE CI Plus	North American Salt	12.3	27%	6/13/2011
HydroMelt Liquid Deicer	Cargill	28	28.6%	8/15/2011
FreezGard CI Plus Sub Zero	North American Salt	14.1	27.5%	10/11/2011

Note-Iceban 200 was formerly Iceban Performance Plus M

Those products marked with an asterisk (*) indicates that the stratification can be seen and agitation is required.

Category 2 - Corrosion Inhibited Liquid Calcium Chloride

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
Liquid Dow Armor	Dow Chemical	26	30%	6/25/1999
Winter Thaw DI	Tetra Technologies	16.5	32%	9/13/1999
Corguard TG	Tiger Calcium Services	27.7	29%	1/9/2001
Calcium Chloride with Boost	America West	12.6	32%	6/5/2006
Road Guard Plus	Tiger Calcium Services	16	25%	6/5/2006

**Product has been re-qualified.

Those products marked with an asterisk (*) indicates that the stratification can be seen and agitation is required.

Category 3 - Non Corrosion Inhibited Liquid Calcium Magnesium Acetate

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
Liquid CMA 25%	Cryotech	-11	25%	5/19/1998
SC CMA 25%	Sure Crop Farm Services	-2.8	25%	9/13/1999

Category 4 - Corrosion Inhibited Solid Sodium Chloride

Category 4A- Corrosion Inhibited Solid Sodium Chloride (Corrosion Percent Effectiveness of 30% or less)

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
Inhibited Ice Slicer	Envirotech	30	N/A	5/19/1998
CG-90 Non-Phosphate 2.8%	Cargill	27	N/A	5/19/1998
IMC CI SALT A 3.5	North American Salt	28	N/A	8/21/2001
IMC CI SALT B 4.5	North American Salt	18.6	N/A	8/21/2001
Clear Lane PNS Enhanced Deicer	Cargill	28.9	N/A	8/1/2005
Ice Slicer Elite	Envirotech	16	N/A	8/1/2005

Category 4B- Corrosion Inhibited Solid Sodium Chloride (Corrosion Percent Effectiveness 31% to 85%)

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
Ice Slicer RS	Redmond	80	N/A	10/13/2009
Ice Slicer Super Blend Plus	Redmond	60.4	N/A	10/13/2009

Category 5 - Corrosion Inhibited Sodium Chloride Plus 10% Magnesium Chloride (Solid)

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
CG-90 Surface Saver 10%	Cargill	15	N/A	5/19/1998
Meltdown 10	Envirotech	30	N/A	5/19/1998
Surface Saver PNS 10%	Cargill	27.2	N/A	8/21/2001

Category 6 - Corrosion Inhibited Sodium Chloride Plus 20% Magnesium Chloride (Solid)

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
CG-90 Surface Saver 22%	Cargill	26	N/A	5/19/1998
Meltdown 20	Envirotech	27	N/A	8/8/2000
Surface Saver PNS 20%	Cargill	22	N/A	8/21/2001

Category 7 - Calcium Magnesium Acetate (Solid)

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
CMA	Cryotech	-7	96%	5/19/1998

Category 8 - Non Corrosion Inhibited Solid Sodium Chloride

CATEGORY 8A-B Standard Gradation, Brining Salt, Insoluble Material less than 1%, and Moisture less than 0.5%.

Product Name	Manufacturer		Date Approved
NASC Salt (Coarse)	North American Salt		4/21/2006
Bulk Coarse Solar	Morton Salt		4/21/2006
Intrepid Coarse Salt	Intrepid Potash		6/3/2010

CATEGORY 8A-R Standard Gradation, Road Salt, Insoluble Material less than 10%, and Moisture less than 0.5%.

Product Name	Manufacturer		Date Approved
Cargill Dry Salt	Cargill		6/1/1998
Mineral Melt	NSC Minerals		6/1/1998
NASC Salt (Coarse)	North American Salt		8/8/2000
Kayway Salt (Coarse)	Kayway Industries		12/23/2003
Bulk Coarse Solar	Morton Salt		4/26/2005
Ice Slicer Super Blend	Redmond Mineral		8/2/2006
ISCO Bulk Rock Salt	SPL		6/23/2008
Natural Alternative Ice Melt	NaturaLawn of America		5/17/2010
Intrepid Coarse Salt	Intrepid Potash		6/3/2010

CATEGORY 8B - Insoluble Material less than 10%, and Moisture less than 5.0%.

Product Name	Manufacturer	%Moisture	Date Approved
Ice Slicer RS	Redmond Mineral	1.95	2/9/2003
QwikSalt	North American Salt	2.54	6/30/2004
Type C Treated Salt	Broken Arrow	2.94	8/2/2004
SS-5.0	Shelton's Salt	0.90	9/16/2004
Bulk Type C Road Salt	Morton Salt	2.63	4/26/2005
ESSA Salt	ESSA	0.84	6/26/2007
Rapid Thaw	Broken Arrow	2.49	3/4/2009

CATEGORY 8C-B Fine Gradation, Brining Salt, Insoluble Material less than 1%, and Moisture less than 0.5%.

Product Name	Manufacturer		Date Approved
Mineral Melt	NSC Minerals		3/1/2006
Quick Brine RF	NSC Minerals		3/1/2006
Rocanville Standard Road Salt	NSC Minerals		10/6/2006
Medium Solar Salt	North American Salt		8/12/2009
Mixing Solar Salt	North American Salt		8/12/2009
Intrepid Medium Salt	Intrepid Potash		6/3/2010

CATEGORY 8C-R, Fine Gradation, Road Salt, Insoluble Material less than 10% and Moisture less than 0.5%.

Product Name	Manufacturer			Date Approved
Mineral Melt	NSC Minerals			3/1/2006
Quick Brine VS	NSC Minerals			3/1/2006
Quick Brine RF	NSC Minerals			3/1/2006
Rocanville Standard Road Salt	NSC Minerals			10/6/2006
Medium Solar Salt	North American Salt			8/12/2009
Mixing Solar Salt	North American Salt			8/12/2009
Intrepid Medium Salt	Intrepid Potash			6/3/2010
Ice Slicer Near Zero	Redmond Minerals			12/3/2010

Category 9 - Corrosion Inhibited Liquid Sodium Chloride

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
Salt Brine + Brine Cl	Cargill	25.4	23.3	8/12/2009

Category 10 - Corrosion Inhibited Liquid Sodium Chloride Plus Calcium Chloride

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
TC Econo*	Tiger Calcium Services	20.5	20/2 ⁽¹⁾	8/12/2009
ESB	America West	23.8	17.3/2.7 ⁽²⁾	12/3/2010
Beet Heet Severe	K-Tech Specialty Coatings	21.1	15.3/5.4 ⁽³⁾	7/13/2011

1 - 20% NaCl and 2% CaCl₂

2- 17.3% NaCl and 2.7% CaCl₂

3 - 15.3% NaCl and 5.4% CaCl₂

Category 11 - Corrosion Inhibited Liquid Chloride Blended Brines

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
Road Guard Plus*	Tiger Calcium Services	16	27 ⁽¹⁾	8/12/2009
Road Guard TC	Tiger Calcium Services	21.3	32.1 ⁽²⁾	8/12/2009
Road Guard XCEL	Tiger Calcium Services	20.3	33.2 ⁽³⁾	8/12/2009

1 - 25% Calcium Chloride and 2% Magnesium Chloride

1 - 27.3% Calcium Chloride and 4.8% Magnesium Chloride

2 - 28.5% Calcium Chloride and 4.7% Magnesium Chloride

Those products marked with an asterisk (*) indicates that the stratification can be seen and agitation is required.

Pacific Northwest Snow Fighters (PNS) Qualified Product List - INHIBITORS
Date of Listing: March 21, 2012

Category A1 - Corrosion Inhibitor for Sodium Chloride Brine (Minimum 21% NaCl)

Product Name	Manufacturer	% NaCl		% Additive	Class	% Effectiveness	Date Approved
ArtiClear CI Plus	North American Salt	21.2		5	2	21.3	12/3/2010
Watershed CI	Rivertop Renewables	22.1		5	1	23.2	3/21/2012

Category A2 - Corrosion Inhibitor for Sodium Chloride and Calcium Chloride Brine (Minimum 15% NaCl & 2% CaCl₂)

Product Name	Manufacturer	% NaCl	% CaCl₂	% Additive	Type/Class	% Effectiveness	Date Approved
Boost SB	America West	17.3	2.7	25	1 / 2	23.8	12/3/2010

Category A3 - Corrosion Inhibitor for Sodium Chloride (Minimum 15% NaCl)

Product Name	Manufacturer	% NaCl		% Additive	Class	% Effectiveness	Date Approved
ArtiClear Gold	North American Salt	18.8		15	2	26.6	12/3/2010

PNS Experimental Category - Approved Liquid Corrosion Inhibited Products

Product Name	Manufacturer	Corrosion Rate % Effectiveness	% Concentration	Date Approved
CF-7	Cryotech	0.0	50 ⁽¹⁾	6/20/2001
CMAK	Cryotech	0.0	12.5/25 ⁽²⁾	6/20/2001
NC 3000	Glacial Technologies	-3.5	25 ⁽³⁾	3/13/2002
Alpine Ice-Melt	Nachurs Alpine Sol. Ind.	-4.8	50 ⁽⁴⁾	6/23/2008
Fusion 60/40	Eco Solutions	22.1	15 ⁽⁵⁾	11/23/2009
Geomelt S	Geomelt USA	23.4	15 ⁽⁶⁾	3/5/2010

1 - Potassium Acetate

2 - 12.5% Calcium Magnesium Acetate and 25% Potassium Acetate

3 - The product contains a 25% Potassium Acetate concentration. The product also contains 30% Carbohydrate material which is still under consideration as an active ingredient but at this time has not be included.

4 - Potassium Acetate

5 - 15% Sodium Chloride, blend of 60% Fusion/ 40% Salt Brine

6 - 15% Sodium Chloride, blend of 25% Geomelt 55 and Salt Brine.

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