





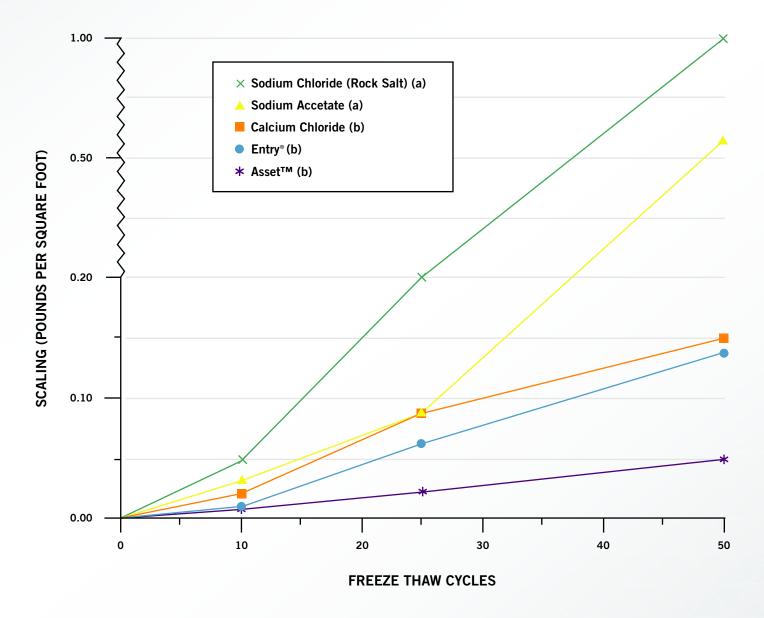
Resource Guide





ASTM C672

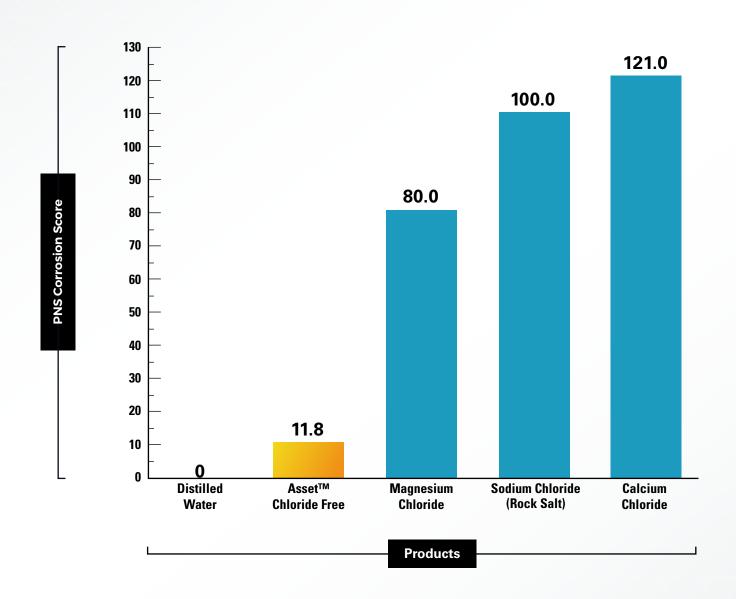
Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals.



- (a) The evaluation of salt scaling of concrete by freeze and thaw test method with small sample and the affect of magnesium salt on scaling. Iwate University, Japan. Hanehara, Oyamada, Kanno, Nakamura.
- (b) Laboratory Evaluation of Deicing Agents, Revision 1, CTL Group Project Number 052148. September 30, 2020.



PNS¹ Corrosion Score Comparison

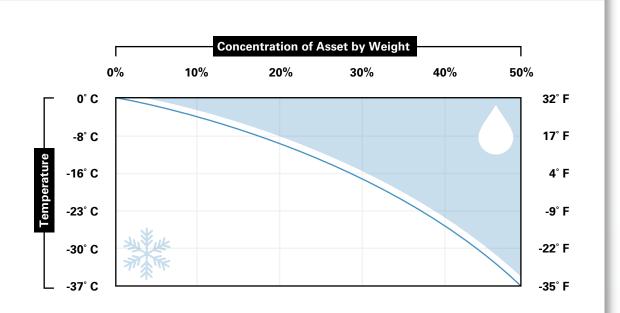


^[1] For a list of PNS Scores for various products as well as testing methodology visit <u>clearroads.org/qualified-product-list/.</u>



Product Attributes (The Stats)

Freeze Curve



Product Attributes

Product Attributes	Asset
Percentage Chlorides	0%
Percentage Urea	0%
Appearance	Brown
Specific Gravity at 68° F (20° C)	1.34
Density (Pounds/Gallon) at 68° F (20° C)	11.2
Recommended Standard Application Rate (per Acre)	29 Gallons

^{*}A number of conditions can affect product performance including surface area, surface temperature, surface grade, air temperature, application timing and rate.



SAFETY DATA SHEET Name of Product:

Product #: 1000133

Revision Date: November 17, 2020

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Asset

SYNONYMS: Deicing Fluid, Anti-icing Fluid.

PRODUCT CODES: 1000144

MANUFACTURED FOR: Secure Winter Products, LLC

CORPORATE ADDRESS: PO Box 523

Harleysville, PA 19438

PHONE: 888-408-5433

EMERGENCY PHONE: United States: Chemtrec: 800-424-9300 (CCN# 15189)

Canada: CANUTEC: 613-996-6666

I TECH 877-324-4402

CHEMICAL NAME: Potassium Formate

CHEMICAL FAMILY: Organic acid, potassium salt

CHEMICAL FORMULA: HCOOK

PRODUCT USE: Deicing fluid, Anti-icing fluid.

SECTION 2: HAZARDS IDENTIFICATION

GHS ELEMENTS:

Hazard Classification: Acute Toxicity – Inhalation (Category 5).

Eye Irritation (Category 2B).

Pictogram: None

Signal Word: Warning

Hazard Statements: May be Harmful if swallowed

Precautionary Statements: Wash skin throughly after handling. Wear protective gloves, clothing, eye and face protection.

If swallowed, rinse mouth. Do NOT induce vomiting.

If on hair or skin, remove all contaminated clothing and rinse skin with water.

If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes, rinse carefully with water for several minutes. Remove contact lenses, if able and continue rinsing.

Immediately call a poison center or doctor/physician. See First Aid instruction for specific treatment.

Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation.
SKIN: May cause irritation.
INGESTION: May cause irritation.
INHALATION: May cause irritation.

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ACUTE HEALTH HAZARDS: Possible skin and eye irritation.

CHRONIC HEALTH HAZARDS: None known.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

CARCINOGENICITY:

OSHA: No ACGIH: No NTP: No IARC: No CA Prop 65: No

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

CAS No. INGREDIENT: Potassium Formate 25% - 35% 590-29-4 Adjuvant Blend 15% - 25% Proprietary

*The exact concentration is being withheld as a trade secret.

SARA 313 REPORTABLE: N/A

OSHA PEL-TWA: N/A OSHA PEL STEL: N/A OSHA PEL CEILING: N/A ACGIH TLV-TWA: N/A ACGIH TLV STEL: N/A ACGIH TLV CEILING: N/A

SECTION 4: FIRST AID MEASURES

EYES: Flush with water immediately and thoroughly for 15 minutes. If irritation persists, seek medical attention.

SKIN: Thoroughly wash with soap and water. If irritation persists, seek medical attention.

INGESTION: Call a physician immediately. Do not induce vomiting without medical advice.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: Not flammable.

FLASH POINT:

>212 C°: >100

METHOD USED: Closed cup.

AUTOIGNITION TEMPERATURE:

F°: >750

C°: >400

THERMAL DECOMPOSITION: >360°C

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NFPA HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: 0 REACTIVITY: 0 OTHER: 0

HMIS HAZARD CLASSIFICATION

HEALTH: FLAMMABILITY: 0 REACTIVITY: 0 PROTECTION: В

EXTINGUISHING MEDIA: Water or media suitable for surrounding material.

SPECIAL FIRE FIGHTING PROCEDURES: Proper safety equipment to include SCBA operated in positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Carbon monoxide and/or carbon dioxide may be released.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and/or carbon dioxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Confine the spill to a diked area or sump, if possible, and recover as much of the product as

possible. Place in suitable containers. Dispose in accordance with all federal, state, and local

regulations.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store in suitable containers made of mild steel, stainless steel, plastic or fiberglass.

OTHER PRECAUTIONS: Always use good safety and industrial hygienic practices.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good hygienic operating protocols are always recommended.

Provide local ventilation as necessary. **VENTILATION:**

RESPIRATORY PROTECTION: If exposure limits are exceeded or irritation is experienced, approved respiratory protection

should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where

exposure limits are not known wear approved respiratory protection.

EYE PROTECTION: Safety goggles.

Protective gloves. SKIN PROTECTION:

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: Wash hands thoroughly after handling.

EXPOSURE GUIDELINES: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear.

ODOR: Mild odor.

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Name of Product : Page 17, 2020

ODOR THRESHOLD: No data available.

PHYSICAL STATE: Liquid.
pH AS SUPPLIED: 6.5

MELTING POINT: Unknown

FREEZING POINT: -30 °F, -34 C°

BOILING POINT: Unknown

FLASH POINT: >212°F, >100°C

METHOD USED: Tagged Closed Cup

EVAPORATION RATE: N/A

FLAMMABLE LIMITS IN AIR: Not flammable.

VAPOR PRESSURE (mmHg): No data available.

VAPOR DENSITY (AIR = 1): No data available.

SPECIFIC GRAVITY (20°C): 1.33

DENSITY (20°C): 11.1 lb/gallon (1.33 kg/L)

SOLUBILITY IN WATER: Complete

PARTITION COEFFICIENT: n-octanol/water – N/A

PERCENT SOLIDS BY WEIGHT: 50%

PERCENT VOLATILE: 50%

VOLATILE ORGANIC COMPOUNDS (VOC): None

AUTOIGNITION TEMPERATURE: N/A

THERMAL DECOMPOSITION: N/A

VISCOSITY: 9.6 cPs @20°C

SECTION 10: STABILITY AND REACTIVITY

STABLE UNSTABLE

Χ

STABILITY:

CONDITIONS TO AVOID (STABILITY): Extreme heat.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids or strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur.

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SECTION 11: TOXICOLOGICAL INFORMATIO N

TOXICOLOGICAL INFORMATION: No data available

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Reclaim and reuse as much as possible. Dispose in accordance with all federal, state, and local regulations.

RCRA HAZARD CLASS: No.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:

GROUND TRANSPORTATION: Not regulated for transport

WATER TRANSPORTATION (IMDG): Not regulated for transport

AIR TRANSPORTATION (IATA): Not regulated for transport

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SECTION 15: REGULATORY INFORMATION

CHEMICAL INVENTORY LISTS:

TSCA (U.S. Toxic Substances Control Act): Yes TSCA Section 12(b): No DSL (Canadian Domestic Substances List): Yes EINCS (European Inventory of Existing Commercial Chemical Substances): Yes AICS (Australia): Yes IECSC (China): Yes ENCJ (Japan): Yes

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): No

CLEAN AIR ACT (CAA): Contains no priority air pollutants.

CLEAN WATER ACT (CWA): Contains no priority water pollutants.

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Secure Winter Products, LLC will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.



