



MATERIAL SAFETY DATA SHEET

Name of Product:

ALPINE KF-12W

Product #: F11
Revision Date: June 4, 2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ALPINE KF-12W
SYNONYMS: Calcium Nitrate/Calcium Chloride Solution
PRODUCT CODES: F11

MANUFACTURER: NACHURS ALPINE SOLUTIONS®
DIVISION: New Hamburg
ADDRESS: 30 Neville Street, New Hamburg, ON N3A 4G7 CANADA
PHONE: 1-519-662-2352

EMERGENCY PHONE: 1-877-324-4402 (I tech)
CHEMTREC PHONE: 1-800-424-9300 (United States)
CANUTEC: 1-613-996-666 (Canada)
FAX PHONE: N/A

CHEMICAL NAME: Calcium Nitrate/Calcium Chloride Solution
CHEMICAL FAMILY: Inorganic Salt
CHEMICAL FORMULA: Ca(NO₃)₂ and CaCl₂

PRODUCT USE: Oil Industry


PREPARED BY: NACHURS ALPINE SOLUTIONS®

SECTION 2: HAZARDS IDENTIFICATION

GHS ELEMENTS:

Hazard Classification: Serious Eye Irritation (Category 2A).
Acute Toxicity Oral (Category 4).

Pictogram:



Signal Word: Warning

Hazard Statements: Causes serious eye irritation.
Harmful if swallowed.

Precautionary Statements: Wear protective gloves, clothing, eye and face protection.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
If in eyes, rinse cautiously with water for several minutes. Remove contacts if present and easy to do. Continue rinsing. Immediately call a poison center, doctor or physician and seek medical attention.
If swallowed, rinse mouth. Do NOT induce vomiting. Call a poison center, doctor or physician if you feel unwell.

POTENTIAL HEALTH EFFECTS

EYES: May cause severe irritation with corneal injury.
SKIN: May cause irritation. Can cause severe irritation to previously abraded skin.
INGESTION: May cause gastrointestinal irritation or ulceration, especially in large amounts.
INHALATION: Mists may cause irritation to upper respiratory tract.

ACUTE HEALTH HAZARDS: See Above.

CHRONIC HEALTH HAZARDS: Prolonged or repeated exposure to skin may cause irritation/burns. Risk of nitrate toxicity, especially with ingestion of large quantities.

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MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

CARCINOGENICITY: No data reported

OSHA: No data reported

ACGIH: No data reported

NTP: No data reported

IARC: No data reported

OTHER: No data reported

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	Calcium Nitrate	Calcium Chloride	Proprietary Additive	Water
CAS NO.:	10124-37-5	10043-52-4		7732-18-5
% WT:	34-38%	18-22%	2-2.4%	37.6-46%
% VOL:				
SARA 313 REPORTABLE:	N/A			
pmm:	N/A			
mg/m3:	N/A			
OSHA PEL-TWA:		15 mg/m ³ for Calcium Chloride		
OSHA PEL STEL:		N/A		
OSHA PEL CEILING:		N/A		
ACGIH TLV-TWA:		10 mg/m ³ for Calcium Chloride		
ACGIH TLV STEL:		N/A		
ACGIH TLV CEILING:		N/A		

SECTION 4: FIRST AID MEASURES

EYES:	Flush with plenty of water for at least 15 minutes. Get medical attention (if necessary).
SKIN:	Flush skin with plenty of water. Get medical attention (if necessary)
INGESTION:	Delay absorption of ingested nitrate by giving milk or water. Do not induce vomiting. If spontaneous vomiting should occur, keep head below hips to prevent aspiration of liquid into lungs. Seek medical attention immediately.
INHALATION:	Remove to fresh air. If discomfort continues, seek medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: (% BY VOLUME)	UPPER:	N/A
	LOWER:	N/A
FLASH POINT:		N/A
METHOD USED:		N/A
AUTOIGNITION TEMPERATURE:		N/A
NFPA HAZARD CLASSIFICATION:		
HEALTH:		1
FLAMMABILITY:		0
REACTIVITY:		1
OTHER:		

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HMIS HAZARD CLASSIFICATION

HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 1
PROTECTION:

EXTINGUISHING MEDIA: The material is non-flammable. If exposed to fire from another source, use suitable extinguishing media for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: For small spills: Isolate area and absorb with material such as sand/kitty litter. Collect material in a suitable and properly labeled container. Flush residue with plenty of water. Dispose of appropriately.

For large spills: Isolate area and set up a dike to contain the spill. Transfer material to suitable and properly labeled containers. Absorb with materials such as sand and clean up (flush) the remaining residue with plenty of water. Dispose of water in accordance to local Regulations.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Keep in a tightly closed container, stored in a cool, dry, well ventilated area. Protect from atmospheric moisture. If risk of splash, wear appropriate PPE such as gloves, boots, apron, face shield.

OTHER PRECAUTIONS: Do not store in aluminium tanks.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below exposure limits. If operation generates fumes or mist, use ventilation.

VENTILATION : Ventilation is recommended.

RESPIRATORY PROTECTION: Be sure to use a certified respirator.

EYE PROTECTION: Splash goggles. Face shield if risk of splash.

SKIN PROTECTION: Rubber or PVC gloves recommended.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Rubber boots are recommended where splashing or spill is likely. Wear waterproof apron if splash or spill is likely.

WORK HYGIENIC PRACTICES: Wash hands thoroughly after use.

EXPOSURE GUIDELINES: See Section 3.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear to cloudy, colourless liquid

ODOR: N/A

ODOR THRESHOLD: No data available.

PHYSICAL STATE: Liquid

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pH AS SUPPLIED: 3.0 to 8.0

SALT-OUT POINT:
F°: -43.6°F
C°: -42°C

BOILING POINT: Approximately the same as water
F°: 212°F
C°: 100°C

FLASH POINT: N/A

METHOD USED: N/A

EVAPORATION RATE: N/A

FLAMMABLE LIMITS IN AIR: Not flammable.

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): 1.570 kg/L

DENSITY, LBS/GAL (20°C): 13.08

SOLUBILITY IN WATER: Completely miscible in water

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

PERCENT SOLIDS BY WEIGHT: 57.5-59.5%

PERCENT VOLATILE: N/A

VOLATILE ORGANIC COMPOUNDS (VOC): N/A

AUTOIGNITION TEMPERATURE: N/A

THERMAL DECOMPOSITION: N/A

MOLECULAR WEIGHT: Calcium Nitrate: 164.088 g/mol
Calcium Chloride: 110.99 g/mol

VISCOSITY: Thicker than water.

SECTION 10: STABILITY AND REACTIVITY

	STABLE	UNSTABLE
STABILITY:	x	
CONDITIONS TO AVOID (STABILITY):	None known. Hygroscopic so avoid moisture.	
INCOMPATIBILITY (MATERIAL TO AVOID):	Corrosive to some metals. Heat is generated when mixed with water and spattering or boiling can occur. It may react violently with water to emit toxic gases. Avoid contact with : sulfuric acid, aluminum, zinc, galvanized iron, reducing agents and combustible materials.	
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	Calcium nitrate decomposed to nitrous oxides and oxygen.	
HAZARDOUS POLYMERIZATION:	Does not occur.	
CONDITIONS TO AVOID (POLYMERIZATION):	N/A	

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SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: LD50 (Oral, Rat): 3900 mg/kg for Ca(NO₃)₂
LD50 (Oral, Rat): 918-1668 mg/kg for CaCl₂
LD50 (dermal, rabbits): >5000 mg/kg for CaCl₂

OTHER: Risk of nitrate toxicity from ingestion. Large amounts may cause dizziness, abdominal cramps, vomiting, bloody diarrhea, weakness, convulsions and collapse.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Calcium Chloride: LD50 (Sensitive Aquatic Species): > 100 mg/L
LD50 (Bluegill): 8350-10650 mg/L
LD50 (Daphni magna): 759-3005 mg/L
Calcium Nitrate: LD50 (fish, 96 hr): > 100 mg/L

BIODEGRADATION: Biodegradation does not occur.

BIOACCUMULATION: No bioaccumulation is expected due to the high water solubility of the product. The nitrate ion is the predominant form of plant nutrition and will follow the natural nitrification/densification cycle. This could lead to algae blooms, especially in static water.

MOBILITY: Potential for mobility in soil is very high.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Large spills should be diked to contain the material and prevent contact with waterways and sewer systems. Do not dump into any sewers, on the ground, or into any body of water. Material should be absorbed with absorbent materials (such as kitty litter/sand) and disposed of in accordance with Provincial and Federal regulations.

RCRA HAZARD CLASS: Not listed.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION and TRANSPORT CANADA:

PROPER SHIPPING NAME: Calcium Nitrate / Calcium Chloride Blend.
HAZARD CLASS: N/A
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENT: N/A
Health: 1 Flammability: 0 Reactivity: 1 Specific: None

WATER TRANSPORTATION:
PROPER SHIPPING NAME: Calcium Nitrate / Calcium Chloride Blend.
HAZARD CLASS: N/A
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENT: N/A
Health: 1 Flammability: 0 Reactivity: 1 Specific: None

AIR TRANSPORTATION
PROPER SHIPPING NAME: Calcium Nitrate / Calcium Chloride Blend.
HAZARD CLASS: N/A
ID NUMBER: N/A
PACKING GROUP: N/A
LABEL STATEMENT: N/A
Health: 1 Flammability: 0 Reactivity: 1 Specific: None

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OTHER AGENCIES: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA (TOXIC SUBSTANCE CONTROL ACT): Yes

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

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A

311/312 HAZARD CATEGORIES: 5.1

313 REPORTABLE INGREDIENTS: Calcium Nitrate
Calcium Chloride

STATE REGULATIONS: Not Regulated

INTERNATIONAL REGULATIONS: Not Regulated

CANADA FEDERAL REGULATIONS:

WHMIS CLASSIFICATIONS: D-2B (Toxic)
DSL (Domestic Substance List): Calcium Nitrate: Yes
Calcium Chloride: Yes

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION: Technical Services Department

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 NACHURS ALPINE SOLUTIONS® 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. This Material Safety Data Sheet is valid for three years.