



## SAFETY DATA SHEET

### Section 1. PRODUCT AND COMPANY IDENTIFICATION

**SDS ID: SDS515**

**Product Name: DCA 4 Liquid Supplemental Coolant Additive**

**Product Code: SP3971**

**Manufacturer:**

US Office:

FRAM Group Operations LLC  
Danbury, CT 06810-5109

Canadian Office:

FRAM Group (Canada), Inc.  
Mississauga, Ontario L5L 3S6

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:

(800)890-2075 (in the US)

(800)668-9349 (in Canada)

TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):

CHEMTREC 1-800-424-9300 (in the US)

CANUTEC (613)996-6666 (in Canada)

**MSDS Date of Preparation:** 07/31/14

**Product Use:** Cooling system additive for trucks

### Section 2. HAZARDS IDENTIFICATION

GHS/HAZCOM 2012 Classification:

Health	Physical
Eye Corrosion Category 1 Skin Irritation Category 2	Non-Hazardous

Label Elements



**DANGER!**

H315 Causes skin irritation

H318 Causes serious eye damage

**Prevention:**

P264 Wash exposed skin thoroughly after handling.

P280 Wear protective gloves, protective clothing, eye protection, and face protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of water



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P332 + P313 If skin irritation occurs: Get medical attention.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor.  
P363 Wash contaminated clothing before reuse.

### Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Potassium Phosphate	7758-11-4	5-10%
Potassium Nitrate	7757-79-1	1-5%
Sodium Molybdate	7631-95-0	1-5%
Dipotassium Adipate	19147-16-1	1-5%
Sodium Nitrite	7632-00-0	1-5%

The exact concentrations are a trade secret.

### Section 4. FIRST AID MEASURES

**Eye:** Immediately flush eyes with large quantities of water for at least 20 minutes, holding the eyelids apart. Get medical attention.

**Skin:** Remove contaminated clothing. Immediately wash skin thoroughly with soap and water. If irritation develops or persists, get medical attention. Launder clothing before re-use. (Discard contaminated shoes)

**Ingestion:** DO NOT INDUCE VOMITING. If conscious, give one glass of water or milk. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

**Inhalation:** Immediately remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention.

**Most Important Symptoms:** May cause eye burns. Irritating to the skin. Harmful or fatal if inhaled, ingested or absorbed through the skin. May cause nitrite poisoning. Inhalation of mists may cause respiratory irritation, coughing, nose bleeds, sore throat, shortness of breath and tightness in the chest.

**Indication of Immediate Medical Attention and Special Treatment, If Needed:** Seek immediate medical attention for eye contact with liquid. Ingestion will require immediate medical attention.

**Notes to Physicians:** The principal toxic effects of sodium nitrite poisoning are vasodilation and/or methemoglobinemia. Hypotension with syncope and tachycardia are common findings. Coronary vasospasm due to acute withdrawal may be seen. Paradoxical bradycardia may occur rarely. Coronary ischemia and cerebrovascular disease can occur due to severe hypotension. Immediate life support measures should be provided because of associated hypotension, seizures, and methemoglobinemia-induced anoxia. Immediately contact a poison center or hospital emergency department for treatment advice. The specific antidote for nitric induced methemoglobinemia is methylene blue.



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### Section 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Use media appropriate to the surrounding materials. Use water to extinguish fire. Do not use dry chemicals or foams. Some chemical extinguishing agents may react with this material.

**Specific Hazards Arising From the Chemical** Product may accelerate burning. Liquid that comes in contact with combustibles may aid in the possibility of ignition. Thermal decomposition may release oxides of carbon, nitrogen, potassium, molybdate and phosphorous.

**Special Fire Fighting Procedures:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Fight fire from maximum distance or use unmanned hose holders. Do not allow run-off from firefighting to enter drains or water courses. Runoff may cause pollution.

### Section 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Evacuate spill area and keep unprotected personnel away. Remove all combustible or flammable materials from spill area if it is safe to do so. Wear appropriate protective clothing as described in Section 8.

**Methods and Materials for Containment / Cleanup:** Collect liquid with an inert absorbent and place into container. Do not use combustible absorbents or towels. Prevent spill from entering sewers and water courses. Report releases as required by local, state and federal authorities.

### Section 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Prevent contact with the eyes. Avoid contact with skin and clothing. Avoid breathing vapors or mists. Wear protective clothing and equipment. Wash thoroughly with soap and water after handling. Liquid contains an oxidizer which may enhance combustion if allowed to dry on flammable or combustible materials. Keep away from all flammable or combustible materials such as solvents, oil, paper, cloth rags, etc.

Do not reuse containers. Empty containers retain product residues can be hazardous. Follow all SDS precautions when handling empty containers.

**Conditions for Safe Storage, Including Any Incompatibilities:** Store in a dry, well-ventilated area away from excessive heat and sources of ignition. Avoid storage on wooden floors.

NFPA CLASSIFICATION: None



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<b>Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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**Exposure Guidelines:**

Potassium Phosphate	None Established
Potassium Nitrate	None Established
Sodium Molybdate (As Molybdenum and soluble compounds)	0.5 mg/m <sup>3</sup> TWA ACGIH TLV (respirable ) 5 mg/kg TWA OSHA PEL (Total dust)
Dipotassium Adipate	5 mg/m <sup>3</sup> TWA ACGIH TLV
Sodium Nitrite	None Established

**Appropriate Engineering Controls:** Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

**Personal Protective Equipment**

**Respiratory Protection:** If the exposure limits are exceeded a NIOSH approved particulate respirator (N95 or better filters) may be worn. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

**Skin Protection:** Wear impervious gloves such as rubber if contact is likely.

**Eye Protection:** Chemical safety goggles are recommended if contact is possible.

**Other Protective Equipment / Clothing:** Wear impervious clothing as needed to prevent contact. A safety shower and eyewash should be available in the immediate work area.

<b>Section 9. PHYSICAL AND CHEMICAL PROPERTIES</b>
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<b>Appearance:</b> Blue liquid.	<b>Odor:</b> Slight
<b>Odor Threshold:</b> Not Determined	<b>pH:</b> 10-11
<b>Melting/Freezing Point:</b> Not applicable	<b>Boiling Point:</b> 212°F (100°C)
<b>Flashpoint:</b> None	<b>Evaporation Rate:</b> Not determined
<b>Flammability (Solid, Gas):</b> Not applicable	<b>Flammable Limits:</b> LEL: Not applicable UEL: Not applicable
<b>Vapor Pressure:</b> 760 @ 100°C	<b>Vapor Density (Air = 1):</b> Not applicable
<b>Specific Gravity:</b> 1.13-1.15	<b>Solubility In Water:</b> 100%
<b>Partition Coefficient (n-octanol/water):</b> Not determined	<b>Autoignition Temperature:</b> Not available
<b>Decomposition Temperature:</b> Not determined	<b>Viscosity:</b> Not determined



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### Section 10. STABILITY AND REACTIVITY

**Reactivity:** May aid in ignition if allowed to dry in contact with organic materials.

**Chemical Stability:** Stable under normal storage and handling conditions.

**Possibility of Hazardous Reactions:** None expected under normal use conditions.

**Conditions to Avoid:** High temperatures, and organic materials.

**Incompatibility Materials:** Strong acids, reducing agents, cyanides, alkaloids, metallic salts and fluorine. May ignite on contact with organic materials.

**Hazardous Decomposition Products:** Thermal decomposition may release oxides of carbon, nitrogen, potassium, molybdate and phosphorous.

### Section 11. TOXICOLOGICAL INFORMATION

#### Potential Health Effects:

##### Acute Hazards:

**Ingestion:** Ingestion may cause gastrointestinal irritation, dizziness, nausea, vomiting, bloody diarrhea, low blood pressure, convulsions, increase in urine output, and collapse. Overexposure to sodium nitrite may cause nitrite poisoning with symptoms including nausea, dizziness, vertigo, vomiting, collapse, cyanosis, abdominal pain, methemoglobinemia, rapid heart beat, irregular breathing, coma, convulsions, circulatory collapse and death.

**Inhalation:** Inhalation of vapors or mists may cause respiratory irritation with symptoms of coughing, nose bleeds, sore throat, shortness of breath and tightness in the chest. Overexposure to sodium nitrite may occur with symptoms similar to those listed under ingestion.

**Eye Contact:** Contact may cause eye burns or damage; and severe irritation with redness, tearing and pain.

**Skin Contact:** Contact may cause irritation with redness, itching and pain. Sodium molybdate may cause a rash to occur which is difficult to heal. Sodium molybdate may be absorbed through the skin causing cramping, vomiting hypertension and anemia.

**Chronic Effects:** Prolonged or repeated exposure may cause mild gastroenteritis, dermatitis, eczema, headache, mental impairment, loss of hair, bronchitis, laryngitis, conjunctivitis, kidney and liver damage and anemia. Sodium molybdate and potassium nitrate have been found to cause adverse reproductive effects and/or birth defects in studies with laboratory animals.



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**Carcinogenicity Listing:** None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, or OSHA.

#### Acute Toxicity Values:

Product:	Oral Rat LD50 - 6200 mg/kg
Potassium Phosphate:	Oral Rat LD50 - 2440 mg/kg Skin Rabbit LD50 - >2000 mg/kg Inhalation Rat LC50 - >1.1mg/L/4hr
Potassium Nitrate:	Oral Rat LD50 - 3015 mg/kg
Sodium Molybdate:	Oral Rat LD50 - 4000 mg/kg Inhalation Rat LC50 - > 2,080 mg/m <sup>3</sup> /4hr
Dipotassium adipate:	Oral Rat LD50 - 5560 mg/kg Inhalation Rat LC50 - >7.7 mg/L /4hr
Sodium Tolytriazole:	Oral Rat LD50 - 640 - 1980 mg/kg Skin Rabbit LD50 - >2000 mg/kg
Sodium Nitrite:	Oral Rat LD50 - 180 mg/kg Inhalation Rat LC50 - 5.5 mg/L /4hr

### Section 12. ECOLOGICAL INFORMATION

#### Ecotoxicity:

Potassium Phosphate:	LC50 Oncorhynchus mykiss (Rainbow trout) >100 mg/L/96 hr. EC50: Daphnia Magna: >100 mg/L/48 hr. EC50: Desmodesmus subspicatus (Algae) >100 mg/L/96hr
Potassium Nitrate:	LC50 Gambusia affinis (Western mosquitofish) 22.5 mg/L/96 hr. EC50 Species: Daphnia magna (Water flea) 490 mg/L / 48 hr
Sodium Molybdate:	No data available
Dipotassium adipate:	LC0 Brachydanio rerio ( Danio rerio) >1000mg/L/96hr EC50: Daphnia Magna: 46 mg/L/48 hr EC50: Desmodesmus subspicatus (Algae) >100 mg/L/96hr
Sodium Tolytriazole:	No data available.



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Sodium Nitrite: LC50: Western mosquitofish, female 1.5 mg/L/ 96 hr.  
LC50: Daphnia magna 8.3 mg/L /96 hr.

### Persistence and Degradability:

Sodium Nitrite: Does not volatilize, and is likely to remain in water until consumed by plants or other organisms.  
Dipotassium adipate: Readily biodegradable 83% in 30 days

### Bioaccumulative Potential:

Dipotassium adipate: BCF 3.162

### Mobility in Soil:

Dipotassium adipate: Koc values for adipic acid: 2.4 - 21.5

**Other Adverse Effects:** None known

### Section 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

### Section 14. TRANSPORT INFORMATION

**U.S. DOT HAZARD CLASSIFICATION** (For Ground Shipments Only): Not Regulated

If the quantity of Sodium nitrite is greater than 100 lbs. (45.4 kg) per package (one single package would weigh >2000 lbs), the following DOT shipping description applies:

RQ Environmentally hazardous substances, liquid, n.o.s. (Sodium nitrite), 9, UN3082, III

**DOT MARINE POLLUTANTS:** This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

**IMDG CODE SHIPPING CLASSIFICATION:** Not Regulated

**CANADIAN TDG CLASSIFICATION** (For Ground Shipments Only): Not Regulated

### Section 15. REGULATORY INFORMATION

**CERCLA:** This product has a Reportable Quantity (RQ) of 2,000 lbs. based on the RQ for Sodium Nitrite of 100 lbs. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.



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**SARA Hazard Category (311/312):** Acute health, chronic health

**SARA 313:** This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Sodium Nitrite	7632-00-0	1-5%
Nitrate Compounds (Potassium Nitrate)	7757-79-1	1-5%

### CANADA:

This product has been classified under the CPR and this SDS discloses information elements required by the CPR.

**Canadian WHMIS Classification:** Class D - Division 2 - Subdivision B - (A toxic material causing other chronic effects)

### Section 16. OTHER INFORMATION

**NFPA Rating:** Health = 3      Fire = 0      Instability = 1  
**HMIS Rating:** Health = 3      Fire = 0      Physical Hazards = 1

**Revision Summary:** All Sections – conversion to Hazcom 2012 classification and labeling and format.

**SDS Date of Preparation/Revision:** July 31, 2014

Disclaimer of Liability:

The information contained herein is based on the data available to us and, is to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we assume no liability for damages incurred by use of this material. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist. Users of this product should satisfy themselves that the conditions and methods of use assure the product is used safely. No representations or warranties, either expressed or implied, or any nature are made hereunder with respect to the information contained within. It is the responsibility of the user to comply with and all federal, state or local laws and regulations that may exist. Nothing contained herein is to be construed as a recommendation for use in violation of any applicable laws or regulations.

Consult Fram Group 1-800-890-2075 for further information.