MATERIAL SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

MSDS ID: MSDS602

PRODUCT NAME: FRAM® Spin-on Coolant Filters

PRODUCT NUMBER: PR7308, PR8591

Manufacturer:

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: 11/07/2012

Product Use: Cooling system filter for trucks

Section 2. HAZARDS IDENTIFICATION

This product is a metal filter containing white or yellow pellets with a slight odor.

EMERGENCY OVERVIEW

This product is a manufactured article (truck coolant filter) containing white pellets. The filter unit is sealed so no contact with the contents occurs during normal handling or use. No adverse effects are expected with normal handling of the metal filter. Contact with the pellets may cause the following adverse effects:

May cause eye and skin irritation or burns. May be absorbed through the skin in harmful amounts. Inhalation of dust may cause respiratory tract irritation or burns, coughing, nose bleeds, sore throat, shortness of breath and tightness in the chest. Harmful or fatal if inhaled, ingested or absorbed through the skin. May cause nitrite poisoning.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Sodium Nitrite	7632-00-0	30-60%
Sodium Silicate	6834-92-0	10-30%
Disodium Tetraborate	1330-43-4	5-10%
Tolytriazole	29385-43-1	5-10%
Magnesium stearate	557-04-0	1-5%
Sodium Nitrate	7631-99-4	0.1-1%

Phenolphthalein	77-09-8	0.1-1%

Section 4. FIRST AID MEASURES

Eye: None expected with normal use. If contact occurs with filter pellets, immediately flush eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Get medical attention.
Skin: None expected with normal use. If contact with the filter pellets occurs, 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: None expected with normal use. If filter pellets or dust is swallowed, 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: None expected with normal use. If dust from the filter pellets is inhaled, immediately remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get 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.

Section 5. FIRE FIGHTING MEASURES

Extinguishing Media: Use media appropriate to the surrounding materials. If filters are damaged and pellets are released, use water, carbon dioxide or foam to extinguish fire.
Unusual Fire or Explosion Hazards: If pellets are released from the filter during a fire, product may accelerate burning or decompose explosively.
Special Fire-Fighting Instructions: 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 fire fighting to enter drains or water courses. Runoff may cause pollution.
Hazardous Combustion Products: None expected from metal filters. Thermal decomposition of pellets may release carbon and nitrogen oxides.
Explosion Data (sensitivity to mechanical impact or static discharge): Pellets may be sensitive to mechanical impact.

Section 6. ACCIDENTAL RELEASE MEASURES

If filters are damaged and pellets are released, 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. Collect filters and place into appropriate container for disposal. Pick up pellets and place into container. Vacuum up remaining dust. Do not use combustible absorbents or towels. If spill occurs outdoors, cover the spill to prevent wind from spreading dust to the surrounding area. Report releases as required by local, state and federal authorities.

Section 7. HANDLING AND STORAGE

Handling: Wash thoroughly with soap and water after handling. Protect filters against physical damage

If filters are damaged and pellets are released, avoid contact with the eyes, skin and clothing. Avoid breathing dusts. Wear protective clothing and equipment. Wash thoroughly with soap and water after handling. Keep pellets or dust away from all flammable or combustible materials such as solvents, oil, paper, cloth rags, etc.

Storage: Store filters in a dry, well ventilated area away from excessive heat and sources of ignition.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Sodium Nitrite	None Established
Sodium Silicate	None Established
Sodium Tetraborate	2 mg/m3 TWA ACGIH TLV (inhalable) 6 mg/m3 STEL ACGIH TLV (inhalable)
Tolytriazole	None Established
Magnesium stearate	10 mg/m3 TWA ACGIH TLV
Sodium Nitrate	None Established
Phenolphthalein	None Established

Engineering Controls: General ventilation is adequate for normal use.
Respiratory Protection: None needed for normal use. In situations where contact with the pellets is likely and 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: None needed for normal use. In situations where contact with the pellets is likely, wear impervious gloves.
Eye Protection: None needed for normal use. In situations where contact with the pellets is likely, chemical safety goggles are recommended.
Other: None needed for normal use. In situations where contact with the pellets is likely, wear impervious clothing as needed to prevent contact. A safety shower and eyewash should be available in the immediate work area.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

The following physical characteristics are for the pellets only.

Appearance and Odor: White or yellow pellets with a slight odor.

Physical State: Solid	**Boiling Point:** Not applicable
Vapor Density: <1	**Vapor Pressure:** <0.1 mmHg
Solubility In Water: 10%	**Evaporation Rate:** <1
Specific Gravity: 55 lb/cu	**pH:** 10.5 @ 1% solution
Melting Point: Not applicable	**Octanol/Water Coefficient:** Not determined

Flashpoint: >200°F (93°C) CC	**Autoignition Temperature:** Not available
Flammable Limits: LEL: Not applicable **UEL**: Not applicable	

Section 10. STABILITY AND REACTIVITY

Stability: Stable under normal storage and handling conditions.
Incompatibility: The pellets are incompatible with oxidizing materials, reducing agents, metals, acids, alkalis and moisture. Pellets may ignite on contact with organic materials.
Hazardous Decomposition Products: Thermal decomposition of pellets may release carbon and nitrogen oxides.
Hazardous Polymerization: Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:
Ingestion: None expected under normal use conditions. Ingestion of pellets may cause gastrointestinal burns, 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: None expected under normal use conditions. Inhalation of pellet dust may cause respiratory irritation or burns 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: None expected under normal use conditions. Contact with pellets may cause severe irritation or burns with redness, tearing and pain.
Skin: None expected under normal use conditions. Contact with pellets may cause irritation with redness, itching and pain. Sodium nitrite and sodium tetraborate may be absorbed through the skin causing effects similar to those described under inhalation and ingestion.
Sensitization: This product is not expected to cause sensitization.
Chronic: None expected under normal use conditions. Prolonged or repeated exposure to pellets may cause mild gastroenteritis, dermatitis, eczema, headache, mental impairment, loss of hair, bronchitis, laryngitis, conjunctivitis, kidney and liver damage and anemia. Sodium tetraborate and sodium nitrate have been found to cause adverse reproductive effects and/or birth defects in studies with laboratory animals.
Carcinogenicity: Phenolphthalein is listed by IARC as "possibly carcinogenic to humans " (Group 2B). None of the other components greater than 1% is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH or OSHA.
Mutagenicity: Tolytriazole has demonstrated mutagenic activity in a bacterial test system. Sodium tetraborate and sodium nitrate have tested positive for mutagenicity in some test systems.

Medical Conditions Aggravated by Exposure: None expected under normal use conditions. Employees with pre-existing skin, respiratory and kidney disease may be at increased risk from exposure to pellets.

Acute Toxicity Values:
Sodium Nitrite: Oral rat LD50 85 mg/kg; Inhalation rat LC50 5.5 mg/l/4 hr
Sodium Silicate: Oral rat LD50 1280 mg/kg
Sodium Tetraborate: Oral rat LD50 2660 mg/kg; Skin rabbit >1055 mg/kg; Inhalation rat LC50 >2 mg/m3/4 hr

Tolytriazole: No toxicity data available
Magnesium stearate: No toxicity data available
Sodium Nitrate: Oral rat LD50 1267 mg/kg
Phenolphthalein: No toxicity data available

Section 12. ECOLOGICAL INFORMATION

Sodium Nitrite: LC50/96 hour fish 0.56 mg/L
LC50/96 hour daphnia magna 8300 ug/L
Sodium Tetraborate: LC50/96 he Gambusia affinis (Western mosquitofish) 104 mg/L
Tolytriazole: LC50/96 hour fathead minnow 25.5 mg/L
EC50/48 hour daphnia magna 35.4 mg/L
Sodium Nitrate: LC50/96 hour daphnia magne 4206000 ug/L; LC50/96 hour Oncorhynchus mykiss (Rainbow trout) 1658 mg/L

Not readily biodegradable. This material is very toxic to aquatic life. May be harmful to the environment if release in large quantities.

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)
PROPER SHIPPING NAME: Consumer Commodity
TECHNICAL NAME: None
UN NUMBER: None
HAZARD CLASS/PACKING GROUP: ORM-D
LABELS REQUIRED: None

Note: If >166 pounds of this product in a single container, RQ requirements apply.

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

IMDG CODE SHIPPING CLASSIFICATION
DESCRIPTION: Corrosive solid, toxic n.o.s. (Disodium Metasilicate, Sodium Nitrite)
ID NUMBER: UN2923
HAZARD CLASS: 8
PACKING GROUP: PGIII
LABELS REQUIRED: Corrosive, Toxic
PLACARDS REQUIRED: Corrosive, Toxic

MATERIAL SAFETY DATA SHEET

FRAM (R) Spin-on Coolant Filter PR7308, PR8591 **MSDS602**

CANADIAN TDG CLASSIFICATION (For Ground Shipments Only)
PROPER SHIPPING NAME: Consumer Commodity (Limited Quantity)
TECHNICAL NAME: None
CLASS: None
UN NUMBER: None
PACKING GROUP: None

Section 15. REGULATORY INFORMATION

CERCLA: This product has a Reportable Quantity (RQ) of 166 lbs. based on the RQ for Sodium Nitrite (60% maximum) 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.

SARA Hazard Category (311/312): Acute Health, Chronic Health, Fire Hazard

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	30-60%
Nitrate Compounds (Sodium Nitrate)	7631-99-4	0.1-1%

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List.

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

Canadian WHMIS Classification: Manufactured article

European Inventory Of Existing Commercial Chemical Substances (EINECS): All of the ingredients are listed on the EINECS inventory.

Australia: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

Korea: All of the ingredients of this product are listed on the Korean Existing Chemical List (KECL).

Philippines: All of the ingredients of this product are listed on the Philippine Inventory of Chemical and Chemical Substance (PICCS)

China: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).

MATERIAL SAFETY DATA SHEET

FRAM (R) Spin-on Coolant Filter PR7308, PR8591 **MSDS602**

Section 16. OTHER INFORMATION

Ratings for filter contents:

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

Revision Summary: Section 1: Update company logo and data review.

Disclaimer of Liability:

The information container 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 representatives 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 ant 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 Honeywell CPG for further information.