



MSDS G18

Supercedes MSDS G18
with 1-27-97 effective date and
MSDS G31 with 7-10-98 effective date.

This Material Safety Data Sheet applies to the following Baldwin Filters Part Numbers:

CS5008
CS5009
CS5010
CS5011

BetzDearborn Material Safety Data Sheet

Effective Date: 10-JUL-1998

Printed Date: 17-JUN-1999

1) Chemical Product and Company Identification

Product Name: ENDCOR 4718 & BetzDearborn TR84718

Production Application Area: A closed cooling water corrosion treatment

Company Address:

BetzDearborn, Inc. Water Management Group

200 Witmer Road, Horsham, PA 19044

Information Phone Number - (215) 773-6269

Emergency Telephone (Health/Accident): (800) 877-1940 (USA)

2) Composition/Information On Ingredients

Information for specific product ingredients as required by the U.S. OSHA Hazard Communication Standard is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

HAZARDOUS INGREDIENTS

CAS#	Chemical Name
7632-00-0	Sodium Nitrite: Oxidizer; toxic (by ingestion); potential blood toxin
10555-76-7	Boric Acid Sodium Salt Tetrahydrate: Potential irritant (eyes and respiratory)
149-30-4	2-Mercaptobenzothiazole: Irritant; potential sensitizer

No component is considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration at OSHA thresholds for carcinogens.

3) Hazards Identification

EMERGENCY OVERVIEW

WARNING: May cause slight irritation to the skin. Potential skin sensitizer. Severe irritant to the eyes.

Mists/aerosols may cause irritation to upper respiratory tract.

DOT Hazard: Corrosive to aluminum, RQ

Emergency Response Guide: #60

Odor: Slight

Appearance: Red, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

Proper Fire-Extinguishing Media: Flood with water. Use of CO² or foam may not be effective.

POTENTIAL HEALTH EFFECTS

Acute Skin Effects:	Primary route of exposure; May cause slight irritation to the skin. Potential skin sensitizer.
Acute Eye Effects:	Severe irritant to the eyes.
Acute Respiratory Effects:	Mists/aerosols may cause irritation to upper respiratory tract.
Ingestion Effects:	May cause gastrointestinal irritation.
Target Organs:	Prolonged or repeated exposures may cause CNS depression, primary irritant dermatitis, skin sensitization, and/or toxicity to the blood.
Medical Conditions	
Aggravated:	Not Known
Symptoms of Exposure:	May cause redness or itching of skin, irritation, and/or tearing of eyes (direct contact).

4) First Aid Measures

Skin Contact:	Remove contaminated clothing. Wash exposed area with a large quantity of soap solution or water for 15 minutes.
Eye Contact:	Immediately flush eyes with water for 15 minutes. Immediately contact a physician for additional treatment.
Inhalation:	Remove victim from contaminated area to fresh air. Apply appropriate first aid treatment as necessary.
Ingestion:	Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician. Dilute contents of stomach using 3-4 glasses milk or water.

5) Fire Fighting Measures

Fire Fighting Instructions:	Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).
Extinguishing Media:	Flood with water. Use of CO ² or foam may not be effective.
Hazardous Decomposition	
Products:	Thermal decomposition (destructive fires) yields elemental oxides.
Flash Point:	> 200F > 93C P-M(CC)
Miscellaneous:	Corrosive to aluminum, RQ, UN3266; Emergency Response Guide #60

6) Accidental Release Measures

Protection and Spill Containment: Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.

Disposal Instructions: Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

7) Handling and Storage

Handling: Contains an oxidizer. Avoid all contact with reducing agents, oils, greases, organics and acids. Do not allow to dry.

Storage: Keep containers closed when not in use. Reasonable and safe chemical storage. Protect from freezing.

8) Exposure Controls/Personal Protection

EXPOSURE LIMITS

Chemical Name	PEL (OSHA)	TLV (ACGIH)
Sodium Nitrite	Not Determined	Not Determined
Boric Acid Sodium Salt Tetrahydrate	Not Determined	Not Determined
2-Mercaptobenzothiazole	Not Determined	Not Determined

Engineering Controls: Adequate ventilation to maintain air contaminants below exposure limits.

Personal Protective Equipment: Use protective equipment in accordance with 29 CFR 1910 Subpart 1

Respiratory Protection: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Use air purifying respirators within use limitations associated with the equipment or else use supplied air respirators. If air purifying respirator use is appropriate, use a respirator with dust/mist filters.

Skin Protection: Neoprene gloves. Wash off after each use. Replace as necessary.

Eye Protection: Splash proof chemical goggles.

9) Chemical and Physical Properties

Specific Grav. (70F, 21C)	1.052	Odor	Slight
Freeze Point (F)	28.00	Appearance	Red
Freeze Point (C)	-2	Physical State	Liquid
Viscosity (cps 70F, 21C)	10	Flash Point P-M(CC)	> 200F > 93C
Vapor Pressure (mmHG)	~ 18.0	pH As Is (Approx.)	12.3
Vapor Density (air = 1)	< 1.00	Evaporation Rate (Ether = 1)	< 1.00
% Solubility (water)	100.0		
NA = Not Applicable			
ND = Not Determined			

10) Stability and Reactivity

Stability: Stable under normal storage conditions.

Hazardous Polymerization: Will not occur.

Incompatibilities: May react with strong oxidizers.

Decomposition Products: Thermal decomposition (destructive fires) yields elemental oxides.

BetzDearborn Internal Pumpout /Cleanout Categories: "B"

11) Toxicological Information

Oral LD50 RAT: > 2,000 mg/kg (NOTE: Estimated Value)

Dermal LD50 RABBIT: > 2,000 mg/kg (NOTE: Estimated Value)

12) Ecological Information

Aquatic Toxicology: No Data Available.

Biodegradation: No Data Available.

13) Disposal Considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is: Not Applicable.

Please be advised, however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14) Transport Information

DOT HazardCorrosive to aluminum, RQ
UN / NA NumberUN3266
DOT Emergency Response Guide #.....60

15) Regulatory Information

TSCA: All components of this product are listed in the TSCA inventory.

CERCLA and/or SARA Reportable Quantity (RQ): 298 gallons due to Sodium Nitrite.

SARA Section 312 Hazard Class: Immediate (acute); Delayed (Chronic).

SARA Section 302 Chemicals: No regulated constituent present at OSHA thresholds.

SARA Section 313 Chemicals:

CAS #	Chemical Name	Range
7632-00-0	Sodium Nitrite	2.0-5.0%
149-30-4	2-Mercaptobenzothiazole	0.1-1.0%

California Regulatory Information

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65) Chemicals Present: No regulated constituent present at OSHA thresholds.

Michigan Regulatory Information

No regulated constituent present at OSHA thresholds.

16) Other Information

NFPA/HMIS.....Code	Code Translation
Health.....2	Moderate Hazard
Fire.....1	Slight Hazard
Reactivity.....0	Minimal Hazard
Special.....ALK	pH above 12.0
(1) Protective Equipment.....B	Goggles, Gloves

(1) Refer to Section 8 of this MSDS for additional protective equipment recommendations.



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