



Safety Data Sheet (SDS)

North American (U.S. and Canada)

Revision date: 2018-06-14

SECTION 1: Identification

Product identifiers:

Product trade name: GOOD-RITE* SODIUM MBT Corrosion Inhibitor
Company product number: NAMBT
Other means of identification: Sodium 2-mercaptobenzothiazole

Recommended use of the chemical and restrictions on use:

Uses: Corrosion Inhibitor
Restrictions on use: None identified

Details of the supplier:

Manufacturer/Supplier: Emerald Performance Materials, LLC
1499 SE Tech Center Place, Suite 300
Vancouver, WA 98683
United States
Telephone: +1-360-954-7100
FAX: +1-360-954-7201
For further information about this SDS: Email: product.compliance@emeraldmaterials.com

Emergency telephone number:

ChemTel (24 hours): 1-800-255-3924 (USA); +1-813-248-0585 (outside USA);
1-300-954-583 (Australia); 000-800-100-4086 (India).

SECTION 2: Hazard(s) identification

Information in accordance with U.S. 29 CFR 1910.1200 (Hazcom 2012) and Canada Hazardous Products Regulations (WHMIS 2015):

Classification of the product:

Corrosive to Metals, category 1
Skin Corrosion, category 1B
Skin Sensitizer, category 1

Label elements:

Hazard pictogram(s):



Signal word:

Danger

Hazard statements:

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

Precautionary statements:

P234 Keep only in original packaging.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

SDS Name: GOOD-RITE* SODIUM MBT Corrosion Inhibitor

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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/physician.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P406 Store in a corrosion-resistant container with a resistant inner liner.

P501 Dispose of contents/container in accordance with local, regional and international regulations.

Supplemental information: Hazardous to the aquatic environment - Acute Category 1, Very toxic to aquatic life.

Hazardous to the aquatic environment - Chronic Category 1, Very toxic to aquatic life with long lasting effects.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

Hazards not otherwise classified:

Physical hazards not otherwise classified: No Additional Information

Health hazards not otherwise classified: No Additional Information

See Section 11 for toxicological information.

SECTION 3: Composition/information on ingredients

Mixture:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Weight%</u>
0002492-26-4	Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	45-<55

Notes: Contains sodium 2-mercaptobenzothiazole: 49.5-51% solution.

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4: First-aid measures

Description of first aid measures:

General: If irritation occurs or persists from any route of exposure, remove the affected individual from the area. Call a physician.

Eye contact: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. Get medical attention immediately.

Skin contact: Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention immediately.

Inhalation: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Most important symptoms and effects, both acute and delayed: Burns, Eye redness and pain, Irritation. Preexisting sensitization, skin and/or respiratory disorders or diseases may be aggravated. See section 11 for additional information.

Indication of any immediate medical attention and special treatment needed, if necessary: Symptoms may be delayed. Symptomatic and supportive therapy as needed. Following severe exposure, observe patient for at least 24 to 48 hours.

SECTION 5: Fire-fighting measures

NFPA flammability class: IIIB

Extinguishing media:

Suitable: Being an aqueous system, product is not a fire hazard, as supplied. After water is evaporated, dry solids could burn.

SDS Name: GOOD-RITE* SODIUM MBT Corrosion Inhibitor

Water spray, ABC dry chemical and protein type air foams are effective. Carbon dioxide may be ineffective on larger fires due to a lack of cooling capacity, which may result in reignition.

Unsuitable: None known.

Special hazards arising from the chemical:

Unusual fire/explosion hazards: Product is not considered a fire hazard, but will burn if ignited. Run off water from firefighting may have corrosive effects. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

Hazardous combustion products: Irritating or toxic substances will be emitted upon burning, combustion or decomposition. See section 10 (Hazardous decomposition products) for additional information.

Special protective equipment and precautions for fire-fighters: Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn.

Environmental precautions: Do not flush liquid into public sewer, water systems or surface waters.

Methods and materials for containment and cleaning up: Treat as caustic material. Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse. Wash the spill area with soap and water.

SECTION 7: Handling and storage

Precautions for safe handling: As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Do not get in eyes, on skin or clothing. Do not breathe dust, vapor, aerosol, mist or gas. Do not ingest, taste, or swallow. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Wash contaminated clothing before reuse. Discard shoes contaminated with this product. Provide eyewash fountains and safety showers in the work area.

Conditions for safe storage, including any incompatibilities: Store cool and dry, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not allow product to freeze. Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Avoid storage in aluminum or zinc containers. Do not reuse empty container without commercial cleaning or reconditioning. The recommended shelf-life of Good-Rite® 50% NaMBT is 730 days at room temperature. If shipment or storage temperatures exceed 130 °F for Good-Rite® 50% NaMBT, then we suggest use within 180 days. Empty container contains residual product which may exhibit hazards of product. The alkalinity of this solution may cause a reaction resulting in container corrosion or product changes affecting its functionality. Do not reuse empty container. Absorption of carbon dioxide from the atmosphere may precipitate free mercaptobenzothiazole. Excessive exposure to air may cause oxidation and the formation of insoluble substances.

SECTION 8: Exposure controls / personal protection

Control parameters:

Occupational exposure limits (OEL):

<u>Chemical Name</u>	<u>ACGIH - TWA/Ceiling</u>	<u>ACGIH - STEL</u>	<u>OSHA - PEL</u>	<u>OSHA - STEL</u>	<u>OSHA - Ceiling</u>	<u>AIHA - WEEL</u>
Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	N/E					
<u>Chemical Name</u>	<u>OSHA - PEL</u>	<u>OSHA - STEL</u>	<u>OSHA - Ceiling</u>	<u>AIHA - WEEL</u>		
Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	N/E	N/E	N/E	N/E		

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. (Ventilation guidelines/techniques may be found in publications such as Industrial Ventilation: American Conference of Governmental Industrial Hygienists, 1330 Kemper Meadow Drive, Cincinnati, OH, 45240-1634, USA.) (<http://www.acgih.org/home.htm>).

Individual protection measures, such as personal protective equipment (PPE):

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection: Wear chemical resistant (impervious) gloves. Wear chemical resistant protective clothing. Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR).

Further information: Eyewash fountains and safety showers are recommended in the work area.

SECTION 9: Physical and chemical properties

Form:	Liquid	pH:	>11
Appearance:	Dark brown	Relative density:	1.245-1.265 @ 25 °C
Odor:	None	Partition coefficient (n-octanol/water):	Not Available
Odor threshold:	Not Available	% Volatile by weight:	Water: 50% +/- 1%
Solubility in water:	Dilutable	VOC:	Not Available
Evaporation rate:	Not Available	Boiling point °C:	>100 °C
Vapor pressure:	Not Available	Boiling point °F:	>212 °F
Vapor density:	Not Available	Flash point:	>108 °C (>226 °F)
Viscosity:	Not Available	Auto-ignition temperature:	475 °C (887 °F)
Melting point/Freezing point:	Not Available	Flammability (solid, gas):	Not Applicable (liquid)
Oxidizing properties:	Not oxidizing	Flammability or explosive limits:	LFL/LEL Not Available
Explosive properties:	Not explosive		UFL/UEL Not Available
Decomposition temperature:	Not Available		

Other information: Amounts specified are typical and do not represent a specification.

SECTION 10: Stability and reactivity

Reactivity: This material reacts violently with acids.

Chemical stability: This product is stable.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Excessive heat and ignition sources. Do not freeze. Below pH 7, sodium 2-mercaptobenzothiazole will be protonated to form insoluble 2-mercaptobenzothiazole. In the presence of iron, sodium 2-mercaptobenzothiazole will be reduced to benzothiazole. In weak alkaline or neutral solutions, the mercaptobenzothiazole anion can readily complex with various metal ions and form insoluble, relatively undissociable salts.

Incompatible materials: Avoid strong acids and oxidizing agents. Depending on the amount and specific materials involved, contact can result in intense heat, boiling, flame development, explosion or toxic gas generation.

Hazardous decomposition products: Carbon dioxide, carbon monoxide, hydrocarbons, oxides of nitrogen, and oxides of sulfur. 2-

Mercaptobenzothiazole.

SECTION 11: Toxicological information

Information on likely routes of exposure:

General: Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

Eyes: Causes serious eye damage.

Skin: Causes skin burns. May cause allergic skin reaction.

Inhalation: Exposure to vapors or mists may cause severe irritation and burns of the nose, throat and respiratory tract.

Ingestion: May be harmful if swallowed. Ingestion may cause severe irritation and burns of the mouth, throat and digestive tract.

Symptoms/effects, acute and delayed: Burns, Eye redness and pain, Irritation

Acute toxicity information: Not classified (based on available data, the classification criteria are not met). SODIUM BENZOTHIAZOL-2-YL SULPHIDE: Data for 50% solution: Oral LD50 (rat)=2100-4350 mg/kg.

<u>Chemical Name</u>	<u>Inhalation LC50</u>	<u>Species</u>	<u>Oral LD50</u>	<u>Species</u>	<u>Dermal LD50</u>	<u>Species</u>
Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	>6.5 mg/L (6 hours)	Rat/ adult	>2000 mg/kg	Rat/ adult	>7940 mg/kg	Rabbit/ adult

Skin corrosion/irritation: Causes severe skin burns (Category 1B). SODIUM BENZOTHIAZOL-2-YL SULPHIDE: Data for 50% solution: Corrosive to skin and eyes with potential delayed effects.

<u>Chemical Name</u>	<u>Skin irritation</u>	<u>Species</u>
Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Corrosive	Rabbit/ adult

Serious eye damage/irritation: Causes serious eye damage (Category 1).

<u>Chemical Name</u>	<u>Eye irritation</u>	<u>Species</u>
Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Corrosive	Rabbit/ adult

Respiratory or skin sensitization: Skin sensitization (Category 1). SODIUM BENZOTHIAZOL-2-YL SULPHIDE - READ-ACROSS (2-MERCAPTOBENZOTHIAZOLE): Maximization and Buehler sensitization tests, guinea pig: sensitizing (skin).

<u>Chemical Name</u>	<u>Skin sensitisation</u>	<u>Species</u>
Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Sensitizer (read-across)	Guinea Pig/ adult

Carcinogenicity: Not classified (based on available data, the classification criteria are not met). SODIUM BENZOTHIAZOL-2-YL SULPHIDE: Data for 2-Mercaptobenzothiazole (MBT) (read-across): In NTP studies, mercaptobenzothiazole (MBT) in corn oil was force fed through a stomach tube to rats and mice for two years. An increased incidence of tumors (i.e.: no effect) was observed in mice. The strength of the data was evaluated by NTP and its science advisory board to determine whether there is "clear", "some", "equivocal", "no", or "inadequate" evidence of carcinogenicity. Because only a limited response occurred, NTP interpreted these studies as showing "some" evidence of carcinogenicity. The nature of the tumor response (e.g.: no effect in mice; some effect in rats) and other concerns about the conduct of these studies (e.g. force feeding an amount of MBT which may have exceeded the maximum tolerable dose) makes it difficult to clearly assess the significance of the results to those who work with MBT.

Carcinogenic status: The components of this mixture are not known to be listed or regulated by IARC (Group 1 or 2), NTP, OSHA or ACGIH.

Germ cell mutagenicity: Not classified (based on available data, the classification criteria are not met). SODIUM BENZOTHIAZOL-2-YL SULPHIDE: Data for 50% solution: Genotoxicity: Ames test (in-vitro): negative. READ-ACROSS (2-MERCAPTOBENZOTHIAZOLE): Mutagenicity was negative in in-vivo genotoxicity assays.

Reproductive toxicity: Not classified (based on available data, the classification criteria are not met). SODIUM BENZOTHIAZOL-2-YL SULPHIDE - Data for 2-Mercaptobenzothiazole (MBT) (read-across): Final results of a two-generation reproduction study in rats show that MBT does not cause reproductive toxicity at levels as high as 15,000 ppm (745 mg/kg bw/day) in the diet. No evidence of teratogenicity in rat, mice and hamster studies. Developmental toxicity, oral, rats: NOAEL (no-observed adverse-effect-level) of 300 mg/kg bw/day.

Specific target organ toxicity (STOT) - single exposure: Not classified (based on available data, the classification criteria are not met).

Specific target organ toxicity (STOT) - repeated exposure: Not classified (based on available data, the classification criteria are not

SDS Name: GOOD-RITE* SODIUM MBT Corrosion Inhibitor

met). SODIUM BENZOTHIAZOL-2-YL SULPHIDE: Data for 2-Mercaptobenzothiazole (MBT) (read-across): Repeated dose oral toxicity studies showed NOAEL (No-Observed-Adverse-Effect-Level) of 50 mg/kg bw/day and LOAEL (Lowest-Observed-Adverse-Effect-Level) of 150-375 mg/kg bw/day (systemic effects). Continuous administration of high levels of MBT in the diet does decrease body weight gain. Although liver and kidney weight increase and pathological changes were observed, they are not considered to be biologically meaningful or toxicologically significant.

Aspiration hazard: Not classified (no relevant information found).

Other toxicity information: No additional information available.

SECTION 12: Ecological information

Ecotoxicity: SODIUM BENZOTHIAZOL-2-YL SULPHIDE: Data for 2-Mercaptobenzothiazole (MBT) (read-across).

Chemical Name Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Fish 96 hour LC50 0.73 mg/L (read-across)	Fish 96 hour LC50 1.8-3.8 mg/L (50% solution)	Fish Chronic NOEC 0.041 mg/L (read-across, 89 days)
Chemical Name Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Invertebrates 48 hour EC50 0.71 mg/L (read-across)	Invertebrates 24 hour EC50 N/E	Invertebrates Chronic NOEC 0.08 mg/L (21 days, read-across)
Chemical Name Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Algae 96 hour EC50 0.3 mg/L (cell number, 50% solution)	Algae 72 hour EC50 0.5 mg/L (read-across)	Algae Chronic NOEC 0.066 mg/L (72 hours, read-across)

Persistence and degradability:

Chemical Name Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Biodegradation Not readily biodegradable (read-across)
--	--

Bioaccumulative potential:

Chemical Name Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Bioconcentration Factor (BCF) <8 (read-across)	Log Kow 2.42 (read-across)
--	--	--------------------------------------

Mobility in soil: No specific information available.

Chemical Name Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)	Mobility in soil (Koc/Kow) 326-3560 (read-across MBT)
--	---

Other adverse effects: No additional information available.

SECTION 13: Disposal considerations

HAZARDOUS WASTE: Dispose of waste (incinerate) in a RCRA permitted hazardous waste disposal facility. **Corrosive:** EPA Hazardous Waste No. D002. Federal Resource Conservation and Recovery Act (RCRA), 40CFR261.22. Federal, state and local regulations where the waste material is generated, treated, and/or disposed of must be examined to verify the appropriate waste classification.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14: Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

UN number: UN3267

UN proper shipping name:

Corrosive liquid, basic, organic, n.o.s. (Sodium 2-mercaptobenzothiazole)

Transport hazard class(es):

U.S. DOT hazard class: 8

Canada TDG hazard class: 8

Europe ADR/RID hazard class: 8

IMDG Code (ocean) hazard class: 8

ICAO/IATA (air) hazard class: 8

SDS Name: GOOD-RITE* SODIUM MBT Corrosion Inhibitor

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

Packing group: II

Environmental hazards:

Marine pollutant: Marine Pollutant (IMDG code 2.9.3).

Hazardous substance (USA): Not Applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:

Chemical Name

Sodium benzothiazol-2-yl sulphide (Sodium 2-mercaptobenzothiazole)

Category

Category X (solution)

Special precautions for user: Not Applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question:

U.S. federal and state regulations/legislation:

This SDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Reportable Quantity (RQ):

Not Applicable

U.S. Superfund Amendments and Reauthorization Act (SARA) - SARA Section 313:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372:

None known

U.S. TSCA Section 12(b) Export Notification:

This product is not subject to TSCA 12(b) reporting requirements.

California Proposition 65:

The following ingredient(s) present in the product is [are] known to the State of California to cause cancer:

None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

The following ingredient(s) present in the product is [are] known to the State of California to cause birth defects or other reproductive harm:

None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

Notes: No additional information

Canada regulations/legislation:

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

Notes: No additional information

Chemical inventories:

<u>Regulation</u>	<u>Status</u>
Australian Inventory of Chemical Substances (AICS):	Y
Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
China Inventory of Existing Chemical Substances (IECSC):	Y
European EC Inventory (EINECS, ELINCS, NLP):	Y
Japan Existing and New Chemical Substances (ENCS):	Y
Japan Industrial Safety and Health Law (ISHL):	Y

Regulation

Status

Korean Existing and Evaluated Chemical Substances (KECL):	Y
New Zealand Inventory of Chemicals (NZIoC):	Y
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Y
Taiwan Inventory of Existing Chemicals:	Y
U.S. Toxic Substances Control Act (TSCA):	Y

Europe REACh (EC) 1907/2006: Applicable components are registered, exempt or otherwise compliant. REACh is only relevant to substances either manufactured or imported into the EU. Emerald Performance Materials has met its obligations under the REACh regulation. REACh information regarding this product is provided for informational purposes only. Each Legal Entity may have differing REACh obligations, depending on their place in the supply chain. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

SECTION 16: Other information

SDS Revision date: 2018-06-14

HMIS (Hazardous Materials Identification System) Ratings:

Health: 3 **Flammability:** 1 **Physical hazard:** 0 **Personal Protection:** X

NFPA (National Fire Protection Association) Ratings:

Health: 3 **Flammability:** 1 **Instability:** 0

Key: 0=Insignificant; 1=Slight; 2=Moderate; 3=High; 4=Extreme. An asterisk appearing after the HMIS Health numerical rating denotes a chronic hazard.

Hazardous Materials Identification System (HMIS), National Paint and Coating Association, rating applies to product "as packaged" (i.e., ambient temperature). Ratings are based upon HMIS® III and NFPA 704 (2007). An asterisk appearing after the HMIS Health® III numerical rating denotes a chronic hazard. National Fire Protection Association (NFPA) rating identifies the severity of hazards of material during a fire emergency (i.e., "on fire").

Legend:

* : Trademark owned by Emerald Performance Materials, LLC.

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA WEEL: American Industrial Hygiene Association (AIHA) Workplace Environmental Exposure Level (WEEL)

N/A: Not Applicable

N/E: None Established

STEL: Short Term Exposure Limit

TWA: Time Weighted Average (exposure for 8-hour workday)

Users Responsibility/Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to develop appropriate work practice guidelines and employee instructional programs for your operation.

Safety Data Sheet Preparer:

Product Compliance Department

Emerald Performance Materials, LLC

1499 SE Tech Center Place, Suite 300

Vancouver, WA 98683

United States