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## Material Safety Data Sheet *Endurabond DHMO*

### 1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trade Names:	Endurabond DHMO	Chemtrec:	800-262-8200
Description:	Aqueous Primer System	International Number:	202-483-7616
Company Identification:	Blair Rubber Company 5020 Panther Parkway Seville, OH 44273	Information Number:	330-769-5583

### 2. COMPOSITION/INFORMATION ON THE COMPONENTS

Hazardous Components	CAS No.	Approximate %
Chlorinated polymer	Not hazardous	20.0 - 25.0%
Phenolic Compound	Trade Secret	5.0 - 7.0%
Bis-Maleimide	Trade Secret	2.0 - 4.0%
Nitrogen substituted polymer	Not hazardous	5.0 - 7.0%
Metal oxide	Trade Secret	2.0 - 4.0%
Ethylbenzene	100-41-4	<0.2%
Perchloroethylene	127-18-4	<0.2%
Water	7732-18-5	56.0 - 61.0%

### 3. HAZARDS IDENTIFICATION

**HMIS HEALTH: 2\*** **FLAMMABILITY: 0** **REACTIVITY: 0** **PERSONAL PROTECTION: H**

\* - Indicates a chronic hazard. See Section 3.

**PRIMARY ROUTES OF EXPOSURE:** Eye, Skin, Inhalation (breathing)

**EYE CONTACT:** Material can cause the following: irritation, tearing, reddening.

**SKIN CONTACT:** Prolonged or repeated skin contact can cause the following: slight irritation. May cause sensitization by skin contact.

**INHALATION (Breathing):** Inhalation of vapor or mist can cause the following: irritation of nose, throat, and lungs, headache.

**TARGET ORGANS/CHRONIC EFFECTS:** Prolonged or repeated overexposure to perchloroethylene can cause liver damage, blood disorders, central nervous system (CNS) effects, heart damage, kidney damage and spleen damage. Prolonged or repeated overexposure to ethylbenzene may cause the following: kidney effects – liver effects – lung effects – pituitary effects – thyroid effects – testicular effects. Prolonged or repeated exposure to dust can

cause the following: -metal fume fever, central nervous system (CNS) effects, possible adverse reproductive effects, lung effects

Metal Oxide	IRIS	Not classifiable
Ethylbenzene	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.
Ethylbenzene	IARC	Possible carcinogen
Ethylbenzene	IRIS	Not classifiable
Ethylbenzene	US CA CRT	Carcinogenic
Perchloroethylene	NIOSH	Potentially carcinogenic
Perchloroethylene	US CA CRT	Carcinogenic
Perchloroethylene	IARC	Probable human carcinogen

#### EMERGENCY OVERVIEW:

**Dark Brown liquid opaque, direct contact with material can cause the following: eye and skin irritation, gastrointestinal irritation. May cause sensitization by skin contact. Prolonged or repeated exposure can cause the following: liver effects, kidney effects. Tetrachloroethylene is listed by the Internatal Agency for Research on Cancer as a probably cancer causing agent.**

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#### 4. FIRST AID MEASURES

**EYE CONTACT:** Flush eyes with water for at least 15 minutes. Get prompt medical attention.

**SKIN CONTACT:** Remove contaminated clothing and shoes. Wash affected area with soap and water. If irritation develops, consult a physician. Wash contaminated clothing separately before reuse.

**INHALATION (Breathing):** Remove to fresh air. If symptoms develop, seek immediate medical attention. Restore and support continued breathing.

**INGESTION (Swallowing):** Seek medical attention. Do not induce vomiting. Give victim one or two glasses of water or milk. Call physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious person.

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#### 5. FIRE - FIGHTING MEASURES

**Flash Point .....** >100° C (212 °F) Method Not Specified

**Autoignition.....:** not applicable

**Explosive Limits:** not applicable

**Suitable extinguishing media:** Use extinguishing media appropriate for surrounding fire.

**Specific hazards during fire fighting:** Closed containers may rupture via pressure build-up when exposed to fire or extreme heat. During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition.

**FIRE FIGHTING PROCEDURES/EQUIPMENT:** Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

Further information: Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Remain upwind, avoid breathing smoke, and contain any run off.

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#### 6. ACCIDENTAL RELEASE MEASURES

**EVACUATION:** Isolate hazard areas. Keep unnecessary and unprotected personnel from entering. Eliminate all sources of ignition (flame, hot surfaces and electrical, static or frictional sparks). Avoid breathing vapor or spray mists. Do not handle until all safety precautions on this MSDS have been read and understood.

**CONTAINMENT:** Safely stop discharge. Contain material, as necessary, with a dike or barrier. Stop material from contaminating soil, or from entering sewers or bodies of water.

## ACCIDENTAL RELEASE MEASURES CONTINUED

**CLEAN-UP/PERSONAL PROTECTION EQUIPMENT:** Appropriate safety measures and protective equipment should be used. Use supplied air respirator or self-contained breathing apparatus in enclosed spaces or if airborne exposure limits can be exceeded. If exposed to material during clean up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. Do not take clothing home to be laundered. Appropriate protective equipment must be worn when handling a spill of this material.

**COLLECTION AND DISPOSAL:** Stop discharge, if safe to do so. Use proper protective equipment. Cover spills with absorbent clay or sawdust and place in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations.

**REPORTING:** Spills of this material in excess of a component's RQ must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations.

Xylene	RQ = 100 LB
Methyl ethyl ketone	RQ = 5000 LB
Ethyl benzene	RQ = 1000 LB
Epichlorohydrin	RQ = 100 LB

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## 7. HANDLING AND STORAGE

**STORAGE CONDITIONS:** Store in cool, dry, well ventilated area away from heat, ignition sources, and direct sunlight. Keep containers tightly closed. **WARNING:** Hot organic chemical vapors or mists can suddenly and without warning combust when mixed with air. Ignition can occur at typical elevated temperature process conditions. Any use in such process should be evaluated thoroughly to assure safe operating conditions. Refer to OSHA 29 CFR Part 1910.106 "Flammable and Combustible Liquids" for specific requirements. **WARNING:** Application of this product within a tank or other confined space must comply with the requirements of OSHA Permit – Required Confined Spaces Standard.

**TRANSFERS:** Containers should be supported and grounded before opening, dispensing, mixing, pouring, and emptying. Open with non-sparking tools. If container is warm, open bung slowly to release internal pressure.

**PERSONAL HYGIENE:** Wash thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, face shield, and gloves. Professionally launder contaminated clothing before re-use.

**EMPTY CONTAINER PRECAUTIONS:** ATTENTION! This container hazardous when empty. Follow label warnings even after container is emptied, since empty containers may retain produce residues. Do not use heat, sparks, open flames, torches, cigarettes on or near empty container. DO NOT re-use container.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

Component	Regulation	Type of listing	Value
Metal oxide	NIOSH/GUIDE	REL fume	1 mg/m <sup>3</sup>
	NIOSH/GUIDE	STEL Fume	3 mg/m <sup>3</sup>
	OSHA_TRANS	Ceiling	5 mg/m <sup>3</sup>
	Z1A	Ceiling	5 mg/m <sup>3</sup>
	ACGIH	TWA	0.2 mg/m <sup>3</sup>
Component	Regulation	Type of listing	Value
Ethylbenzene	ACGIH	TWA	100 ppm
	ACGIH	STEL	125 ppm
	NIOSH/GUIDE	REL	435 mg/m <sup>3</sup> 100ppm
	NIOSH/GUIDE	STEL	545 mg/m <sup>3</sup> 125ppm

<b>OSHA_TRANS</b>	<b>PEL</b>	<b>435 mg/m3 100ppm</b>
<b>Z1A</b>	<b>TWA</b>	<b>435 mg/m3 100ppm</b>
<b>Z1A</b>	<b>STEL</b>	<b>545 mg/m3 125ppm</b>

Component	Regulation	Type of listing	Value
Perchloroethylene	ACGIH	TWA	25ppm
	ACGIH	STEL	100ppm
	OSHA/Z2	TWA	100ppm
	OSHA/Z2	CEILING	200ppm
	OSHA/Z2	MAX. CONC	300ppm
	Z1A	TWA	170 mg/m3 25ppm

**ENGINEERING CONTROLS/VENTILATION:** Local exhaust ventilation is recommended when vapors, mists, or dusts can be released in excess of established airborne exposure limits (TLVs or PELs). CAUTION: Solvent vapors are heavier than air and collect in lower levels of the work area. Sufficient ventilation (using explosion-proof equipment) should be provided to prevent flammable vapor-air mixtures from accumulating.

**EYE PROTECTION:** Wear chemical splash goggles. (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower..

**SKIN AND BODY PROTECTION:** Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact. Where splashing is possible, full chemically resistant protective clothing and boots are required.

**RESPIRATORY PROTECTION:** Avoid breathing vapor and/or mists. Wear NIOSH/MSHA approved equipment. Determine the appropriate type by consulting the respirator manufacturer. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR 1910.134. Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved half-mask, air purifying respirator. Up to 1000 ppm organic vapor: wear a properly fitted NIOSH approved full face piece, air purifying respirator, or full face piece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or unknown: wear a properly fitted NIOSH approved self contained breathing apparatus in the pressure demand mode, or full face piece airline respirator in the pressure demand mode with emergency escape provision. Air purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters.

**Engineering Measures:** Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use and maintenance of exhaust systems.

**HYGIENIC PRACTICES:** Wash hands before eating, smoking, or using toilet facility. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance.....: dark brown  
 Water Solubility.... dispersible  
 Density.....1.1 g/cm3  
 % volatility: 57-59%

Odor.....: Solvent  
 pH 6.5 8.5  
 Evaporation rate ....: <1 water  
 Flash point.. >100 °C (212 °F),  
 Method not specific

Physical State.....: Liquid  
 Viscosity, dynamic: >150 mPa.s  
 Vapor Density.....: <1.0 water  
 Density.....: 1.1 g/cm3

Lower explosion limit: Not applicable  
 Upper explosion limit: Not applicable

Vapor pressure: Water

**Note:** The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

**HAZARDOUS REACTIONS:** This material is considered stable.

**HAZARDOUS decomposition products:** There are no known hazardous decomposition products for this material.

**MATERIALS TO AVOID:** There are no known materials which are incompatible with this product.

**POLYMERIZATION** Product will not undergo polymerization..

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## 11. TOXICOLOGY INFORMATION

No product toxicological information is available.

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## 12. ECOLOGICAL INFORMATION

No data is available on this product.

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## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL:** When a decision is made to discard this material as supplied, it meets RCRA's characteristic definition of toxicity.

**WASTE Classification:** 40 CFR 261.30 -.38 – Listed Waste Tetrachloroethylene (127-18-4), D039, RQ 100 lbs. Carbon Tetrachloride (56-23-5), D019, RQ 10 lbs. Chloroform (67-66-3), D022, RQ 10 lbs. For disposal, incinerate this material at a facility that complies with local, state, and federal regulations. (see 40 CFR 268)

**GENERAL STATEMENTS:** Empty containers should be taken for local recycling or waste disposal.

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## 14. TRANSPORT INFORMATION

DOT	Not regulated for transport
IMO/IMDG	<b>Not regulated (not dangerous for transport)</b>

*Transportation classification may vary by container volume and may be influenced by regional or country variations in regulations*

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## 15. REGULATORY INFORMATION

### FEDERAL:

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**SARA Title III - Section 311/312 – Categorizations (40CFR370):** Acute Health Hazard Chronic Health Hazard

Y - Fire Hazard

N - Sudden Release of Pressure Hazard

N - Reactivity Hazard

Y - Immediate (acute) Health Hazard

Y - Delayed (Chronic) Health Hazard

Ozone-Depleting chemicals - No regulated ingredients

## SARA Section 302 Extremely Hazardous Materials: None

### SARA Section 313 Information (40CFR372):

This Product contains a chemical WHICH IS LISTED IN Section 313 at or above de minimis concentrations. The following listed chemicals are present: (Quantity present is found elsewhere on this MSDS) SARA title III components:

Metal oxide	
Ethylbenzene	100-41-4
Perchloroethylne	127-18-4

**CERCLA Information (40CFR302.4)** – This material is regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.0This material is or contains chemicals (s) listed in 40 CFR Table 302.4 or non designated RCRA ICR Reportable Quantity (S) (RQ) are listed below. Releases in excess of its reportable quantity must be reported to the National Response Center (1-800-424-8802) and to the appropriate state and local emergency response organizations.

CERCLA Components:

Metal oxide		0 lbs
Ethylbenzene	100-41-4	1,000 lbs RQ
Perchloroethylne	127-18-4	100 lbs RQ

### United States Toxic Substance Control Act (TSCA)

All components of this product are produced in compliance with the requirements of the U.S. Toxic Substances Control Act (TSCA) and are either listed on or are exempt from listing on the Inventory. For certain polymeric substance, the Polymer Exemption cited at 40 CFR723.250 may apply.

**EXPORT NOTIFICATION** - This product contains the following chemical substances subject to the reporting requirements of TSCA Section 12 (B) if exported from the United States: Isopropanol.

**Canadian WHMIS CLASS:** B2, D1A, D2A, D2B.

### STATE RIGHT-TO-KNOW:

**Pennsylvania** – Any material not listed as “Not Hazardous” in the CAS REG NO. column of section 2, composition/information on ingredients, on this MSDA is a trade secret under the provision of the Pennsylvania Worker and Community Right-to-Know Act.

#### California (Proposition 65)

This product contains a component or components know to the State of California to cause cancer: Ethylbenzene 100-41-4

#### California (Proposition 65)

This product contains a component or components know to the State of California to cause birth defects or other reproductive harm: Toluene 108-88-3

#### California (Proposition 65)

This product contains a component or components know to the State of California to cause cancer: Perchloroethylne 127-18-4

#### California (Proposition 65)

This product contains a component or components know to the State of California to cause cancer: Chloroform 67-66-3, Carbon tetrachloride 56-23-5, Dioxane 123-91-1.

**CANADA WHMIS:** This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings. No information is available on the WHIMS class.

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## 16. OTHER INFORMATION/ADDITIONAL COMMENTS

**USERS RESPONSIBILITY:** A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if,

or where, precautions - in addition to those described herein- are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

**DISCLAIMER OF LIABILITY:** The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

The ingredients listed in Composition/Information on the Components Section are embedded in the product and are provided for information.

**Blair Rubber Company provides the information herein is in compliance with Federal hazard communication standard, 29 CFR 1910.1200, to give warning of actual and assumed hazards, and to inform of generally applicable precautions and control measures which are known to Blair Rubber Company. Hazard information is based on available scientific evidence, but is not always obtained from sources under the direction or control of Blair Rubber Company. Blair Rubber Company makes no warranty or representation that the information is accurate, reliable, complete or representative and Buyer may rely thereon only at Buyer's own risk. Blair Rubber Company warrants only that it has made no effort to censor other than trade secret information or to conceal hazards of its products. The data shown on these pages in no way modifies, amends or enlarges any specifications or warranties.**