



MATERIAL SAFETY DATA SHEET (MSDS)

1. Product Identification and Company Details

PRODUCT NAME: Wintrol® Benzotriazole

TRADE NAME: Wintrol® B-F, Wintrol® B-E, Wintrol® B-P, Wintrol® B-G, Wintrol® B-N

PRODUCT CODES: 30BT100

DISTRIBUTOR: Wincom, Inc.

ADDRESS: 11444 Deerfield Rd., Ste B
Cincinnati, Ohio 45242

PHONE: (513) 936-0185

EMERGENCY: CHEMTEL PHONE: (800) 255-3924

FAX PHONE: (513) 936-0068

CHEMICAL NAME/SYNONYMS: 1H-Benzotriazole, 1,2,3-Benzotriazol, btaH

CHEMICAL FAMILY: Triazole

CHEMICAL FORMULA: C₆H₅N₃

PRODUCT USE: Corrosion Inhibitor

Revision Date: 6/25/2010

*All non-emergency questions should be directed to customer service @ (513) 936-0185 or customerservice@wincom-inc.com *

2. Composition/Information on Ingredients

<u>COMPONENT</u>	<u>CAS #</u>	<u>% by Weight</u>	<u>EXPOSURE LIMITS</u>
Benzotriazole	95-14-7	> 99.0	Not assigned

3. Hazard Identification:

EMERGENCY OVERVIEW: Harmful by inhalation (irritant) and if swallowed (irritant). Irritating to eyes. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First Aid Measures

EYES: Flush eyes with water for 15 minutes. Cold water must be used. Get medical attention if irritation persists.

SKIN: Wash off skin thoroughly with water. Remove contaminated clothing and wash before re-use.

INGESTION: Wash out mouth thoroughly with water and give plenty of water to drink. Do not induce vomiting unless told by a medical professional. Obtain medical attention.

INHALATION: Remove from exposure, get fresh air. If problems remain or occur later, get medical attention.



5. Fire Fighting Measures

FLAMMABLE LIMITS IN AIR, (% BY VOLUME) LOWER: 2.4%

FLASH POINT:

F: 383

C: 195

METHOD USED: DIN 51758

AUTOIGNITION TEMPERATURE:

F: 752

C: 400

METHOD USED: DIN 51794

EXTINGUISHING MEDIA: Water spray, fog or foam. Do not use water jet.

6. Accidental Release Measures

SPILL & CLEAN UP: Use proper personal protective equipment. Isolate and secure the area and follow the appropriate emergency guidelines. If local high concentration of airborne dust occurs, dampen spill with water and ventilate to disperse dust-laden air. Sweep up spill and reclaim or place in a covered waste disposal container. Report spill to proper authorities.

7. Handling and Storage

HANDLING AND STORAGE: Store in cool, dry, ventilated area away from any heat source. Keep containers tightly closed and in an upright position when not in use.

OTHER PRECAUTIONS: Avoid generation of dusts.

SECTION 7 NOTES: Change contaminated clothing. Wash hands well after working with substance.

8. Exposure Controls / Personal Protection

ENGINEERING CONTROLS: Use ventilation if possible, e.g., fans or exhaust systems to keep airborne levels below recommended exposure limits.

VENTILATION : Provide natural or mechanical ventilation for dust control.

RESPIRATORY PROTECTION: If good ventilation is not available, wear a respiratory device approved by NIOSH/MSHA for protection against dust.

EYE PROTECTION: Wear safety glasses with un-perforated side shields.

SKIN PROTECTION: Wear chemical resistant gloves for long and repeated contact. Contaminated clothing and shoes should be cleaned before reusing.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety shower/eye wash

WORK HYGIENIC PRACTICES: Acceptable industrial hygiene practices should be maintained.



9. Physical & Chemical Properties

APPEARANCE: White to light yellow flake

ODOR: None found

MOLECULAR WEIGHT: 119.13

PHYSICAL STATE: Solid

BOILING POINT: 204 °C @ 15 mm Hg

MELTING POINT: 98.5 °C

VAPOR PRESSURE (mmHg): 4.0X01-2 @ 20 °C

EVAPORATION RATE: Non-volatile

SOLUBILITY IN WATER: 2.0 wt % @ 25°C

OTHER SOLUBILITIES: Soluble in benzene, toluene, chloroform and N,N-dimethylformamide and ethanol

PERCENT VOLATILE: None

REFRACTIVE INDEX: 1.470 – 1.480 @ 20°C

pKa: 8.2 @ 25°C and 8.37 @ 20°C

LOG P (OCTANOL-WATER): Log K_{ow}: 1.44

CRITICAL PRESSURE: 63.8 Bar

GIBBS ENEGRY: 442.65 kJ/mol

HENRY'S LAW: 3.32

SPECTRAL PROPERTIES: **IR:** 1561 (Coblentz Society Spectral Collection) **UV:** 465 (Sadtlar Research Laboratories Spectral Collection) **NMR:** 6410 (Sadtlar Research Laboratories Spectral Collection) **MASS:** 470 (Atlas of Mass Spectral Data, John Wiley & Sons, New York)

SECTION 9 NOTES: The above chemical properties are a compilation of data from the NTP and Wincom, Inc.

10. Chemical Stability & Reactivity Information

STABILITY: Stable

INCOMPATIBILITY (MATERIAL TO AVOID): Oxidizing Agents

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: **FIRE:** Nitrogen oxides, carbon monoxide and carbon dioxide. HCN in reducing atmospheres

HAZARDOUS POLYMERIZATION: Will not occur

11. Toxicological Information

TOXICOLOGICAL INFORMATION:

Oral LD₅₀ (Rat): = 560 mg/kg

Dermal LD₅₀ (Rabbit): > 2,000 mg/kg

Eye irritation (Rabbit): Causes eye irritation

Skin irritation (Rabbit): Not a primary skin irritant

In a test for primary skin irritation and sensitization on guinea pigs, 1-H-benzotriazole was at most mildly irritating in concentrations up to 50% in ethanol and was not a sensitizer. The dry powder is severely irritating to the rabbit eyes (0.1 ml unwashed) but prompt water washing reduces irritation considerably. [Clayton, G.D., F.E. Clayton (eds.) Patty's Industrial Hygiene and Toxicology. Volumes 2A, 2B, 2C, 2D, 2E, 2F: Toxicology. 4th ed. New York, NY: John Wiley & Sons Inc., 1993-1994., p. 3347(NTP WEBSITE)]

HUMAN TOXICITY LEVELS: NONE FOUND



12. Ecological Information

ECOLOGICAL INFORMATION:

SPILL & CLEAN UP: Use proper personal protective equipment. Isolate and secure the area and follow the appropriate emergency guidelines. If local high concentration of airborne dust occurs, dampen spill with water and ventilate to disperse dust-laden air. Sweep up spill and reclaim or place in a covered waste disposal container.

WASTE DISPOSAL METHOD: Dispose of in accordance with federal, state and local regulations regarding pollution.

CERCLA REPORTABLE QUANTITY (RQ): N/A

AQUATIC TOXICITY: LC₅₀: 100 mg/l (*Brachydanio rerio*, otherwise known as "zebra fish")

13. Disposal Considerations

WASTE DISPOSAL METHOD: Dispose of in accordance with federal, state and local regulations.

14. Transportation Information

DOT CLASSIFICATION: This product is currently not a DOT controlled material in the United States.

15. Regulatory Information

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): 8(b) inventory: **Benzotriazole-1,2,3**

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances

WORLDWIDE CHEMICAL INVENTORY STATUS: USA, TSCA, CANADA and DSL

CALIFORNIA PROPOSITION 65: None of the components in Wintrol® B are in the current P-65 chemicals list

HMIS HAZARD CLASSIFICATION

HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 0

PROTECTION: J

NATIONAL FIRE PROTECTION (U.S.A)

HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 0

16. Other Information

PREPARATION INFORMATION: Prepared on 25 June 2010, Supersedes 26 April 2010.

DISCLAIMER:

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data, and information furnished by Wincom hereunder are given gratis and Wincom assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk.