

**EMS CATALOG NO:** 16905  
**EMS PRODUCT:** Imidazole  
**DATE:** 06/15/2006  
**PAGE NUMBER:** One of 4

**MATERIAL SAFETY DATA SHEET**

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FOR PRODUCT AND SALES INFORMATION

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CONTACT ELECTRON MICROSCOPY SCIENCES OFFICE ABOVE.

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PRODUCT IDENTIFICATION

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**PRODUCT NAME:** Imidazole  
**CAS NUMBER:** 288-32-4  
**CHEMICAL FORMULA:** C<sub>3</sub>H<sub>4</sub>N<sub>2</sub>  
**CHEMICAL FAMILY:** Nitrogen Heterocycle  
**PROPER SHIPPING NAME:** DOT-NR

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PHYSICAL DATA

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**BOILING POINT:** 255-256°C  
**VAPOR DENSITY:** 2.3

**VAPOR PRESSURE:** N.A  
**EVAPORATION RATE:** N.A

% VOLATILE: N.A SOLUBILITY IN H<sub>2</sub>O: 2410mg/L  
SPECIFIC GRAVITY: 0.55-0.63 % SOLID BY WEIGHT: N.A  
pH: 10% w/v 9.8 MELTING POINT: 88-90°C  
APPEARANCE: Crystalline powder, very faint amine odor

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#### FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT: 293°F (cc)  
FLAMMABLE LIMITS: LEL N.A UEL N.A  
SPECIAL FIRE FIGHTING PROCEDURES: Wear SCBA and protective gear.  
EXTINGUISHING MEDIA: Water fog, foam, dry chemical  
UNUSUAL FIRE AND EXPLOSION HAZARDS: May emit toxic fumes of NO<sub>x</sub> and CN,  
if heated to decomposition.

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#### HEALTH HAZARD DATA

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THRESHOLD LIMIT VALUE: Not established  
PERMISSIBLE EXPOSURE LIMIT: Not established

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<u>TOXICITY DATA</u>	<u>IRRITATION DATA</u>	<u>OTHER DATA</u>
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Oral-Rat LD <sub>50</sub> -970mg/kg	Eye Rabbit-	Oral-mouse LD <sub>50</sub> -880mg/kg
Inhalation Rat LD <sub>50</sub> -	Skin Rabbit-	Mutation Data
Skin Rabbit-		RTECS N13325 1985-86
Inhalation Human-		

EFFECTS OF OVEREXPOSURE -  
Eye irritant  
Skin Effects: Skin irritant - corrosive  
Inhalation: Irritating vapor  
Ingestion: May cause discomfort

TARGET ORGANS: Skin - eyes

FIRST AID: EYES: Flush with water for 15 minutes.

SKIN: Remove contaminated clothing and wash with soap and water.

INHALATION: Remove from exposure assist breathing.

INGESTION: Give water or milk. GET MEDICAL AID! Seek physician for all overexposures.

PRIMARY ROUTES OF ENTRY: Inhalation - Skin contact  
HAZARDOUS INGREDIENTS: N.A.

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#### REACTIVITY DATA

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STABILITY: Stable  
CONDITIONS TO AVOID: High temperatures

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, NO<sub>x</sub>, CN-  
HAZARDOUS POLYMERIZATION: Will not occur  
CONDITIONS TO AVOID: N.A.  
INCOMPATIBLE MATERIALS: Acids

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#### Spill or Leak Procedures

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:  
Wearing protective gear, collect the spill and put into a proper container for disposal. Ventilate well and scrub spill area with detergent and water solution.

WASTE DISPOSAL METHOD: Dispose following local, State and Federal regulations.

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#### SPECIAL PROTECTION INFORMATION

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RESPIRATORY PROTECTION: Dust mask  
EYE PROTECTION: Safety goggles  
VENTILATION: Local exhaust  
PROTECTIVE GLOVES: Chemical resistant  
OTHER PROTECTIVE EQUIPMENT:  
Lab coat or apron

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## SPECIAL PRECAUTIONS

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### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Store in a cool, dry area in tightly-closed containers. Avoid contact with skin and eyes or breathing dust.