



**Product** : AMINDO 8738-68  
**MSDS Number** : MMSD-057  
**Version Date** : November 08, 2010

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Product** : AMINDO 8738-68  
**Type** : Melamine Formaldehyde Resin

**Supplier details:**

PT ALKINDO MITRARAYA (AMR)  
JI Gatot Subroto km. 8, Desa Kadu Jaya, Kecamatan Curug  
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INDONESIA  
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### 2. HAZARDS IDENTIFICATION

#### GHS CLASSIFICATION

Flammable Liquid Hazard Category 3  
Skin Corrosion / Irritation Hazard Category 2  
Serious Eye Damage / Eye Irritation Hazard Category 1  
Skin Sensitizer Hazard Category 1  
Carcinogenicity Hazard Category 2  
Target Organ Systemic Toxicant (TOST) - Single Exposure Hazard Category 3  
Aquatic Environment Chronic Hazard Category 4

#### GHS LABELING



#### GHS SIGNAL WORD

Danger

#### HAZARD STATEMENTS

Flammable liquid and vapor  
Suspected of causing cancer  
Causes serious eye damage  
May cause an allergic skin reaction  
Causes skin irritation  
May cause respiratory irritation  
May cause drowsiness and dizziness  
May cause long lasting harmful effects to aquatic life



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#### PRECAUTIONARY STATEMENTS

##### Prevention

Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and other equipment. Use only no sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye/face protection. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Use only outdoors or in a well-ventilated area. Avoid breathing vapors or spray mist.

##### Response

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Specific treatment - refer to supplemental first aid instructions. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician. If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

In case of fire, use the following media for extinction: water spray or fog, alcohol foam, carbon dioxide, dry chemical.

##### Storage

Store in well ventilated place. Keep cool. Store locked up. Keep container tightly closed.

##### Disposal

Dispose of contents/container in accordance with local and national regulations.

### 3. COMPOSITION INFORMATION

#### CHEMICAL DESCRIPTION

Melamine formaldehyde polymer – butylated (CAS No. 68002-25-5), in solution in n-butanol.

#### HAZARDOUS COMPONENTS

Melamine formaldehyde polymer – butylated CAS No. 68002-25-5	69.5 ± 1.5 %
n-Butanol CAS No. 71-36-3	29.5 ± 1.5 %
Formaldehyde CAS No. 82115-62-6	± 1 %

### 4. FIRST AID MEASURES

#### EYE CONTACT:

In the event of contact with eyes, irrigate copiously with water for at least ten minutes, obtain medical advice immediately if irritation persists or there is any sign of tissue damage.

#### SKIN CONTACT:

Remove contaminated clothing. In the event of contact with the skin, remove excess resin with a clean cloth; clean skin with water (or soap and water). If irritation persists or if any sign of tissue damage is apparent, obtain medical advice immediately.



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**INHALATION:**

In the event of excessive inhalation remove the individual to fresh air and keep at rest; obtain medical advice immediately.

**INGESTION:**

In the event of accidental ingestion, rinse mouth with water; give up to 1 tumbler (½ pint) of milk or water to drink; obtain medical advice immediately.

## 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:**

Foam, dry powder, carbon dioxide, water spray.

**EXPOSURE HAZARDS:**

Keep containers cool by spraying with water if exposed to fire. Heating will cause pressure rise with risk of bursting and subsequent explosion. For decomposition products see Section 10.

**PROTECTIVE EQUIPMENT:**

Fire fighters and others exposed, wear self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:**

Use personal protection recommended in Section 8. Avoid breathing vapor from hot material. Where exposure level is known, wear approved, positive pressure, self-contained respirator. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

**ENVIRONMENTAL PRECAUTIONS:**

Do not allow to enter drains and water courses. If sewers become contaminated contact Local Water Authority and Police. Should resin enter other waterways inform the Environment Agency.

**METHODS FOR CLEANING UP:**

Absorb onto sand. Drums leaking near base may be inverted. Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

## 7. HANDLING & STORAGE

**HANDLING:**

Handle in a well-ventilated flameproof area preferably in an enclosed system. Keep concentration of vapors as low as is reasonably practicable and observe occupational exposure limits detailed in Section 8.

**STORAGE:**

Store in closed containers away from sources of heat in a well-ventilated flameproof area. Storage is subject to the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972; SI 917.  
Storage temperature: 25 – 30°C.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING MEASURES:**

Ensure adequate ventilation to keep vapor concentrations below occupational exposure limits.

**OCCUPATIONAL EXPOSURE LIMITS (EH40):**

**Formaldehyde**

1 ppm  
1.2 mg/m<sup>3</sup>

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*n-Butanol*  
20 ppm  
100 mg/m<sup>3</sup>

**EYES:**

Goggles.

**RESPIRATORY PROTECTION:**

Wear suitable respiratory protection if exposure limits may be exceeded. Airline respirator or cartridge respirator with appropriate filter.

**HAND PROTECTION:**

Wear impermeable gloves.

**SKIN PROTECTION:**

Wear suitable protective clothing.

## 9. PHYSICAL & CHEMICAL PROPERTIES

Phase	: Liquid (25.0 °C)
Appearance, Color	: Transparent, colorless
Odor	: Formaldehyde and solvent
Boiling point (760 mmHg)	: 110 - 130°C
Water solubility	: insoluble
Flash point (°C)	: 45.0 (Tag close cup)

## 10. STABILITY & REACTIVITY

**CONDITIONS TO AVOID:**

Heating will cause pressure rise with risk of bursting and subsequent explosion.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Thermal decomposition products may include formaldehyde, butanol, oxides of nitrogen, hydrogen cyanide, ammonia and carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

**Potential health effects:**

Limited evidence of a carcinogenic effect.  
Risk of serious damage to eyes.  
May cause sensitization by skin contact.  
Vapors may cause drowsiness and dizziness.  
Irritating to respiratory system and skin.

**HAZARDOUS INGREDIENTS TOXICITY:**

*n-Butanol*

Butanol has acute oral (rat) and dermal (rabbit) LD50 values of 0.790 g/kg and 3.4 g/kg, respectively. The inhalation LC50 (rat) value after a 4-hour exposure is 8000 ppm (24.24 mg/L). Acute overexposure to vapors of butanol may cause headache, dizziness, drowsiness, blurred vision and a burning sensation in the eyes. Chronic overexposure to butanol vapors can produce headache and central nervous system depression. Direct contact with butanol may cause severe eye irritation and moderate skin irritation.

*Formaldehyde*

Formaldehyde has oral (rat) and dermal (rabbit) LD50 values of 100 mg/kg and 270 mg/kg, respectively. The LC50 following a 4-hour inhalation exposure to rats is 250-478 ppm (0.31-0.59 mg/l). Irritation of the nose and throat has been observed in people exposed to formaldehyde vapor levels in excess of 1 ppm. Normal



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breathing may be seriously impaired at levels above 10 ppm and serious lung damage can occur at levels exceeding 50 ppm. Formaldehyde has been reported to cause pulmonary hypersensitivity in some individuals who were exposed to concentrations known to cause irritation; however, no pulmonary sensitization has been demonstrated in laboratory animal studies. Formaldehyde solutions can cause severe eye and moderate skin irritation. Repeated skin exposure to solutions of 2% or more formaldehyde has caused allergic skin reactions. Formaldehyde was found to be weakly mutagenic in a number of in vitro genotoxicity tests and positive in certain in vivo screening tests for mutagenicity. Formaldehyde did not cause birth defects in rats inhaling concentrations up to 10 ppm. However, a study using higher levels did show a slight but statistically significant reduction in male fetal body weight. Lifetime inhalation of formaldehyde vapor at concentrations above 5 ppm for 6 hours per day, caused nasal tumors in laboratory animals. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to the occurrence of nasopharyngeal cancer, a rare type of cancer. IARC also found limited evidence of cancer of the nasal cavity and paranasal sinuses and insufficient evidence for an association between formaldehyde and leukemia. Inhalation caused liver and kidney damage in laboratory animal tests.

## 12. ECOLOGICAL INFORMATION

### ASSESSMENT:

If properly handled, this material should not present a serious environmental hazard.

### TEST RESULTS:

AMR has not conducted environmental studies on this product. The product does not contain any substance that is classified under EC legislation for environmental effects. Data is available on some of the components.

#### *n-Butanol*

BOD5 >0.5 Readily biodegradable

COD

#### *Formaldehyde*

BOD5 >0.5 Readily biodegradable

COD

## 13. DISPOSAL CONSIDERATIONS

AMR encourages the recycle, recovery, and reuse of materials, where permitted. If disposal is necessary, AMR recommends that organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

## 14. TRANSPORT INFORMATION

### Land Transport

Proper Shipping Name : Resin solution  
UNDG Class : 3  
UN No : 1866  
Packing Group : III  
Transport label required : Flammable liquid  
HAZCHEM Code : 3[Y]

### Sea Transport (IMO)

Proper Shipping Name : Resin solution  
IMDG Class : 3  
UN Number : UN1866  
Packing Group : III  
Transport label required : Flammable liquid



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**Air Transport (ICAO/IATA)**

Proper Shipping Name : Resin solution  
Hazard Class : 3  
Packing Group : III  
UN : UN1866  
Transport Label Required : Flammable liquid  
Packing Instruction/Maximum Net Quantity Per Package:  
Passenger Aircraft : 309; 60L  
Cargo Aircraft : 310; 220L

**15. REGULATORY INFORMATION**

**European Union (EU):** All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

**United States (USA):** All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

**China:** All components of this product are included on the Chinese Inventory or are not required to be listed on the Chinese Inventory.

**Japan:** All components of this product are included on the Japanese (ENCS) Inventory or are not required to be listed on the Japanese Inventory.

**OTHER INFORMATION**

**RISK PHRASES:**

R10 Flammable  
R40 Possible risk or irreversible effects  
R43 May cause sensitization by skin contact

**SAFETY PHRASES:**

S24/25 Avoid contact with skin and eyes  
S37 Wear suitable gloves.  
S43 In case of fire use sand, foam, dry powder or carbon dioxide extinguisher.  
S51 Use only in well ventilated areas.

**16. OTHER INFORMATION**

Whilst every care has been taken in the preparation of this material safety data sheet, the same has been produced from information and data currently available to PT Alkindo Mitraraya at the date hereof; however, PT Alkindo Mitraraya cannot be responsible for any errors or omissions. If in any doubt, please consult PT Alkindo Mitraraya.

Reasons for issue: New Format