

INEOS Melamines

A division of INEOS Americas LLC

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: MAPRENAL® MF 988/80B

Reference Number: 000000003244

Date: 12/21/2006

Company Information:

United States:

INEOS Melamines, A division of INEOS Americas LLC
1395 S. Marietta Parkway ; Bldg. 500, Suite 210
Marietta, GA 30067, USA
Emergency telephone: US-EMTEL+1 352 323 3500
For Product Information call: 1-413-730-2259

Mexico/Latin America:

INEOS Melamines, A division of INEOS Americas LLC
1395 S. Marietta Parkway ; Bldg. 500, Suite 210
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Canada:

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1395 S. Marietta Parkway ; Bldg. 500, Suite 210
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2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS No.</u>	<u>Average concentration</u>	<u>Concentration range</u>	<u>Units (wt./wt.)</u>
¹ butylated benzoguanomine resin			>=78.0 - <=82.0	%
butan-1-ol	71-36-3		>=16.0 - <=18.0	%
isobutanol	78-83-1		>=1.0 - <=2.0	%
formaldehyde	50-00-0		<1.0	%

¹ The specific chemical identity (including CAS No.) and/or concentration is being withheld because it is trade secret information of INEOS Melamines, A division of INEOS Americas LLC.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Form: liquid
Colour: yellowish
Odour: alcohol

WARNING STATEMENTS

WARNING!
Flammable liquid and vapour
Causes eye irritation
Causes skin irritation
Causes respiratory tract irritation
May cause allergic skin reaction.
Contains Formaldehyde - Potential Cancer Hazard

POTENTIAL HEALTH EFFECTS

Likely routes of exposure: eye and skin contact
inhalation

Eye contact: Highly irritating to eyes.

Skin contact: Highly irritating to skin.
No more than slightly toxic if absorbed.
May cause allergic skin reaction.

Inhalation: Severely irritating if inhaled.
No more than slightly toxic if inhaled.
Significant adverse health effects are not expected to develop under normal conditions of exposure.

Ingestion: No more than slightly toxic if swallowed.
Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

Signs and symptoms of overexposure: headache
dizziness/incoordination
nausea/vomiting
loss of consciousness
vertigo
confusion
anxiety
laboured breathing
drowsiness

Carcinogenicity: Contains a component that is a National Toxicology Program (NTP) and International Agency for Research Cancer (IARC) listed carcinogen.

Refer to Section 11 for toxicological information.

4. FIRST AID MEASURES

If in eyes: Immediately flush with plenty of water for at least 15 minutes.

- If easy to do, remove any contact lenses.
Get medical attention.
Remove material from skin and clothing.
- If on skin: Immediately flush the area with plenty of water.
Remove contaminated clothing.
Wash skin gently with soap as soon as it is available.
Get medical attention.
Wash clothing before reuse.
- If inhaled: Remove patient to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult give oxygen.
Remove material from eyes, skin and clothing.
- If swallowed: Immediate first aid is not likely to be required.
A physician or Poison Control Center can be contacted for advice.
Wash heavily contaminated clothing before reuse.

5. FIRE FIGHTING MEASURES

- Flash point: 40 °C DIN 53213
- Autoignition temperature: 380 °C DIN 51794
- Hazardous products of combustion: nitrogen oxides (NOx);
- Extinguishing media: Water spray, foam, dry chemical, or carbon dioxide
- Unusual fire and explosion hazards: There is a possibility of pressure build-up in containers when heated.
Keep containers cool by spraying with water if exposed to fire.
- Fire fighting equipment: Firefighters, and others exposed, wear self-contained breathing apparatus.
Equipment should be thoroughly decontaminated after use.
- Miscellaneous advice: In use, may form flammable/explosive vapour-air mixture.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions: Remove any sources of sparks, flame, or hot surfaces.
Use personal protection recommended in section 8.
- Environmental precautions: Keep out of drains and water courses.
- Methods for cleaning up: Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush spill area with water.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

7. HANDLING AND STORAGE

Handling

Keep away from heat, sparks, and flame.
Avoid breathing vapour or mist.
Avoid contact with eyes, skin and clothing.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

Container hazardous when empty. Emptied containers retain vapour and product residue. Follow labelled warnings even after container is emptied. Residual vapours may explode on ignition. Do not cut, drill, grind or weld on or near this container. Improper disposal or reuse of this container may be dangerous and/or illegal. The reuse of this material's container for non-industrial purposes is prohibited and any reuse must be in consideration of the data provided in this material safety data sheet.

Storage

General: Do not expose to extreme temperatures.
Keep in a cool, dry, well ventilated place.
Stable under normal conditions of handling and storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection: Wear chemical goggles.
Have eye flushing equipment available.

Hand protection: Wear chemical resistant gloves.
Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.

Body protection: Wear suitable protective clothing.
Wear full protective clothing if exposed to splashes.
Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.
Wash contaminated skin promptly.
Launder contaminated clothing and clean protective equipment before reuse.
Have safety shower available at locations where skin contact can occur.
Wash thoroughly after handling.
Attention! Repeated or prolonged contact may cause allergic skin reaction in some people.

Respiratory protection: Avoid breathing vapour or mist.
Use approved respiratory protection equipment (full facepiece recommended) when airborne exposure limits are exceeded.
If used, full facepiece replaces the need for face shield and/or chemical goggles.
Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.
Observe respirator use limitations specified by the manufacturer.

Ventilation: Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits.
If practical, use local mechanical exhaust ventilation at sources of air contamination such as processing equipment.

Airborne exposure limits: (ml/m³ = ppm)

MAPRENAL® MF 988/80B	No specific occupational exposure limit has been established.
butan-1-ol	ACGIH TLV: 20 ml/m ³ ; ; 8-hr TWA OSHA PEL: 100 ml/m ³ ; 300 mg/m ³ ; ; 8-hr TWA Mexican OEL: 50 ml/m ³ ; 150 mg/m ³ ; skin * ; 8-hr TWA * skin absorption of this material may add to the overall exposure.
isobutanol	ACGIH TLV: 50 ml/m ³ ; 152 mg/m ³ ; ; 8-hr TWA OSHA PEL: 100 ml/m ³ ; 300 mg/m ³ ; ; 8-hr TWA Mexican OEL: 50 ml/m ³ ; 150 mg/m ³ ; ; 8-hr TWA Mexican OEL: 75 ml/m ³ ; 225 mg/m ³ ; ; 15-min STEL
formaldehyde	ACGIH TLV: 0.3 ml/m ³ ; 0.37 mg/m ³ ; ; ceiling A2: The ACGIH has designated this component as an "A2" substance, thereby including it among industrial substances suspect of carcinogenic potential for man. Worker exposure by all routes should be carefully controlled. The ACGIH has designated this component as having confirmed potential for worker sensitization as a result of either dermal contact or inhalation exposure based on the weight of scientific evidence. OSHA PEL: 0.75 ml/m ³ ; ; 8-hr TWA OSHA PEL: 2 ml/m ³ ; ; 15-min STEL Mexican OEL: 2 ml/m ³ ; 3 mg/m ³ ; ; ceiling

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	1.09 @ 20 °C
Boiling range :	60 - 100 °C
Freezing point	~ -8 °C
Vapour pressure:	12 hPa @ 20 °C 93 hPa @ 50 °C
Water solubility:	insoluble
Viscosity :	5,000 - 10,000 mPa.s @ 23 °C

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Conditions to avoid:	Elevated temperatures All sources of ignition.
Materials to avoid -	None known

Hazardous reactions: Hazardous polymerization does not occur.

Hazardous decomposition products: formaldehyde;

11. TOXICOLOGICAL INFORMATION

INEOS Melamines, A division of INEOS Americas LLC has not conducted toxicity studies on this material and no toxicological information was obtained in a reasonably extensive search of the available scientific literature.

Components

Data from INEOS Melamines, A division of INEOS Americas LLC studies and/or the available scientific literature on the components of this material which have been identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Hazardous Products Act are discussed below.

butan-1-ol	<p>Irritating to eyes, skin and respiratory tract. The vapour has a narcotic effect. Excessive exposure may cause dizziness, vertigo, confusion, lack of coordination, dyspnoea, nausea and loss of consciousness. Accidental inhalation during ingestion or vomiting may cause lung injury leading to death. May cause hearing loss. Slightly toxic after skin application in animal studies. Slightly to moderately toxic following oral administration. Repeat inhalation studies reported multiple systemic effects. No effects on offspring observed in laboratory animals in the presence of maternal toxicity.</p>
isobutanol	<p>Slightly toxic following oral administration. Slightly toxic after skin application in animal studies. Practically nontoxic based on animal inhalation exposure studies. Highly irritating to eyes (rabbit). Moderately irritating to skin (rabbit). This material produced tumours in laboratory animals. The weight of the evidence indicates that this material is not mutagenic in in-vitro assays.</p>
formaldehyde	<p>Corrosive to eyes. Can produce severe eye damage leading to loss of sight. Highly irritating to skin. Repeated contact can produce numbness. Repeated skin application produces skin allergy. Causes burning of the nose and throat. Causes digestive tract injury if swallowed. Inhalation may result in nausea, vomiting and diarrhea. Can trigger asthma attacks in susceptible individuals. Slightly to moderately toxic following oral administration. Moderately toxic after skin application in animal studies. Repeated inhalation exposure produced multiple systemic effects. This material produced tumours in laboratory animals.</p>

The weight of the evidence indicates that this material is mutagenic.
Listed by the National Toxicology Program (NTP) as a substance that may reasonably be anticipated to be a carcinogen and is classified as a "known human carcinogen" by the International Agency for Research on Cancer (IARC).

12. ECOLOGICAL INFORMATION

INEOS Melamines, A division of INEOS Americas LLC has not conducted environmental toxicity or biodegradation studies with this material.

13. DISPOSAL CONSIDERATIONS

US EPA RCRA Status: This material when discarded is a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. See disposal considerations below for U.S. EPA disposal requirements. Consult regulatory officials for performance standards.

US EPA RCRA hazardous waste number: D001 Compound/Characteristic: Ignitability

Disposal considerations: Deactivation
Recovery
CMBST - High temperature organic destruction technologies
Consult 40 CFR 268.48 for concentration based standards.

Miscellaneous advice: Consult your attorney or appropriate regulatory officials for information on such disposal.
Local, state, provincial, and national disposal regulations may be more or less stringent.
This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

US DOT

Proper shipping name: RESIN SOLUTION

Hazard Class: 3
Hazard Identification number: UN1866
Packing Group: Packing Group III
Transport label: Flammable liquid.

Canadian TDG

Proper shipping name: RESIN SOLUTION

Hazard Class: 3
Hazard Identification number: UN1866
Packing Group: Packing Group III
Transport label: Flammable liquid.

Reportable Quantity/Limit

US DOT RQ 100 lb *formaldehyde*
Package size containing reportable amount: 10,000 lb
US DOT RQ 5,000 lb *butan-1-ol*
Package size containing reportable amount: 27,777 lb

15. REGULATORY INFORMATION

All components are in compliance with the following inventories: U.S. TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Chinese, Phillipine PICCS

Other chemical inventory information: The polymer contained within this product is exempt from listing in the European Inventory. The monomers used to manufacture this polymer are listed as required, as are all other components of this product.

Canadian WHMIS classification: B3 - Combustible Liquids
D2(A) - Materials Causing Other Toxic Effects
D2(B) - Materials Causing Other Toxic Effects

SARA Hazard Notification:

Hazard Categories Under Title III Rules (40 CFR 370): Fire
Immediate
Delayed

Section 302 Extremely Hazardous Substances: formaldehyde

Section 313 Toxic Chemical(s): butan-1-ol formaldehyde

CERCLA Reportable Quantity:

100 lbs formaldehyde
5000 lbs butan-1-ol
5000 lbs isobutanol

For this/these chemicals, release of more than the Reportable Quantity to the environment in a 24 hour period requires notification to the National Response Center (800-424-8802 or 202-426-2675).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Products Regulation.

Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.

Safety data sheet also created in accordance with Brazilian law NBR 14725

16. OTHER INFORMATION

Product use: Coating agent

Reason for revision: Company name change.

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	2	2	1	
Suggested HMIS Rating:	2	2	1	G

Prepared by the INEOS Melamines, A division of INEOS Americas LLC Product Stewardship Group. Please consult INEOS Melamines, A division of INEOS Americas LLC @ 1-413-730-2259 if further information is needed. See page header for date of preparation.

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