MATERIAL SAFETY DATA SHEET
LTM®10 EPOXY RESIN PREPREG

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME LTM®10 EPOXY RESIN PREPREG
PRODUCT NO. LTM10, LTM10B, 200
PRODUCT USE Epoxy Resin Prepreg
SUPPLIER Advanced Composites Group
Inc.
5350 129th East Avenue
Tulsa, OK 74134
e-mail: sales@acg-us.com
Tel: 1 918 252 3922
Fax: 1 918 252 7371
Emergency Contact: Chemtrec
Tel: 1 800 424 9300 (24 hour)
www.advanced-composites.com

2 HAZARDS IDENTIFICATION

ENVIRONMENT
Contains a substance which causes risk of hazardous effects to the environment.

PHYSICAL AND CHEMICAL HAZARDS
When handled correctly, undamaged units represent no danger. Polymerizes easily with evolution of heat. Keep cool. Potential exothermic reaction when heated

HUMAN HEALTH
Exposure to fibers is unlikely to occur when properly used. The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals. The product contains a substance/a chemical group which is suspected of having harmful long-term effects. Harmful vapors may be liberated during curing.

POTENTIAL HEALTH EFFECTS

GENERAL INFORMATION
Cured panels often produce edges which are extremely sharp and capable of penetrating protective clothing.

INHALATION
Not relevant at normal room temperatures. When heated, harmful vapors may be formed. The manufactured articles. Dust may irritate throat and respiratory system and cause coughing. It is therefore important to take particular care to avoid inhalation exposure when mechanically processing cured material (e.g. grinding, sanding and sawing).

INGESTION
Harmful if swallowed.

SKIN CONTACT
Risk of sensitization or allergic reactions among sensitive individuals.

HEALTH WARNINGS
Preparation contains an epoxy resin, which may cause sensitization and development of allergy.

ROUTE OF ENTRY
Skin and/or eye contact.

3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>EC No.</th>
<th>CAS-No.</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N,N',N'-TETRAGLYCIDYL-4,4'-DIAMINODIPHENYMETHANE</td>
<td>249-204-3</td>
<td>28768-32-3</td>
<td>10-25%</td>
</tr>
</tbody>
</table>
4 FIRST-AID MEASURES

GENERAL INFORMATION
Preparation contains an epoxy resin, which may cause sensitization and development of allergy. Exposure to fibers is unlikely to occur when properly used. Prolonged skin contact may cause redness, irritation and dry skin. Wash promptly with soap & water if skin becomes contaminated. Get medical attention if any discomfort continues.

INHALATION
Limited inhalation hazard at normal work temperatures. Unlikely route of exposure as the product does not contain volatile substances. General first aid, rest, warmth and fresh air. Get medical attention if any discomfort continues.

INGESTION
Not relevant, due to the form of the product.

SKIN CONTACT
Important to remove the substance from the skin immediately. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.

EYE CONTACT
Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention promptly if symptoms occur after washing.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Fire can be extinguished using: Water spray, foam, dry powder or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES
Quench exotherming material with water spray Avoid breathing fire vapors. Use supplied air respirator if product is involved in a fire. Containers close to fire should be removed immediately or cooled with water. Keep run-off water out of sewers and water sources.

UNUSUAL FIRE & EXPLOSION HAZARDS
Potential exothermic reaction when heated High temperatures generate: Acrid smoke/fumes

SPECIFIC HAZARDS
By heating and fire, irritating vapors/gases may be formed.

PROTECTIVE MEASURES IN FIRE
Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet.

ENVIRONMENTAL PRECAUTIONS
Avoid release to the environment. Do not discharge into drains, water courses or onto the ground.

SPILL CLEAN UP METHODS
Collect in containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. For waste disposal, see section 13.

7 HANDLING AND STORAGE

HANDLING
Defrost thoroughly before use. Protective gloves are recommended. Limited inhalation hazard at normal work temperatures. Observe good industrial hygiene practices.

STORAGE
Keep only in the original protective bag at a temperature not exceeding - 18 °C Do not store near heat sources or expose to high temperatures.

STORAGE CLASS
Store frozen (Product stability)

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT COMMENTS
No exposure limits noted for ingredient(s).
LTM®10 EPOXY RESIN PREPREG

PROCESS CONDITIONS
The recommended curing procedures must be followed.

PROTECTIVE EQUIPMENT

ENGINEERING MEASURES
Provide adequate general and local exhaust ventilation. Workplace exposure limits must be complied with. If this is not possible, then suitable dust masks must be worn.

RESPIRATORY EQUIPMENT
No specific recommendation made, but protection against nuisance dust must be used when the general level exceeds 10 mg/m³. It is therefore important to take particular care to avoid inhalation exposure when mechanically processing cured material (e.g. grinding, sanding and sawing).

HAND PROTECTION
Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin. Protective gloves are recommended. Rubber (natural, latex). Nitrile. For exposure of 1 to 4 hours use gloves made of: Butyl rubber gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable.

EYE PROTECTION
Exposure to fibres is unlikely to occur when properly used.

OTHER PROTECTION
Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES
Wash hands after handling. Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.

PERSONAL PROTECTION
Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

SKIN PROTECTION
Wear apron or protective clothing in case of contact.

ENVIRONMENTAL EXPOSURE CONTROLS
Do not release into the environment.

9 PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE</td>
<td>Epoxy resin Impregnated fabric.</td>
</tr>
<tr>
<td>COLOR</td>
<td>Dark Brown</td>
</tr>
<tr>
<td>ODOR</td>
<td>Slight odor</td>
</tr>
<tr>
<td>SOLUBILITY</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>VOLATILE ORGANIC CONTENT</td>
<td>Negligible</td>
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</table>

10 STABILITY AND REACTIVITY

STABILITY
Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID
Caution: Thick laminates (>10mm) may exotherm on curing. Avoid heat. Toxic gases are generated when heated.

HAZARDOUS POLYMERISATION
May polymerize. Potential exothermic reaction when heated.

POLYMERISATION DESCRIPTION
Systems are based on a reactive resin / curative combination and may under certain circumstances undergo a rapid rise in temperature, an exotherm. This may be accompanied by the evolution of potentially harmful fumes.

MATERIALS TO AVOID
Strong oxidising substances. Strong alkalies. Amines.
LTM®10 EPOXY RESIN PREPREG

HAZARDOUS DECOMPOSITION PRODUCTS
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11 TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Name</th>
<th>N,N,N',N'-TETRAGLYCIDYL-4,4'-DIAMINODIPHENYL METHANE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARCINOGENICITY</td>
<td>Extensive in vitro and in vivo tests have been conducted with this substance in bacteria and animals in order to clarify its mutagenic potential. Interpretation of the test results in accordance with EC criteria (Directive 2001/59/EC) indicates that this substance should be classified as a Category 3 mutagen, with Risk Phrase R68.</td>
</tr>
<tr>
<td>Name</td>
<td>2-ETHYL-4-METHYLIMIDAZOLE</td>
</tr>
<tr>
<td>Toxic Dose 1 - LD 50</td>
<td>1000 mg/kg (oral rat)</td>
</tr>
<tr>
<td>Toxic Dose 2 - LD 50</td>
<td>&gt;400 mg/kg (dermal/rabbit)</td>
</tr>
</tbody>
</table>

12 ECOLOGICAL INFORMATION

| ECOTOXICITY | The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment. |
| MOBILITY | The product is insoluble in water and will sediment in water systems. |
| BIOACCUMULATION | The product hardens to a solid immobile substance. Bioaccumulation is unlikely to be significant because of the low water solubility of this product. |
| DEGRADABILITY | The product is not expected to be biodegradable. |

13 DISPOSAL CONSIDERATIONS

| WASTE MANAGEMENT | Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Diposal Authority. |
| DISPOSAL METHODS | Recover and reclaim or recycle, if practical. Waste is suitable for incineration. Dispose of waste and residues in accordance with local authority requirements. |

14 TRANSPORT INFORMATION

| TRANSPORT NOTES | The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID). |

15 REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAN</th>
<th>US</th>
<th>EU</th>
<th>AUS</th>
<th>JAP</th>
<th>KOR</th>
<th>CHN</th>
<th>PHLP</th>
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<tr>
<td>N,N,N',N'-TETRAGLYCIDYL-4,4'-DIAMINODIPHENYL METHANE</td>
<td>DSL</td>
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<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>TSCA 12(b) Export Notification</th>
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<tr>
<td>N,N,N',N'-TETRAGLYCIDYL-4,4'-DIAMINODIPHENYL METHANE</td>
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<td>2-ETHYL-4-METHYLIMIDAZOLE</td>
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LTM®10 EPOXY RESIN PREPREG

US FEDERAL REGULATIONS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>SARA</th>
<th>CERCLA-R</th>
<th>SARA 313</th>
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<tr>
<td>N,N,N',N'-TETRAGLYCIDYL-4,4'-DIAMINODIPHENYL METHANE</td>
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<tr>
<td>2-ETHYL-4-METHYLIMIDAZOLE</td>
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CLEAN AIR ACT

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<tr>
<th>COMPONENT</th>
<th>CAA Accidental Release Prevention</th>
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<td>N,N,N',N'-TETRAGLYCIDYL-4,4'-DIAMINODIPHENYL METHANE</td>
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<td>2-ETHYL-4-METHYLIMIDAZOLE</td>
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US STATE REGULATIONS

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<th>COMPONENT</th>
<th>CAS</th>
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<th>MA</th>
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<th>PA</th>
<th>RI</th>
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<tr>
<td>N,N,N',N'-TETRAGLYCIDYL-4,4'-DIAMINODIPHENYL METHANE</td>
<td>28768-32-3</td>
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<td>2-ETHYL-4-METHYLIMIDAZOLE</td>
<td>931-36-2</td>
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WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS

LABEL(S) FOR SUPPLY

Materials Causing Other Toxic Effects.

CONTROLLED PRODUCT CLASSIFICATION
This Product has been classified according to the hazard criteria of the Controlled Products Regulations and the MSDS contains all required information.

16 OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL</th>
<th>PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>* 2</td>
<td>1</td>
<td>2</td>
<td>C</td>
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NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>INSTABILITY</th>
<th>SPECIAL</th>
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<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(2)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

GENERAL INFORMATION
Only trained personnel should use this material. The recommended curing procedures must be followed.

ISSUED BY
Product Safety Officer

REVISION DATE 30/06/2009
DISCLAIMER

All statements, technical information and recommendations contained in this data sheet are given in good faith and are based on tests believed to be reliable, but their accuracy and completeness are not guaranteed. They do not constitute an offer to any person and shall not be deemed to form the basis of any subsequent contract, nor to constitute any warranty or representation as to quality, merchantability or fitness for purpose. All products are sold subject to the seller’s Standard Terms and conditions of Sale. Accordingly, the user shall determine the suitability of the products for their intended use prior to purchase and shall assume all risk and liability in connection therewith. It is the responsibility of those wishing to sell items made from or embodying the products to inform the user of the properties of the products and the purposes for which they may be suitable, together with all precautionary measures required in handling those products. The information contained herein is under constant review and liable to be modified from time to time.

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