

**SECTION 1: Identification**

**1.1. Identification**

Product form : Article  
Product name : ELL Unclad laminate

**1.2. Recommended use and restrictions on use**

Use of the substance/mixture : Laminate for consumer and industrial electronics

**1.3. Supplier**

AGC Multi Material America Inc.  
1420 W 12th Place  
Tempe, AZ 85281  
T 480-967-5600

**1.4. Emergency telephone number**

Emergency number : 480-967-5600 (8am - 5pm MST) M - F

**SECTION 2: Hazard(s) identification**

**The subject product is a solid material that is not exempted as an article due to its downstream use. The subject product does not pose hazards in its original form. During processing, such as cutting, grinding, or heating, hazards listed in section 2.1 apply.**

**2.1. Classification of the substance or mixture**

**GHS US classification**

|  |   |
|--|---|
| Skin corrosion/irritation Category 2   | Causes skin irritation  |
| Serious eye damage/eye irritation Category 2   | Causes serious eye irritation   |
| Skin sensitization, Category 1   | May cause an allergic skin reaction   |
| Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | May cause respiratory irritation  |
| Specific target organ toxicity (repeated exposure) Category 1                              | Causes damage to organs through prolonged or repeated exposure (Inhalation) |

**2.2. GHS Label elements, including precautionary statements**

**GHS US labeling**

Hazard pictograms (GHS US) : 

Signal word (GHS US) : Danger

Hazard statements (GHS US) : Causes skin irritation  
May cause an allergic skin reaction  
Causes serious eye irritation  
May cause respiratory irritation  
Causes damage to organs through prolonged or repeated exposure (Inhalation)

Precautionary statements (GHS US) : Do not breathe dust, vapors.  
Wash hands, forearms and face thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.

# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Contaminated work clothing must not be allowed out of the workplace.  
Wear eye protection, face protection, protective gloves.  
If on skin: Wash with plenty of soap and water.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Call a POISON CENTER, a doctor if you feel unwell.  
Get medical advice/attention if you feel unwell.  
If skin irritation occurs: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
Wash contaminated clothing before reuse.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : None known.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name                    | Product identifier    | %       |
|-------------------------|-----------------------|---------|
| Glass, oxide, chemicals | CAS-No.: 65997-17-3   | 20 – 50 |
| Silica, vitreous        | CAS-No.: 60676-86-0   | 12 – 25 |
| Proprietary component   | CAS-No.: Trade secret | < 5     |

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Not considered a potential route of exposure in its original form. In case of processing such as cutting, grinding, or heating: Remove person to fresh air and keep comfortable for breathing.

# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

|                                       |  |
|---------------------------------------|--|
| First-aid measures after skin contact | : Not considered a potential route of exposure in its original form. In case of processing such as cutting, grinding, or heating: Remove/Take off immediately all contaminated clothing. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.  |
| First-aid measures after eye contact  | : Not considered a potential route of exposure in its original form. In case of exposure to dust, vapours, or smoke during processing, such as cutting, grinding, or heating: Rinse immediately with plenty of water. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion    | : Not expected to present a significant hazard under anticipated conditions of normal use. In case of processing such as cutting, grinding, or heating: Rinse mouth out with water. Call a poison center/doctor/physician if you feel unwell.  |

### 4.2. Most important symptoms and effects (acute and delayed)

|   |  |
|---|--|
| Potential Adverse human health effects and symptoms | : Not considered a potential route of exposure in its original form. |
| Symptoms/effects after skin contact                 | : Irritation. May cause an allergic skin reaction.                   |
| Symptoms/effects after eye contact                  | : Mild eye irritation.   |

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam. |
| Unsuitable extinguishing media | : None known.  |

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

|                                |  |
|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|--|

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

|                      |  |
|----------------------|--|
| Emergency procedures | : In case of processing such as cutting, grinding, or heating: Avoid contact with eyes, Avoid contact with skin. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray. |
|----------------------|--|

#### 6.1.2. For emergency responders

|                      |   |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|---|

### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

|                         |   |
|-------------------------|---|
| Methods for cleaning up | : Mechanically recover the product. Notify authorities if product enters sewers or public waters. |
| Other information       | : Dispose of materials or solid residues at an authorized site.                                   |

# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid dust formation. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe vapors, dust. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep cool.

Storage temperature :  $\leq 77$  °F

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

|  |   |
|--|---|
| <b>ELLX Unclad laminate</b>                      |   |
| No additional information available              |   |
| <b>Glass, oxide, chemicals (65997-17-3)</b>      |   |
| No additional information available              |   |
| <b>Silica, vitreous (60676-86-0)</b>             |   |
| <b>USA - OSHA - Occupational Exposure Limits</b> |   |
| Local name                                       | Silica, fused, respirable dust  |
| OSHA PEL TWA [2]                                 | 20 mppcf  |
| Remark (OSHA)                                    | Table Z-3. For OSHA PEL (TWA): Use formula: $(80 \text{ mg/m}^3 / (\% \text{SiO}_2))$ for mg/m <sup>3</sup> . CAS No. source: eCFR Table Z-1. |
| Regulatory reference (US-OSHA)                   | OSHA Annotated Table Z-3 Mineral Dusts  |
| <b>Proprietary component (Trade secret)</b>      |   |
| No additional information available              |   |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

|   |
|---|
| <b>Hand protection:</b>   |
| Not expected to present a significant hazard under anticipated conditions of normal use. In case of repeated or prolonged contact wear gloves. In case of processing such as cutting, grinding, or heating: nitrile rubber gloves |

# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

|                                   |
|-----------------------------------|
| <b>Eye protection:</b>            |
| Safety glasses                    |
| <b>Skin and body protection:</b>  |
| Wear suitable protective clothing |
| <b>Respiratory protection:</b>    |
| Wear respiratory protection.      |

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |   |
|---|---|
| Physical state                                  | : Solid   |
| Appearance                                      | : Solid. panels.                                |
| Color   | : off-white to light yellow brown               |
| Odor  | : Odourless                                     |
| Odor threshold                                  | : No data available                             |
| pH  | : Not relevant                                  |
| Melting point                                   | : No data available                             |
| Freezing point                                  | : Not applicable                                |
| Boiling point                                   | : Not relevant                                  |
| Flash point                                     | : Not applicable                                |
| Relative evaporation rate (butyl acetate=1)     | : No data available                             |
| Flammability (solid, gas)                       | : Non flammable.                                |
| Vapor pressure                                  | : Not relevant                                  |
| Relative vapor density at 20 °C                 | : No data available                             |
| Relative density                                | : 1.4 – 2.2 Relative evaporation rate (water=1) |
| Solubility                                      | : Water: Negligible                             |
| Partition coefficient n-octanol/water (Log Pow) | : No data available                             |
| Auto-ignition temperature                       | : Not applicable                                |
| Decomposition temperature                       | : No data available                             |
| Viscosity, kinematic                            | : Not applicable                                |
| Viscosity, dynamic                              | : Not relevant                                  |
| Explosion limits                                | : Not applicable                                |
| Explosive properties                            | : No data available                             |
| Oxidizing properties                            | : No data available                             |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### Glass, oxide, chemicals (65997-17-3)

|               |  |
|---------------|--|
| LD50 oral rat | > 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method) |
|---------------|--|

Skin corrosion/irritation : Causes skin irritation.  
The subject product is a solid material that is not exempted as an article due to its downstream use  
Dust or vapor generated during processing such as cutting, grinding, or heating may pose a listed hazard  
pH: Not relevant

Serious eye damage/irritation : Causes serious eye irritation.  
The subject product is a solid material that is not exempted as an article due to its downstream use  
Dust or vapor generated during processing such as cutting, grinding, or heating may pose a listed hazard  
pH: Not relevant

Respiratory or skin sensitization : May cause an allergic skin reaction.  
The subject product is a solid material that is not exempted as an article due to its downstream use  
Dust or vapor generated during processing such as cutting, grinding, or heating may pose a listed hazard

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified  
The subject product is a solid material that is not exempted as an article due to its downstream use  
Dust or vapor generated during processing such as cutting, grinding, or heating may pose a listed hazard

#### Silica, vitreous (60676-86-0)

|            |                      |
|------------|----------------------|
| IARC group | 3 - Not classifiable |
|------------|----------------------|

Reproductive toxicity : Not classified  
STOT-single exposure : May cause respiratory irritation.

#### Silica, vitreous (60676-86-0)

|                      |                                   |
|----------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
|----------------------|-----------------------------------|

# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure (Inhalation). (The subject product is a solid material that is not exempted as an article due to its downstream use. Dust or vapor generated during processing such as cutting, grinding, or heating may pose a listed hazard)

|                                      |  |
|--------------------------------------|--|
| <b>Silica, vitreous (60676-86-0)</b> |  |
| STOT-repeated exposure               | May cause damage to organs through prolonged or repeated exposure. |

Aspiration hazard : Not classified  
Viscosity, kinematic : Not applicable  
Potential Adverse human health effects and symptoms : Not considered a potential route of exposure in its original form.  
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Mild eye irritation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

### SECTION 14: Transport information

#### 14.1. UN number

Not regulated for transport

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable  
Proper Shipping Name (TDG) : Not applicable  
Proper Shipping Name (IMDG) : Not applicable  
Proper Shipping Name (IATA) : Not applicable

#### 14.3. Transport hazard class(es)

##### DOT

Transport hazard class(es) (DOT) : Not applicable

# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### IMDG

Transport hazard class(es) (IMDG) : Not applicable

### IATA

Transport hazard class(es) (IATA) : Not applicable

### 14.4. Packing group

Packing group (DOT) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

No data available

#### IMDG

No data available

#### IATA

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

|  |                      |          |
|--|----------------------|----------|
| Proprietary component  | CAS-No. Trade secret | < 5%     |
| Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S |                      |          |
| 1,1'-(Ethane-1,2-diyl)bis[pentabromobenzene] (EBP)   | CAS-No. 84852-53-9   | 10 – 15% |

### 15.2. International regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

| Component                     | State or local regulations  |
|-------------------------------|---|
| Silica, vitreous (60676-86-0) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List |

## SECTION 16: Other information

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)



# ELLX Unclad laminate

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.