



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : LG HI-MACS® Sheets (Acrylic Solid Surface Material)

1.2. Recommended and Restricted Use

Recommended use : Surface Material

Restricted Use Do not fabricate the material, including grinding, buffing, chipping, sanding, drilling, polishing or other processes that generate dust prior to reading and understanding all contents of this Safety Data Sheet and the Fabrication Manual.

1.3. Details of the supplier of the safety data sheet

LG Hausys America, Inc.
900 Circle 75 Parkway
Suite 1500 Atlanta, GA 30339
Tel: 678-486-8250

1.4. Emergency telephone numbers

Product/Safety : 706-879-3200
Chemtel- Transport Emergency 800-255-3924
Emergency Responders 911

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Comb. Dust	Combustible dust
Skin Sens. 1	Sensitisation — Skin, category 1
H232	May form combustible dust concentrations in air
H317	May cause an allergic skin reaction
H350	May cause cancer (inhalation)
H372	Causes damage to lungs through prolonged or repeated exposure (inhalation)
H335	May cause respiratory tract irritation

2.2. Label elements

Labelling

This product meets the criteria of the Article definition and therefore is exempt from labeling under 29 CFR 1910.1200(c).

2.3. Other hazards

Hazards not otherwise identified : LG HI-MACS® Solid Surface Material is not hazardous and does not pose physical hazards and/or health risks as supplied or shipped. However, operations such as sawing, routing, drilling and sanding can generate dust. High concentrations of dust can cause reversible physical irritation to eyes, nose, skin and respiratory passages and cause coughing and sneezing. Asthmatic conditions may also be aggravated by dust. Even though there are no exposure limits established for dust from HI-MACS®, avoid breathing dust.

LG HI-MACS® Solid Surface Material does not release any gas or vapor at ambient conditions. At higher temperatures (>300°C / 572°F), small amounts of methyl methacrylate could be released; the amount released is dependent upon temperature, time and other variables. Vapor at high concentration can cause skin and respiratory irritation. Overexposure to vapor can cause headache, nausea, weakness and lung irritation with cough, discomfort and shortness of breath. Individuals with pre-existing diseases of the lungs or skin may have increased susceptibility to the effects of overexposure to methyl methacrylate.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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Name	Product identifier	%
Aluminium hydroxide (component)	(CAS No) 21645-51-2	52 - 62
Methyl methacrylate polymer (component)	(CAS No) 9011-14-7	30 - 50
Methyl methacrylate (component)	(CAS No) 80-62-6	<= 1
Copolymer colorants (component)	(CAS No) Not available	1 - 5

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Inhalation is unlikely a route of exposure at ambient temperature. However, processing may generate airborne dust. Use appropriate personal protection and/or engineering controls to avoid inhalation during processing. In case of inhalation of dust or vapor from processing, allow breathing of fresh air. Allow the victim to rest. Consult a physician if breathing is difficult or if symptoms persist.
- First-aid measures after skin contact : Unlikely a route of exposure as supplied. In case of generation of dust or vapor from processing, wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs, seek medical advice/attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Unlikely a route of exposure as supplied. If eye contact with dust or vapor occurs, rinse affected eye(s) immediately with plenty of clean water, including under the eyelids. Obtain medical attention if pain, blinking, tears, or redness persists.
- First-aid measures after ingestion : Unlikely a route of exposure as supplied. If ingestion of dust or vapor occurs, rinse mouth with clean water. Obtain emergency medical attention as necessary.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause an allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Not a flammable solid, but can burn. Use extinguishing media appropriate for surrounding fire, including foam, dry powder, carbon dioxide, or water spray.
- Unsuitable extinguishing media : None known

5.2. Special hazards arising from the substance or mixture

- Fire hazard : The product is not flammable, but burns.
- Explosion hazard : Avoid generation of dust; fine dust dispersed in air in sufficient concentration, and in the presence of an ignition source, is a potential dust explosion hazard.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
- Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Spills of this product as dust generated from processing present a serious slipping hazard. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel from the scene. Don personal protective equipment. Do not breathe vapor or fumes that may be emitted during processing. Wash hands during breaks and at the end of the workday. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Use appropriate personal protective equipment and recover undamaged and minimally contaminated material for reuse and reclamation.

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Emergency procedures : In case of generation of dust from processing, ventilate area.

6.2. Environmental precautions

Contain according to the local, state, and National regulation.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : In case of generation of dust or vapor from processing: Review HANDLING Section before proceeding with clean up. Use appropriate tools to put spilled solids in a safe and convenient waste disposal container. Review FIRE FIGHTING MEASURES and HANDLING Sections before proceeding with clean up.

Avoid contact with skin and eyes. Avoid breathing dust and vapors. On land, sweep or shovel into suitable containers. Minimize generation of dust. Avoid raising airborne dust. Avoid dispersal of dust in the air (i.e. cleaning dust surfaces with compressed air). Only non-sparking tools should be used.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : This product presents a serious slipping hazard when dust generated from processing accumulates on surfaces.

Precautions for safe handling : Loading/ Unloading: Sheets should be unloaded with a forklift or other lifting device capable of handling pallets safely. If a lifting device is not available, always carry a single sheet in the horizontal position on the long sides and wear proper safety shoes and protective gloves, as sheets may have sharp edges. Carrying should be done by two people, each with one hand under the bottom edge for support and the other hand on the top edge to control the sheet.

Processing/ Machining: Avoid breathing dust. Avoid breathing fumes generated during heating. Temperatures reached while thermoforming could be high enough to release some methyl methacrylate. Machining operations during fabrication, such as sawing, sanding or routing, create friction and may result in temperatures high enough to release small amounts of methyl methacrylate at the cutting tool surface. Ensure sufficient ventilation of the work station. Wear personal protective equipment. Avoid raising airborne dust. Avoid contact with skin and eyes. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixture operations. Provide adequate precautions, such as electrical grounding and bonding or inert atmospheres. Handling and processing operations should be conducted in accordance with best practices.

Hygiene measures : Wash exposed skin to remove dust. If a clothes-changing facility is not available, thoroughly wipe all exposed clothing items to remove loose material. Do not use pressurized air (from pneumatic equipment) to remove dust contamination. Wash contaminated clothing as soon as possible."

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : No specific storage is required. Be sure that it is not necessary to strain to reach materials and that shelves are not overloaded.

Incompatible materials : No additional information available.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters†

Methyl methacrylate (80-62-6)		
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	ACGIH STEL (ppm)	100 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	410 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

† The work place exposure limits are not applicable to products as supplied. The provided work place limits shall be considered during processing resulting in generation of dust and/or vapor.

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Aluminium hydroxide (21645-51-2)		
OSHA	OSHA PEL (TWA) (mg/m ³) Aluminum	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
ACGIH	ACGIH TWA (mg/m ³) Aluminum	1 mg/m ³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls

- : Use adequate ventilation to keep employee exposures to airborne concentrations below recommended limits for dust or vapor from operations such as machining, cutting, routing, sanding, etc. In addition, provide for appropriate exhaust ventilation and dust collection at and around location of machinery.
- In case of generation of dust or vapor from processing, it is recommended that all dust control equipment, such as local exhaust ventilation and material transport systems, involved in handling of this product contain explosion relief vents, an explosion suppression system, or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust dusts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area. Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment

- : Gloves. Safety glasses. Protective clothing. Respiratory protection.



Skin and body protection

- : Wear leather or cotton gloves when handling pieces to protect against cuts and abrasions unless using rotating equipment, where gloves could be caught on the equipment. Safety shoes are also recommended whenever handling large pieces of material. Hearing protection may also be required during machining operations, depending on noise (decibel) levels. Wash exposed skin thoroughly after operations which generate dust or vapor.

Eye protection

- : Wear safety glasses during operations such as sawing, sanding, drilling, or routing. Machining operations could require safety goggles and face-shield to protect against flying debris/particles. Have eyewash facilities immediately available.

Respiratory protection

- : In case of insufficient or inadequate ventilation during machining operations or if airborne particulate concentrations or vapor are expected to exceed permissible exposure limits, use a NIOSH approved air-purifying respirator. Respirators should be selected based on the form and concentration of the air contaminant and in accordance with OSHA Respiratory Protection Standard(s) including, but not limited to, 29 CFR 1910.134.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Sheet or Shape (lavatory bowls or sinks)
Color	: Varies
Odor	: None-Odorless
Odor threshold	: Not applicable
pH	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: Not applicable
Relative vapour density at 20 °C	: No data available
Relative density	: 1.7 – 1.8 (Water=1)
Solubility	: Not soluble in water
Log Pow	: No data available
Log Kow	: No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Evaporation Rate	No data available
Partition Coefficient: N-Coctanol/Water	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable at normal temperatures and storage conditions.

10.3. Possibility of hazardous reactions

Polymerization will not occur in solid state.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

None reasonably foreseeable, non-corrosive.

10.6. Hazardous decomposition products

Frictional heat from machining that could reach or exceed a temperature of 300°C (572°F) could result in the release of a small amount of methyl methacrylate vapor.

Thermal Decomposition products: carbon monoxide, methyl methacrylate, and smoke.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Methyl methacrylate (80-62-6)	
LD50 (oral, rat)	7900 mg/kg
LC50 (inhalation, rat)	4632 ppm/4h
ATE US (oral)	7900.000 mg/kg bodyweight
ATE US (gases)	4632.000 ppmv/h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Methyl methacrylate (80-62-6)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

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.

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Methyl methacrylate (80-62-6)	
LC50 fish 1	243 - 275 mg/l (Exposure time: 96 hours - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	69 mg/l (Exposure time: 48 hours - Species: Daphnia magna)
LC50 fish 2	125.5 - 190.7 mg/l (Exposure time: 96 hours - Species: Pimephales promelas [static])

12.2. Persistence and degradability

Not established.

12.3. Bioaccumulative potential

Not established.

Methyl methacrylate (80-62-6)	
Log Pow	0.7

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Material is non-hazardous and no special treatment is required for disposal. Preferred waste disposal options include recycling, landfill, or incineration, when in compliance with applicable Federal, State/Provincial, and Local regulations.

SECTION 14: Transport information

Always transport in accordance with federal, state, and local regulations. This product is not regulated for transport by the Department of Transportation.

Additional information

Other information : No supplementary information available.

ADR No additional information available

Transport by Sea No additional information available

Air Transport No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Methyl methacrylate	CAS No 80-62-6	<= 1
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Methyl methacrylate (80-62-6)	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %

15.2. International regulations

CANADA

No additional information available

Methyl methacrylate polymer (9011-14-7)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Methyl methacrylate (80-62-6)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

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EU-Regulations

No additional information available

Methyl methacrylate (80-62-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

15.2.2. National regulations

Methyl methacrylate polymer (9011-14-7)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Methyl methacrylate (80-62-6)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

15.3. US State regulations

CALIFORNIA PROPOSITION 65

⚠ WARNING: This product can expose you to chemicals including carbon black (airborne, unbound particles of respirable size), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The State of California, under Proposition 65, regulates carbon black (airborne, unbound particles of respirable size) as a carcinogen. In this product, carbon black is not supplied in the form regulated in California.

SECTION 16: Other information

Abbreviations and acronyms	: ACGIH (American Conference of Governmental Industrial Hygienists). ATE - acute toxicity estimate. CAS (Chemical Abstracts Service) number. CLP - Classification, Labelling and Packaging. HCS - Hazard Communication Standard. IARC (International Agency for Research on Cancer). OSHA - Occupational Safety and Health Administration. Overland transport (ADR). STEL- Short-Term Exposure Limit. TLV- Threshold Limit Value. TWA- Time Weighted Average. TSCA - Toxic Substance Control Act. ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road. Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. IARC -International Agency for Research on Cancer. EC50- Median effective concentration. IATA - International Air Transport Association. LC50 - Median lethal concentration. LD50 - Median lethal dose.
Other information	: Refer to NFPA 654, <i>Standard for the Prevention of Fire and Dust explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids</i> , for safe handling.

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his or her own particular use.