

Sheet

Health & Safety

Material Safety Data Sheet

4.1 Chemical Product and Company Identification

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4.2 Composition and Information on Ingredients

	Product no.	% by weight	TLV/PE	LC50/LD50
Alumina Trihydrate	21645-51-2	52-62	15mg/m ³ OSHA PEL 10mg/m ³ ACGIH TLV	not available
MMA – Methyl Methacrylate	80-62-6	30-50	not available	not available
Copolymer colourants	not available	1-5	not available	not available

4.3 Section 03 Hazard Identification Overview

With solid sheets of all colours, dust caused by machining may cause irritation to the skin, eyes and respiratory system. Routes of Entry: inhalation (dust during machining), eyes, skin contact

Potential ACUTE Health effects	The product will not easily enter the human body. The product is supplied as a solid sheet. As such, there would not be any health hazards with it however, if any cutting, sanding or routing takes place, dust may be generated that may cause mechanical irritation to the eyes and respiratory tract.
Eyes :	Dust generated during fabrication may irritate the eyes.
Skin :	Any sharp edge will cut or abrade the skin. Dust generated by fabrication may cause skin sensitization . High concentrations of methacrylate have been shown to cause allergic reactions.
Respiratory Tract:	Dust generated during fabrication may cause irritation to the respiratory tract, characterized by sneezing and coughing. May cause headache in case of long term exposure.

Sheet (continued)

Potential CHRONIC health effects	Non-hazardous to skin (non-corrosive and non-permeating) or by ingestion.
Carcinogenic effects:	None
Mutagenic effects:	No substance present
Teratogenic effects:	None. Is NOT toxic to the blood, kidneys, lungs, nervous system, reproductive system, liver, mucous members.
Symptoms of over-exposure:	None
Medical problems	None

4.4 First Aid Measures

Eye Contact	Upon contact with dust particles, flush eyes immediately with large amounts of water for a minimum of 15 minutes. Seek medical attention.
Skin Contact	Not expected to be a problem. May cause skin sensitisation. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. If irritation persists, seek medical attention.
Inhalation	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Allow the victim to rest in a well ventilated area. Oxygen may be administered if breathing is difficult. Seek medical attention
Ingestion	Not applicable
Notes to Physician	No additional information

Sheet (continued)

4.5 Fire and Explosion Data

Flammability of the Product	Non-flammable
Flash Points	Not available L.E.L. & U.E.L.-not available.
Self-combustion Temperature	Not available
Combustible Products	Some metallic oxides.
Fire Risks in the Presence of Various Substances (Flammability)	Substances (Flammability) Non-flammable in the presence of shocks, heat, oxidizing materials, reducing materials combustible materials, organic materials, metals, acids, alkalis, moisture
Explosion Risk with Different Substances	Not considered an explosion-risk product
Fire Fighting Media and Instructions	<p>Small Fire : Use DRY chemicals, CO₂, water spray or</p> <p>Large Fire : Use water spray, fog, or foam, DO NOT use water jet.</p>
Special Remarks on Fire Hazards	No additional remarks
Special Remarks on Explosion	No additional remarks

4.6 Accidental Release Measures

Small Spill	Use appropriate tools to transfer the dropped solid into a convenient waste disposal container. No additional information.
Large Spill	No additional information

4.7 Handling and Storage

Precautions	Do not breathe in the dust. If work creates dust, ventilate the area to keep exposure to airborne contaminants below the exposure limit.
Storage	No specific storage is required. Be sure that it is not necessary to strain to reach materials, and that shelves are not overloaded.

Sheet *(continued)*

4.8 Physical and Chemical Properties

Engineering Controls	If work (machining, routing, sanding) creates dust, ventilate the area to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Safety glasses. Gloves to protect against cuts and abrasions are highly recommended. Wear appropriate breathing apparatus if ventilation is inadequate (NIOSH approved).
Exposure Control	Not available.

4.9 Exposure Controls/Personal Protection

Odour/Odourless	Taste not available	Colour varies	Not available
Physical state and appearance	Solid	Volatility	Not available
Molecular Weight	applicable	Odour Threshold	Not available
PH (1% soln/water)	applicable	Evaporation rate	Not available
Boiling Point	Not available	Viscosity	Not available
Melting Point	Not available	Water Oil Dist.Coeff	Insoluble in water and oil
Specific Gravity	0.04 (water = 1) based on information available	Solubility in water	Insoluble in water
Vapor Pressure	Not available	Solubility in solvents	Insoluble in methanol, diethyl ether, n-octanol acetone

Sheet (continued)

4.10 Stability and Reactivity Data

Stability	The product is stable.
Conditions of Instability	No additional remarks
Chemical Instability/ Materials to Avoid	Not considered to be reactive according to our database.
Corrosivity	Not considered to be corrosive for metals and glass according to our database..
Special Remarks/ Conditions of Reactivity	No additional remarks
Special Remarks on Corrosivity	No additional remarks
Hazardous Decomposition	Not available
Hazardous Polymerisation	Yes

4.11 Toxicological Information

Mechanical Controls	This product has not been tested for its effects on animals. See Section 11 for ingredient information.
Personal Protection	The substance is not toxic to the blood, kidneys, lungs, nervous system, reproductive system, liver, mucous membranes. No additional information.
Exposure Limits	

4.12 Ecological Information

Ecotoxicity	Not available
BODS and COD	Not available
Toxicity of the Biodegradable Products	Not available
Special Remarks on the Biodegradable Products	No additional remarks

Sheet (continued)

4.13 Disposal

Waste Disposal

Use appropriate tools to put the solid in a convenient waste disposal container.

4.14 Transport Information

DOT/TDG Classification

Not a DOT controlled material (United States)

DOT/TDG Proper Shipping Name

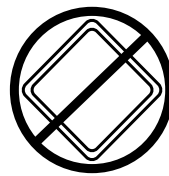
Not regulated.

DOT/Identification Number TDGPIN

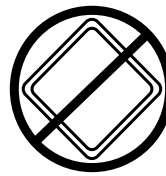
Not applicable.

Packing group

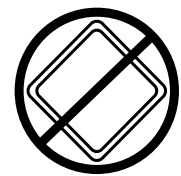
No reportable quantity of hazardous substance (RQ).



DOT (Pictogram)



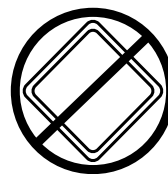
TOG (Pictogram)



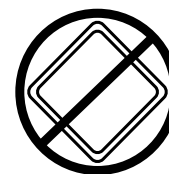
ADR (Europe, Pictogram)

Special Provision For Transport

IATA (Air Transport)		IMDC (Ocean Transport)	
Proper Shipping Name	Not regulated	Proper Shipping Name	Not regulated
Hazard Class	Not controlled under IATA	Hazard Class	Not controlled under IMDG
Identification Number	Not applicable	Identification Number	Not applicable
Packing Group	None	Packing Group	Not applicable



IATA (Pictogram)







IMDF (Pictogram)

Sheet *(continued)*

4.15 Other Regulatory Information and Pictograms

Federal Regulations	TSCA (Toxic Substance Control Act): All components of this product are listed on the TSCA Inventory.
	Resource Conservation & Recovery Act (RCRA)
	(40 CFR 261) Regulated; not Available
	CERCLA Reportable Quantity (RQ) amount; none (lbs)
	This product may contain one or more of the following chemicals subject to the reporting requirements of SECTION 313 of TITLE III of the SUPERFUND AMENDMENT AND REAUTHORIZATION ACT of 1986 (SARA) and 40 CFR Part 372
	Cas Number, Chemical Name: NONE

Other Classifications

WHMIS STATEMENT	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR
WHMIS (Canada) (Pictogram)	 Not controlled under WHMIS (Canada)
DSCL (ECC) (Europe) (Pictogram)	 Not controlled under USCL (Europe)
Japan	Not available
Australia	Not available
Additional Information	No additional remarks
HMIS (U.S.A.)	Health Hazard : 1 Reactivity : 0 Fire Hazard : 0 Personal Protection: A
National Fire Protection Association (USA)	 <p>Health 2 Fire Hazard 0 Reactivity 0 Specific Hazard 0</p> <p>Hazard Rating : 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Minimal (Insignificant)</p>
Protective Clothing (Pictogram)	

Sheet (continued)

4.16 Other Information

References	SAX, N.I Dangerous Properties of Industrial Materials, Toronto, Van Nostrand Reinold, 60 cd. 1984 Industrial Hygiene and Toxicology. Manufacturer's Material Safety Data Sheet.
Glossaire	
AGC:	American Conference of Governmental Industrial Hygienists
ASTM:	American Society for Testing and Materials
BODS:	Biological Oxygen Demand in 5 days
CAS:	Chemical Abstract Services
CEPA:	Canadian Environmental Protection Act
CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act
CFR:	Code of Federal Regulations
DOT:	Department of Transportation
DIN:	Deutsche Institut für Normung
DSL:	Domestic Substance List (Canada)
HCS:	Hazardous Communication System
HMTS:	Hazardous Material Information System
IARC:	International Agency for Research on Cancer
ISO:	ISO International Organisation for Standardisation
DL50/CL50:	Lethal Dose/Concentration kill 50%
DLLo/LCLo:	Lowest Published Lethal Dose/Concentration
NFPA:	National Fire Prevention Association
NIOSH:	National Institute for Occupational Safety & Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety & Health Administration
PEL:	Permissible Exposure Limit (15 minutes)
RCRA:	RESOURCE Conservation and Recovery Act
STEL:	Short Term Exposure Limit (15 minutes)
TDG:	Transportation of Dangerous Goods (Canada)
TLV:	Threshold Limit Value
TWA:	Time Weighted Average
TSCA:	Toxic Substances Control Act
WHMIS:	Workplace Hazardous Material Information System
Consideration	No additional Remark
Revision	Annual update.
Comments	Telephone number changes.
Notice to reader	The data contained in the MSDS and recommendations presented herein are based upon information considered to be accurate, as of this date. However, LG Hausys makes no guarantee or warranty, either expressed or implied, of the completeness of this data and recommendations, and assumes no liability in connection with any use of this information.

Adhesive

1. Products

HI-MACS[®] joint adhesive

2. Manufacturer

LG Hausys, LTD.

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Seoul 150-721, Korea

Tel.: 82 (0)2 3773 7760

Fax: 82 (0)2 3773 7972

3. Chemical family

Solid surface adhesive (contains peroxide initiator)

4. Hazardous ingredient

Hazardous mixtures of other liquids, solids or gases	GAS	%
Benzoyl peroxide	000094-36-0	UP TO 1
Methyl methacrylate	80-62-6	UP TO 50
Ethylene glycol dimethacrylate	97-90-5	UP TO 2
Diocetylphalate	117-81-7	UP TO 10

5. Physical data

Boiling point (°F)	350~450
Vapour pressure (mm Hg) at 25°C	5 mm at 22.2°C
Vapour density	Heavier than air
Evaporation rate	Slower than ether
% volatile volume	22~26 %
Water volume	0 %

6. Fire and explosion hazard data

Flammability	None
Explosion hazard	May be not present
Unusual fire & explosion	None
Special fire fighting procedures	None

Wear stand-alone breathing apparatus and protective clothing to prevent contact with skin and eyes.

Adhesive (continued)

7. Health hazard data

Exposure limits: TLV = 5 mg/m³.

Effects of overexposure: headache, nausea, nose, throat distress.

Emergency and first aid procedures

Eyes : flush with water for 15 minutes, get medical attention.

Skin: wash with soap and water, remove contaminated clothing.

Inhalation: Transport person to a well-ventilated area.

Provide with respiratory assistance if necessary.

Ingestion: no known antidote but give milk or water.

Try to avoid vomiting if swallowed. Get medical attention.

Primary entry route : skin, eyes, inhalation.

8. Reactivity data

Stability	Unstable	
	Stable	0

Incompatibility: oxidising materials can cause a reaction.

Hazardous decomposition products: none.

Condition to avoid: source of ignition.

Hazardous	May occur	
polymerisation	Will not occur	0

9. Spill or leak procedures

Steps to be taken in case material is released or spilled: prevent skin and eye contact. Small spills may be collected with absorbent materials. For large spills, rinse with acetone.

10. Special protection information

Handling and storing: keep storage container closed, avoid source of heat and flammable materials.

11. Safe handling and use

Respiratory protection: not normally required.

Ventilation: use in well ventilated areas.

Protective gloves: neoprene gloves recommended.

Eye protection: not normally needed.

Hygiene measures: clean skin with soap and water.

Other protective equipment: none.