

Safety Data Sheet

Reference No. : R1079E
Issued: 30/January/2018 (Rev. 4.0)

Section 1, Identification

Product Name CLAREX ® Hard Coating Sheet Polymethyl Methacrylate(PMMA) Sheet(Cell Casting Sheet)

RH10 Note N-217 0.5~5.0mm 400×550

Note : Flat, Non-Glare, Matte only represents the surface texture. Same SDS can be applied.

Company Information

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Section 2, Hazard(s) identification

GHS Classification : Not applicable to GHS Classification
Specific Hazards/Toxicity : No particular hazards
Effect on Environment : Not applicable
Physical/Chemical Risks : Flammable solid

Section 3, Composition/information on ingredients

Distinction between single substance or mixtures : Mixture

Composition and Content

<Major Ingredients>

① Polymethyl methacrylate (PMMA)

Japanese Gazette Reference Number : (6) - 524
CAS No. : 9011 - 14 - 7
Structure formula : $(C_5H_8O_2)_x$
U.N. Classification : N/A
Amount : 99.563% or more

<Other ingredients disclosable>

② Methyl methacrylate (MMA)

Japanese Gazette Reference Number : (2) - 1036
CAS No. : 80 - 62 - 6
Structure formula : $C_5H_8O_2$
U.N. Classification : 1247
PRTR No. : 1-420
Amount : 1.500% or below
(as un-polymerized monomer)

③

Japanese Gazette Reference Number :
CAS No. :
Structure formula :
U.N. Classification :
PRTR No. :
Amount :

<Other ingredients not requested for disclosure>

- Polymerization Initiator
- Polymerization Regulator
- UV absorber
- Mold Release
- Pigment & dye
- Others

Section 4, First-aid measures

- EYE : ① Dust or fumes from fabrication operations may cause irritation to the eyes.
Do not rub the eyes and rinse/flush with clean water.
② In case the irritation remains after rinsing the eyes, go to doctors and obtain proper medical attention.
- INGESTION : Ingesting the small amount of the material under normal circumstances will not cause harmful effect. But vomit as much as possible and obtain medical attention when needed.

Section 5, Fire-fighting measures

Fire Fighting Instruction :

The harmful gas such as carbon monoxide and methyl methacrylate may occur in case of fire. Use self-contained breathing apparatus with full face piece and protective clothing and stand upwind of the fire.

Extinguishing Media : Water fog, foam, carbon dioxide, dry chemical, halogenated agents.

Section 6, Accidental release measures

Clean-up.

Section 7, Handling and storage

- Handling ① Mind the corner/edge of the sheet for not cutting hands or other part of the body when handling.
② Mind the accident caused by static electricity which might be occurred in case of rubbing the sheet material and/or the protection foil is peeled off.
③ Do not set up or store near from flames since it is flammable material.
- Storage ① Avoid flames, hi-heat, and exposure under sunlight.
② Store in cool and dry area. Avoid moisture and humidity.
③ Keep enough leeway around the edge of the sheet when store in order to prevent warp and distortion. Store in flat or use of storage equipment with angle is sufficient for preventing distortion.

Section 8, Exposure controls/personal protection

Exposure Limits Not established.

- Engineering Controls ① Installation of dust collecting equipment and exhaust ventilation equipment is recommended in case of dust/fume creating work such as cutting, drilling and sawing.
② Installation of local exhaust ventilation equipment is recommended when thermal processing such as heat bending. Harmful gas might be occurred during the process.

- Personal Protection ① Wear nonslip protective gloves especially in the case of handling large size sheet.
② Wear dust mask especially in case of dust/fume creating situation such as cutting and sawing.
③ Wear eye protecting goggles to protect eyes from dusts and fumes.
④ Wear appropriate protective respirator when needed in thermal processing.

Section 9, Physical and chemical properties

① Polymethyl methacrylate

Form : Sheet Material

Specific Gravity : 1.19

Volatility : N/A

Melting Point : Soften at about 80°C/176°F or over. There is no specific melting point.

Solubility : Insoluble in water. Soluble in some organic solvents.

② Methyl methacrylate (General Properties)

Appearance : Clear liquid

Boiling Point : 101°C/214°F

Vapor Pressure : 3.9hPa (20°C)

Specific Gravity : 0.936 (20°C/4°C)

Auto-ignition Temperature : 421°C/790°F

③

Appearance :

Boiling Point :

Vapor Pressure :

Specific Gravity :

Auto-ignition Temperature :

Section 10, Stability and reactivity

① Polymethyl methacrylate

Auto-ignition Temperature : 400°C/752°F or over

Combustibility : Combust with ignition.

Thermal Decomposition : Thermal decomposition is occurred at 250°C/482°F or over and create light fuel gas and MMA gas. These gas may cause inflammation of eyes, respiratory and skin, and also may cause dizziness, headache, and drowsiness.

Stability : Stable under normal conditions. Dimension change will happen in case of moisture absorption under humid condition.

② Methyl methacrylate (General Properties)

Reactivity : Need stabilizer since it is easy to start polymerization.

Reactant : Polymerization initiator, strong acid and alkali, strong oxidizing agents.

Reaction Condition : The high-temperature condition and direct/indirect sunlight or other strong light to produce an explosive mixture gas or to start polymerization.

Section 11, Toxicological information

No toxicity information available. This is not harmful except it is flammable material.

Section 12, Ecological informationEcotoxicity, residual value, degradability, bioaccumulation, mobility in soil : No data available
Harmful to aquatic organisms is expected to be low since the material is insoluble in water.

Section 13, Disposal considerations

① Follow Federal, State and Local Regulations in case of disposal.

② Entrusting the disposal to the licensed industrial waste professional is recommended.

③ Sufficiently inform the properties of the material to licensed professional when disposal is entrusted.

④ Follow Federal, State and Local Regulations when incinerate the material.

Combustion Energy of Polymethyl methacrylate is 26.2(MJ/kg)=6,265(kcal/kg)。

Section 14, Transport information

UN Number : N/A (non-hazardous material)

UN Classification : N/A

Marine Pollutant : N/A

Special Safety Instruction : Protect the package and item from water. Always handle with care and avoid from damage.

Section 15, Regulatory information

Industrial Safety and Health Act : N/A

Poisonous and Deleterious Substances Control Law : N/A

Fire and Disaster Management Act : Flammables Plastics (3,000kg)

PRTR : Methyl methacrylate as un-polymerized monomer

Ship Safety Act : N/A

Section 16, Other Information

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This SDS is written based on the information and data currently available. The content of the articles will be updated when needed.

The safety/handling instructions above are subjected to the normal treatment of the material. Special safety measures are required in case of special treatment the material.
