

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

Product Name: PERSPEX GW

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2. COMPOSITION/INFORMATION ON INGREDIENTS**PRODUCT DESCRIPTION**

Clear or transparent tinted sheet.
A high molecular weight acrylic sheet used in a wide range of applications.
Polymethyl methacrylate : greater than 80%
Tris-(2-chloroethyl) phosphate : less than 20%

CAS No: 009011-14-7

HAZARDOUS INGREDIENT(S)	CAS No.	EC No.	EC Classification
No classifiable hazardous ingredient(s)			

3. HAZARDS IDENTIFICATION

The sheet product is of low toxicity. Dusts produced during machining may be harmful by ingestion and inhalation with possible risk of irreversible effects.
Thermal decomposition will evolve toxic, irritant and flammable vapours. Care should be taken during thermoforming to ensure that the product is not exposed to temperatures exceeding 200°C.
Certain machining operations eg laser cutting, can give rise to toxic and corrosive fumes. Adequate ventilation **MUST** be used.

4. FIRST-AID MEASURES

Inhalation: Remove patient from exposure, keep warm and at rest. Obtain medical attention if ill effects occur.
Skin Contact: Wash skin with soap and water. If symptoms develop, obtain medical attention.
Eye Contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion: Do not induce vomiting. Obtain medical attention if ill effects occur.

Further Medical Treatment

Symptomatic treatment and supportive therapy as indicated.

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5. FIRE-FIGHTING MEASURES

Combustion will evolve toxic, irritant and flammable vapours.

Extinguishing Media: water spray, foam, dry powder or CO₂.
Fire Fighting Protective Equipment: A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Offcuts, swarf or dust should be collected and disposed of in a safe way. To be disposed of as hazardous waste.

7. HANDLING AND STORAGE

7.1 HANDLING

These sheets are heavy and unwieldy. They should be handled with care, particularly in windy locations or outdoors. If broken or chipped the resultant edges can be sharp and cause cuts to skin and eyes. Take precautionary measures against static discharges.

Process Hazards

All polymers degrade to some extent at their processing temperature, an effect which increases with increasing temperature.

Under normal conditions where thermoforming temperatures will not exceed 200°C thermal decomposition products will include methyl methacrylate.

Certain machining operations eg laser cutting, can give rise to toxic and corrosive fumes. Adequate ventilation MUST be used.

Certain machining operations ie cutting, drilling and grinding etc may produce respirable dusts. Do not breathe dust. Where engineering controls are not fitted or inadequate wear suitable respiratory protective equipment.

Storage Temperature: below 40 °C
Storage Life: Indefinite under specified storage conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Provide adequate ventilation, including appropriate local extraction if dusts, fumes or vapours are likely to be evolved. Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

Local extraction close to the cutting head must be used when laser cutting. Where suitable engineering controls are not fitted or are inadequate, wear suitable protective equipment.

The following information is given as general guidance.

Respirators: **NORMAL HANDLING:**
 Not normally required.
 PROCESSING:
 Dust: A suitable dust mask or dust respirator with filter type P may be appropriate. (EN141/EN143).
 Vapour: If high levels above the Occupational Exposure Limit are likely - A suitable mask with filter type A may be appropriate. (EN141/EN143).
Eye Protection: Wear eye/face protection. Safety spectacles/goggles/full face shield.
Gloves: Sharp edges may cause cuts. Wear suitable gloves.
Other: Wear suitable protective clothing. For information regarding process hazards refer to Section 7, Handling and Storage.

The following values apply to substances which may be evolved during thermal processing.

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HAZARDOUS INGREDIENT(S)	LTEL 8hr TWA ppm	LTEL 8hr TWA mg/m ³	STEL ppm	STEL mg/m ³	Notes
Methyl methacrylate	50	208	100	416	OES

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	sheet
Colour:	Clear or transparent tinted sheet.
Odour:	odourless
pH (Value):	Not applicable.
Boiling Point (°C):	Not applicable.
Melting Point (°C):	Not applicable.
Flash Point (°C):	Sheet has no flash point.
Flammable Limits:	Not applicable.
Auto Ignition Temperature (°C):	421
Explosive Properties:	Not explosive
Oxidising Properties:	Not oxidising.
Vapour Pressure (Pascals):	Not applicable.
Density:	1.24
Solubility (Water):	insoluble
Solubility (Other):	soluble in most organic solvents, acetone and chlorinated hydrocarbons
Partition Coefficient:	Not applicable.
Fire Point (°C):	11.1
Softening Point (°C):	80 - 100
Viscosity (mPa.s):	Not applicable.

10. STABILITY AND REACTIVITY

Hazardous Reactions:	None known.
Hazardous Decomposition Product(s):	Methyl methacrylate, Tris-(2-chloroethyl) phosphate and traces of Acrolein.

11. TOXICOLOGICAL INFORMATION

Inhalation

Solid sheet: Unlikely route of exposure.
Dust: Harmful : possible risk of irreversible effects through inhalation.

Skin Contact

No evidence of irritant effects from normal handling and use. Sharp edges may cause cuts.

Eye Contact

Swarf or dust may cause irritation. Sharp off-cuts may cause eye damage.

Ingestion

Solid sheet: Unlikely route of exposure.
Dust: Harmful : possible risk of irreversible effects if swallowed.

Long Term Exposure

This product contains Tris-(2-chloroethyl) phosphate : less than 20%
Tris-(2-chloroethyl) phosphate (TCEP): Repeated exposure to high levels by oral ingestion produce adverse effects on the brain and kidneys. Effects on the kidneys include renal tubule hyperplasia and adenomas in male and female rats. The weight of evidence would suggest that TCEP is not genotoxic in-vivo and hence uncertainty exists as to the relevance of these findings to man.

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12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Low tonnage material used in partially contained systems. Solid with low volatility. The product is essentially insoluble in water. The product has low potential for bioaccumulation. The product has low mobility in soil.

Persistence and Degradation

The product is non-biodegradable in soil. There is no evidence of degradation in soil and water.

Toxicity

Unlikely to cause harmful effects.

Effect on Effluent Treatment

Unlikely to have an effect on effluent treatment systems. The material is essentially insoluble in water and can therefore be separated from aqueous medium by sedimentation and filtration processes at an effluent treatment plant.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, state or national legislation. Bury on an authorised landfill site or incinerate under approved controlled conditions, using incinerators suitable for the disposal of noxious chemical waste. To be disposed of as hazardous waste.

14. TRANSPORT INFORMATION

Not Classified as Dangerous for Transport.

15. REGULATORY INFORMATION

Not Classified as Dangerous for Supply/Use.

EC Classification: Under the Classification, Packaging and Labelling of Dangerous Substances Regs, 1984, this material is not dangerous for supply or conveyance.

The above classification refers to the solid sheet.

16. OTHER INFORMATION

USE

Acoustic screening for motorways, highways, railways etc.

This data sheet was prepared in accordance with Directive 2001/58/EC.

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PERSPEX is a trade mark of Lucite International.

For other technical information, contact the address in Section 1.

Lucite International does not recommend this product for use in applications involving long-term contact with body tissues.

PERSPEX acrylic sheets are generally suitable for use in applications involving food contact however, regulations are known to vary from country to country. If statements on the compliance of any grades of PERSPEX acrylic sheet with specific food contact regulations are required, please contact Lucite International for further details.

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The following sections contain revisions or new statements: 1,12,16.

GLOSSARY

OES: Occupational Exposure Standard (UK HSE EH40)

LTEL: Long Term Exposure Limit

STEL: Short Term Exposure Limit

TWA: Time Weighted Average