

ACRYPLEX GP PMMA sheet, IM PMMA sheet, OPTIX PMMA sheet

EGR

Chemwatch: 24-1509
Version No: 2.1.1.1
Material Safety Data Sheet according to NOHSC and ADG requirements

Chemwatch Hazard Alert Code: 2

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L.Local/AU.SEN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier	Product name
	ACRYPLEX GP PMMA sheet, IM PMMA sheet, OPTIX PMMA sheet
	Synonyms Acrylic Sheet, Acryplex GP PMMA Sheet, IM PMMA Sheet, Optix PMMA Sheet, Extruded Acrylic Sheet, PMMA Sheet, Poly(methyl Methacrylate) sheet
	Other means of identification Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Use according to manufacturer's directions.
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Details of the manufacturer/importer

Registered company name	EGR
Address	84 Evans Road Salisbury 4107 Old Australia
Telephone	+61 7 3277 7999
Fax	+61 7 3277 8054
Website	www.egrgroup.com
Email	normalley@egr.com.au

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	0	
Toxicity	0	0 = Minimum 1 = Low
Body Contact	2	2 = Moderate
Reactivity	1	3 = High
Chronic	0	4 = Extreme

Poisons Schedule	Not Applicable
Risk Phrases	Not Applicable
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Not Applicable

Relevant risk statements are found in section 2

Indication(s) of danger	Not Applicable
SAFETY ADVICE	
Not Applicable	
Other hazards	
May produce discomfort of the eyes*	

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
80-62-6	NotSpec.	methyl methacrylate
140-88-5	NotSpec.	ethyl acrylate

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
Ingestion	<ul style="list-style-type: none"> ▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

- ▶ Fire Incompatibility: Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves in the event of a fire. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use fire fighting procedures suitable for surrounding area.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ The material is not readily combustible under normal conditions. ▶ However, it will break down under fire conditions and the organic component may burn. ▶ Not considered to be a significant fire risk. ▶ Heat may cause expansion or decomposition with violent rupture of containers.

SECTION 6 ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Minor Spills	<ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid breathing dust and contact with skin and eyes. ▶ Wear protective clothing, gloves, safety glasses and dust respirator. ▶ Use dry clean up procedures and avoid generating dust.
Major Spills	<p>Moderate hazard.</p> <ul style="list-style-type: none"> ▶ CAUTION: Advise personnel in area. ▶ Alert Emergency Services and tell them location and nature of hazard. ▶ Control personal contact by wearing protective clothing.
	Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE**Precautions for safe handling**

Safe handling	<ul style="list-style-type: none"> ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps.
Other information	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry area protected from environmental extremes. ▶ Store away from incompatible materials and foodstuff containers.

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Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ Lined metal can, lined metal pail/ can. ▶ Plastic pail. ▶ Polyliner drum. ▶ Packing as recommended by manufacturer.
Storage incompatibility	<ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	methyl methacrylate	Methyl methacrylate	208 mg/m ³ / 50 ppm	416 mg/m ³ / 100 ppm	Not Available	Not Available
Australia Exposure Standards	ethyl acrylate	Ethyl acrylate	Not Available	Not Available	20 mg/m ³ / 5 ppm	Sen

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
methyl methacrylate	Methyl methacrylate	Not Available	Not Available	Not Available
ethyl acrylate	Ethyl acrylate	Not Available	Not Available	Not Available
Ingredient	Original IDLH	Revised IDLH		
methyl methacrylate	4,000 ppm	1,000 ppm		
ethyl acrylate	2,000 ppm	300 ppm		

MATERIAL DATA

For ethyl acrylate:

Odour Threshold Value: 0.00024 ppm (detection), 0.00037 ppm (recognition) Saturated air at 20 deg C and 1 atm. contains 38500 ppm ethyl acrylate by volume.

Exposure at or below the recommended TLV-TWA is thought to protect the worker from the significant risk of severe eye, nose and skin irritation and to minimise irritant effects of chronic exposure to ethyl acrylate vapour. The reported ability of ethyl acrylate to induce skin sensitisation in exposed human volunteers suggests that some individuals may be hypersensitive or otherwise unusually responsive from exposure to certain chemicals - these individuals may NOT be adequately protected from adverse health effects at the TLV-TWA.

Exposure controls

Appropriate engineering controls	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
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Personal protection	
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Eye and face protection	<ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
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Skin protection	See Hand protection below
Hand/feet protection	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Suitability and durability of glove type is dependent on usage.</p>
Body protection	See Other protection below

Other protection	<ul style="list-style-type: none"> ▶ Overall. ▶ PVC apron. ▶ Barrier cream.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forstberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computer-generated selection:

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Material	CPI
PVA	A

Respiratory protection

Type A-P Filter of sufficient capacity (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A P1	-	A PAPR-P1
up to 50 x ES	Air-line**	A P2	A PAPR-P2

Continued...

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TEFLON	A
BUTYL	C
BUTYL/NEOPRENE	C
PEVA/LPE	C
VTON/NEOPRENE	C

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory, may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or conveniences (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

up to 100 x ES	-	A P3	-
100+ x ES	-	Air-line*	-
		Air-line**	A PAPR-P3

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours; B AUS or B1 = Acid gasses; B2 = Acid gas or hydrogen cyanide(HCN); B3 = Acid gas or hydrogen cyanide(HCN); E = Sulfur dioxide(SO2); G = Agricultural chemicals; K = Ammonia(NH3); Hg = Mercury; NO = Oxides of nitrogen; MB = Methyl bromide; AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid sheet, does not mix with water.	Relative density (Water = 1)	1.18
Physical state	Solid	Partition coefficient n-octanol / water	Not Available
Odour	Not Available	Auto-ignition temperature (°C)	465
Odour threshold	Not Available	Decomposition temperature	280
pH (as supplied)	Not Available	Viscosity (cSt)	Not Available
Melting point / freezing point (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Initial boiling point and boiling range (°C)	97	Taste	Not Available
Flash point (°C)	Not Available	Explosive properties	Not Available
Evaporation rate	Not Available	Oxidising properties	Not Available
Flammability	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Upper Explosive Limit (%)	Not Applicable	Volatle Component (%vol)	Not Available
Lower Explosive Limit (%)	Not Applicable	Gas group	Not Available
Vapour pressure (kPa)	Not Available	pH as a solution (1%)	Not Available
Solubility in water (g/L)	Immiscible	VOC g/L	Not Available
Vapour density (Air = 1)	Not Available		

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
Eye	Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

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Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.	
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	TOXICITY	IRRITATION
methyl methacrylate	Dermal (rabbit) LD50: >5000 mg/kg ^[2]	Eye (rabbit): 150 mg
	Inhalation (rat) LC50: 78 mg/L/4h ^[2]	Skin (rabbit): 10000 mg/kg (open)
	Oral (rat) LD50: 7872 mg/kg ^[2]	
	TOXICITY	IRRITATION
ethyl acrylate	dermal (rat) LD50: 3049 mg/kg ^[1]	Eye (rabbit): 1204 ppm/7h
	Inhalation (rat) LC50: 1414 ppm/4h ^[2]	Eye (rabbit): 45 mg - mild
	Inhalation (rat) LC50: 2180 ppm/4h ^[2]	Skin (rabbit): 10 mg/24h - mild
	Oral (rat) LD50: 461731 mg/kg ^[1]	Skin (rabbit): 500 mg open - mild
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's MSDs. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of Chemical Substances	

METHYL METHACRYLATE

Inhalation (human) TCLo: 60 mg/m³(15 ppm) [Manuf. Rahn Haas]

METHYL METHACRYLATE & ETHYL ACRYLATE

The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

Acute Toxicity	☒								
Skin Irritation/Corrosion	☒								
Serious Eye Damage/Irritation	☒							STOT - Single Exposure	☒
Respiratory or Skin sensitisation	☒							STOT - Repeated Exposure	☒
Mutagenicity	☒							Aspiration Hazard	☒

Legend:

- ☒ - Data required to make classification available
- ☒ - Data available but does not fill the criteria for classification
- ☒ - Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

NOT AVAILABLE

Ingredient	Endpoint	Test Duration	Effect	Value	Species	BCF
methyl methacrylate	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ethyl acrylate	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methyl methacrylate	LOW	LOW
ethyl acrylate	LOW (Half-life = 14 days)	LOW (Half-life = 0.95 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
methyl methacrylate	LOW (BCF = 6.6)
ethyl acrylate	LOW (LogKOW = 1.32)

Mobility in soil

Ingredient	Mobility
methyl methacrylate	LOW (KOC = 10.14)
ethyl acrylate	LOW (KOC = 11.85)

SECTION 13 DISPOSAL CONSIDERATIONS

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Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Recycle wherever possible. ▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material) ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	methyl methacrylate	Y
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	ethyl acrylate	Y

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

METHYL METHACRYLATE(80-62-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
Australia Hazardous Substances Information System - Consolidated Lists	International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft
Australia Inventory of Chemical Substances (AICS)	

ETHYL ACRYLATE(140-88-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
Australia Hazardous Substances Information System - Consolidated Lists	International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft
Australia Inventory of Chemical Substances (AICS)	

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (methyl methacrylate; ethyl acrylate)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y

Legend:
Y = All ingredients are on the inventory. N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at: www.chemwatch.net

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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