



Safety Data Sheet
PE Flame Retardant Masterbatch
Revision 2, Date 14 Jul 17

1. IDENTIFICATION

Product Name	PE Flame Retardant Masterbatch
Other Names	PE Laminating Flame Retardant MB; PEGL06; PEGL08
Uses	Used as a flame retardant; in PE/EVA lamination and other products with high requirements on UV resistance.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	PE Flame Retardant Masterbatch
Product Description	Brominated flame retardants; Flame retardant content >= 70%.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System



Hazard Classification

Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories

Serious Eye Damage/Irritation - Category 2A
Carcinogenicity - Category 2

Pictograms**Signal Word**

Warning

Hazard Statements

H319 Causes serious eye irritation.
H351 Suspected of causing cancer.

Precautionary Statements

Prevention	P280	Wear eye protection/face protection.
	P201	Obtain special instructions before use.
Response	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313	If eye irritation persists: Get medical advice/attention.
	P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Storage	P405	Store locked up.
Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
1,2-Bis(tetrabromophthalimido) ethane	C ₁₈ H ₄ Br ₈ N ₂ O ₄	32588-76-4	56.25 %
Polyethylene (PE)	(C ₂ H ₄) _x	9002-88-4	20 %
Antimony trioxide	Sb ₂ O ₃	1309-64-4	18.75 %
Other additives	No Data Available	-	5 %

4. FIRST AID MEASURES**Description of necessary measures according to routes of exposure****Swallowed**

If swallowed: Rinse mouth. Do NOT induce vomiting. Call a Poison Centre or doctor/physician if you feel unwell.

Eye

Eye contact: Immediately flush eyes with running water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Skin

Skin contact: Remove contaminated clothing and shoes immediately. Flush skin with running water for at least 15 minutes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.

Inhaled

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing until recovered. If experiencing respiratory symptoms, or if you feel unwell, call a Poison Centre or doctor/physician. Apply resuscitation

	if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area.
Flammability Conditions	Non-flammable. Material does not burn.
Extinguishing Media	Suitable: Carbon dioxide, dry chemicals, foam, water spray (mist).
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	May release Hydrogen bromide, Bromine and oxides of Carbon, Hydrogen cyanide (Hydrocyanic acid), Nitrogen oxides (NOx).
Special Fire Fighting Instructions	Runoff from fire control water may pollute waterways. Avoid release to the environment.
Personal Protective Equipment	Wear self-contained breathing apparatus and protective suit.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ventilate enclosed spaces before entering. Do not touch or walk through spilled material.
Clean Up Procedures	Sweep up and shovel into suitable containers for disposal. Prevent dust cloud.
Containment	Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, drains or confined areas.
Decontamination	Residue may be washed down with water.
Environmental Precautionary Measures	Runoff from dilution water may pollute waterways. Avoid release to the environment.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Wear personal protective equipment (see Section 8).

7. HANDLING AND STORAGE

Handling	Ensure a safety shower and eye wash fountain are located close to the work area. Observe good personal hygiene practices and recommended procedures. Ensure adequate ventilation. Avoid heating to temperatures over 400 degC.
Storage	Store in a cool, dry, well ventilated area. Keep container tightly closed. Keep away from strong oxidising agents.
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Safe Work Australia Exposure Standard for COMPONENT: Antimony trioxide, handling and use (as Sb) (CAS No. 1309-64-4): - TWA: 0.5 mg/m3
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Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Local exhaust is needed at sources of dust. Mechanical ventilation is recommended.
Personal Protection Equipment	Skin protection: Protective clothing should be worn. Eye protection: Chemical goggles or safety glasses. Hand protection: Wear suitable (rubber) gloves. Respiratory protection: Approved dust respirator.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granular
Odour	No information available.
Colour	White
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	140 °C
Freezing Point	No Data Available
Solubility	No Data Available
Specific Gravity	1.8
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.30 g/cm ³
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.

Properties That May Initiate or Contribute to Fire Intensity

Non-flammable. Material does not burn.

Reactions That Release Gases or Vapours

Decomposition products: Hydrogen bromide, Bromine and oxides of Carbon, Hydrogen cyanide (Hydrocyanic acid), Nitrogen oxides (NOx).

Release of Invisible Flammable Vapours and Gases

No information available.

10. STABILITY AND REACTIVITY**General Information**

No information available.

Chemical Stability

Stable under normal conditions.

Conditions to Avoid

Avoid heating to temperatures over 400 degC.

Materials to Avoid

Avoid contact with strong oxidising agents.

Hazardous Decomposition Products

Hydrogen bromide, Bromine and oxides of Carbon, Hydrogen cyanide (Hydrocyanic acid), Nitrogen oxides (NOx).

Hazardous Polymerisation

No information available.

11. TOXICOLOGICAL INFORMATION**General Information**

Potential Health Effects:

- Eye contact: Produces irritation, tearing, and burning pain. May cause conjunctivitis.
- Skin contact: May cause sensitization by contact with skin. Prolonged or repeated skin contact may cause dermatitis.
- Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhoea. May cause slow pulse, low blood pressure, bloody stool, shallow breathing, coma, convulsions, and possible death.

Potential Chronic Health Effects:

- May cause chronic heart disease due to effects on the heart muscle.

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

No information available.

Persistence/Degradability

No information available.

Mobility

No information available.

Environmental Fate

Avoid release to the environment.

Bioaccumulation Potential

No information available.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of waste product/package according to national and local regulations.

Special Precautions for Land Fill

No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	PE Flame Retardant Masterbatch PEGLO6
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	PE Flame Retardant Masterbatch PEGLO6
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	PE Flame Retardant Masterbatch PEGLO6
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	PE Flame Retardant Masterbatch PEGLO6
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG

Proper Shipping Name	PE Flame Retardant Masterbatch PEGLO6
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA

Proper Shipping Name	PE Flame Retardant Masterbatch PEGLO6
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Not Assessed
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined

China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	ETBRPH5200, ETBRPH5201
Revision	2
Revision Date	14 Jul 2017
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluble in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.</p>

mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Health and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight