

1. IDENTIFICATION

Product Name	BOPP Film
Other Names	BOPP Co-extruded Film
Uses	Printing; Lamination; Adhesive tape.
Chemical Family	No Data Available
Chemical Formula	(C ₃ H ₆) _x
Chemical Name	Biaxially Oriented Polypropylene (BOPP) Film
Product Description	No Data Available

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 NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Signal Word None

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
Polypropylene	(C3H6) _x	9003-07-0	<=100 %

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

Swallowed	IF SWALLOWED: Get medical advice/attention if you feel unwell.
Eye	IF IN EYES: In case of contact with hot/molten material, immediately flush eyes with cold running water for at least 15 minutes. Do not attempt to remove material if adhering to the eye. Treat as burns - Obtain immediate medical care. In case of contact with fumes/vapours from heating or burning material, immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: In case of contact with hot/molten material, immerse or flood affected area with cold water for 10 - 15 minutes. Do not attempt to remove material or clothing if adhering to skin. Treat as burns - Obtain immediate medical care.
Inhaled	IF INHALED: In case of exposure to fumes/vapours from heating or burning material, remove victim to fresh air and keep at rest in a position comfortable for breathing until recovered. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. 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. Cool fire exposed surfaces with water spray until well after fire is out.
Flammability Conditions	May burn but does not ignite readily. BOPP film is not flammable material but it will burn if exposed to flame. *During machining, electrostatic charge may accumulate, causing sparking and ignite adjacent flammable material.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction - Do not use water jets.

Fire and Explosion Hazard	In a fire, BOPP film will ignite and continue to burn freely even if the source of ignition is removed, provided sufficient oxygen is present. Molten droplets of polymer can be produced, and could ignite adjacent flammable and/or combustible materials. *Contact with molten substance may cause severe burns.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic fumes, including Carbon dioxide, Carbon monoxide.
Special Fire Fighting Instructions	Contain runoff from fire control water - Runoff may pollute waterways.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA) in combination with normal firefighting clothing (full fire kit).
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	>400 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flame). Do not touch or walk through spilled material - BOPP films are slippery!
Clean Up Procedures	Collect waste films for recycling, or dispose according to local regulations (see SECTION 13). *Allow molten material to solidify before cleanup.
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent entry into drains and waterways. If the material has been discharged into a water stream, inform the relevant authorities of the possible presence of floating debris. *Spillage of BOPP films into water (i.e. sewage, drain), could possibly cause blockage to drainage system.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Use proper handling equipment as BOPP rolls are heavy! Avoid breathing dust/fumes/vapours and contact with eyes, skin and clothing. Film edges are sharp and may cause cuts/wounds. Contact with molten substance may cause severe burns. Fumes/vapours may irritate the eyes and respiratory tract. Use personal protective equipment as required (see SECTION 8). Keep away from heat and sources of ignition - No smoking. Take precautionary measures against static discharge. Converting machines should preferably be equipped with static eliminators. *In suspension packing, care should be taken when removing steel bands. Remove suspended rolls carefully to prevent the structure from crumbling.
Storage	Store in a cool and well-ventilated place, out of direct sunlight. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10) and flammable products. *Avoid storage at dry, low humidity areas to prevent generation of static electricity.
Container	Keep in the original packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

No specific exposure standards are available for this product. For dusts from solid substances without specific

General	occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ (total); TWA = 3 mg/m ³ (respirable).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of exposure to dust or fumes/vapours produced by thermal processing of the material. - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses. Wear goggles/face-shield when handling hot/molten material. - Hand protection: Handle with gloves. Recommended: Wear heat-insulating and chemical-impervious gloves when handling hot/molten material. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Wear heat-insulating and chemical-impervious clothes when handling hot/molten material.
Special Hazards Precautions	BOPP films do not present any specific hazards to health or safety when used for their intended purpose in accordance with reasonable industrial practice, hygiene and good housekeeping.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Film
Odour	Odourless
Colour	Clear, transparent
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	155 °C
Freezing Point	No Data Available
Solubility	Insoluble in water
Specific Gravity	0.85 - 0.91 (Water = 1)
Flash Point	No Data Available
Auto Ignition Temp	>400 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	>155 °C
Density	No Data Available
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	During machining, electrostatic charge may accumulate, causing sparking and ignite adjacent flammable material.
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	May burn but does not ignite readily. BOPP film is not flammable material but it will burn if exposed to flame. *In a fire, BOPP film will ignite and continue to burn freely even if the source of ignition is removed, provided sufficient oxygen is present. Molten droplets of polymer can be produced, and could ignite adjacent flammable and/or combustible materials.
Reactions That Release Gases or Vapours	Combustion/thermal decomposition may produce irritating and/or toxic fumes, including Carbon dioxide, Carbon monoxide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	The material is stable under normal storage, handling and operating conditions.
Conditions to Avoid	Keep away from heat and sources of ignition. Take precautionary measures against static discharge.
Materials to Avoid	Incompatible/reactive with oxidising materials, acids, chlorinated solvents, aromatic solvents.
Hazardous Decomposition Products	Combustion/thermal decomposition may produce irritating and/or toxic fumes, including Carbon dioxide, Carbon monoxide.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: The material is biologically inert and not harmful. - Eye contact: Considered non-irritating. Polypropylene flake or dust particles may cause eye irritation. Fumes and vapours produced by heating or burning material may be irritating to the eyes. - Skin contact: The material is not irritating. Contact with hot/molten substance may cause severe burns. - Inhalation: Fumes and vapours produced by heating or burning material may be irritating to the respiratory tract. Chronic effects: No content of this product found at a rate of 0.1% or more is defined by IARC as a probable or approved carcinogen.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	The material is not biodegradable.

Mobility	Material floats on water.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	The material can be disposed of by recycling (reprocessing), incineration (thermal recovery) or landfill, in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Polypropylene is preferably re-used or recycled.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	BOPP Film
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	BOPP Film
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	BOPP Film
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	BOPP Film
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 Code

Proper Shipping Name	BOPP Film
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 DGR

Proper Shipping Name	BOPP Film
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)
---------------------------------------	---

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 Hazardous
----------------------	---------------

National/Regional Inventories

Australia (AIC)	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**

PPBOF1000, PPBOF1001, PPBOF1002, PPBOF1003, PPBOF1004, PPBOF1005, PPBOF1200, PPBOF1201, PPBOF1341, PPBOF1348, PPBOF1592, PPBOF1700, PPBOF1701, PPBOF1702, PPBOF1703, PPBOF1704, PPBOF1705, PPBOF1706, PPBOF1707, PPBOF1708, PPBOF1709, PPBOF1710, PPBOF1711, PPBOF1712, PPBOF1713, PPBOF1714, PPBOF1715, PPBOF1716, PPBOF1717, PPBOF1718, PPBOF1719, PPBOF1720, PPBOF1721, PPBOF1722, PPBOF1723, PPBOF1724, PPBOF1725, PPBOF1726, PPBOF1727, PPBOF1728, PPBOF1729, PPBOF1730, PPBOF1731, PPBOF1732, PPBOF1733, PPBOF1734, PPBOF1735, PPBOF1736, PPBOF1737, PPBOF1738, PPBOF1739, PPBOF1740, PPBOF1741, PPBOF1742, PPBOF1743, PPBOF1744, PPBOF1745, PPBOF1746, PPBOF1747, PPBOF1748, PPBOF1749, PPBOF1750, PPBOF1751, PPBOF1752, PPBOF1753, PPBOF1754, PPBOF1755, PPBOF1756, PPBOF1757, PPBOF1758, PPBOF1759, PPBOF1760, PPBOF1761, PPBOF1762, PPBOF1763, PPBOF1764, PPBOF1765, PPBOF1766, PPBOF1767, PPBOF1768, PPBOF1769,

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 insoluable 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.
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 Heath 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