

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material Name:** Butvar B-98  
**Catalogue Number:** C060  
**Other Names:** Polyvinyl Butyral; Vinyl Acetal Polymers; Butyral; BUTVARR B-98 Polyvinyl Butyral; Terpolymer of polyvinyl butyral, polyvinyl alcohol and polyvinyl acetate.  
**Recommended Use:** A resin for thin film support.

**Supplier Name:** ProSciTech  
**Street Address:** 1/11 Carlton Street, Kirwan, Qld. 4817 Australia  
**Telephone Number:** (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)  
**Emergency Contact:** (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)

## SECTION 2 - HAZARDS IDENTIFICATION

**Hazard Classification:**  
 Hazardous according to the criteria for Classifying Hazardous Substances [NOHSC:1008].  
**Hazardous and/or Dangerous Nature:**  
 HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

**Risk Phrases:**  
 R11 Highly flammable.  
 R36 Irritating to eyes.  
 R66 Repeated exposure may cause skin dryness or cracking.  
 R67 Vapours may cause drowsiness and dizziness.

**Safety Phrases:**  
 S2 Keep out of reach of children.  
 S7 Keep container tightly closed.  
 S9 Keep container in a well-ventilated place.  
 S16 Keep away from sources of ignition - No smoking.  
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S29 Do not empty into drains.  
 S33 Take precautionary measures against static discharges.

*Refer to Section 15 for Poisons Schedule.*

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

### *Pure Substance (Proportion 100%):*

**Chemical Identity:** Butvar B-98  
**Common Name(s):** Polyvinyl Butyral; Vinyl Acetal Polymers; Butyral; BUTVARR B-98 Polyvinyl Butyral; Terpolymer of polyvinyl butyral, polyvinyl alcohol and polyvinyl acetate.  
**CAS Number:** 63148-65-2

### *Mixture Substance:*

<i>Ingredients</i>	<i>Cas Number(s)</i>	<i>Proportion (%)</i>
Polyvinyl Butyral	77360-07-02	> 95.6
Diethyl Butyral	26254-89-7	< 2.0
Water	7732-18-5	< 2.0
Butyraldehyde	123-72-8	< 0.2
Ethyl alcohol [Ethanol]	64-17-5	< 0.1
Ethyl Acetate	141-76-6	< 0.1

## SECTION 4 - FIRST AID MEASURES

**Ingestion:** Seek medical attention if pain or other irregular symptoms occur.  
**Inhalation:** Seek medical attention if pain or other irregular symptoms occur.  
**Eye Contact:** Seek medical attention if pain or other irregular symptoms occur.  
**Skin Contact:** Seek medical attention if pain or other irregular symptoms occur.  
**First Aid Facilities:** Eyebath/eyewash, Safety shower & general washroom facilities.  
**Medical Attention & Special Treatment:**  
 Treat symptomatically and supportively.  
**Additional Information:**

Occupational exposure to this material has not been reported to cause significant adverse human health effects. On the basis of available information, exposure to BUTVAR B-98 polyvinyl butyral is not expected to cause significant adverse human health effects when recommended safety precautions are followed.

## SECTION 5 - FIRE FIGHTING MEASURES

### Suitable Extinguishing Media:

Water spray or any Class A extinguishing agent.

### Hazards from Combustion Products:

Dust mixed in sufficient quantities in air will form explosive concentrations. Hazardous decomposition products include butyraldehyde, butyric acid, acrolein, crotonaldehyde in trace amounts, and carbon monoxide.

### Precautions for Fire Fighters:

Fire fighters or others exposed to products of combustion should wear full protective clothing including self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

**Hazchem Code:** Not available.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### Emergency Procedures:

Wear appropriate protective clothing.

### Containment & Clean up:

Sweep up and place in a sealed container for disposal.

## SECTION 7 - HANDLING & STORAGE

### Precautions for Safe Handling:

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Wear appropriate protective equipment (refer to Section 8). Avoid generating dusty conditions/breathing dust.

### Precautions for Safe Storage:

Store in a cool dry place, away from sources of ignition and heat.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards:** Ethyl alcohol [Ethanol] Cas No. 64-17-5:  
TWA 1000ppm  
TWA 1880 mg/m<sup>3</sup>

Ethyl Acetate Cas No. 141-78-6: [below cutoff]  
TWA 200ppm  
TWA 720mg/m<sup>3</sup>  
STEL 400ppm  
STEL 1440mg/m<sup>3</sup>

**Biological Limit Values:** No biological limit allocated.

### Engineering Controls:

Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

### Personal Protective Equipment:

Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure is excessive.

Wear suitable protective equipment to prevent contact with skin, eyes, inhalation and ingestion. Safety goggles, gloves and lab apron should be sufficient under normal conditions.

## SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance:</b>	White granular solid.
<b>Odour:</b>	Not available.
<b>pH:</b>	Not available.
<b>Vapour pressure (mm of Hg at °C):</b>	Not available.
<b>Vapour density:</b>	Not available.
<b>Boiling point/range (°C):</b>	Not available.
<b>Freezing/melting point (°C):</b>	Softens between 140-200°C.
<b>Solubility:</b>	Not available.
<b>Specific gravity or density:</b>	1/1 gm/cc.

<b>Flash Point:</b>	Not available.
<b>Flammable (explosive) limits:</b>	0.020 oz/ft <sup>3</sup> dust in air (14.5% oxygen)
<b>Ignition temperature:</b>	~390°C (dust cloud only)
<b>Volatile content:</b>	1.5% (water and trace organics)
<b>Bulk Density:</b>	.22 - .25 mg/cc

## SECTION 10 - STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under normal conditions of use.
<b>Conditions to avoid:</b>	Heat, sources of ignition and incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizers.
<b>Hazardous Decomposition Products:</b>	
	Butyraldehyde, butyric acid, acrolein, crotonaldehyde in trace amounts, and carbon monoxide.
<b>Hazardous Reactions:</b>	Does not occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Exposure and Health Effects:

Occupational exposure to this material has not been reported to cause significant adverse human health effects. On the basis of available information, exposure to BUTVAR B-98 polyvinyl butyral is not expected to cause significant adverse human health effects when recommended safety precautions are followed.

### Ingestion:

Unknown, if any symptoms that are irregular do occur seek medical attention.

### Inhalation:

Unknown, if any symptoms that are irregular do occur seek medical attention.

### Eye Contact:

Unknown, if any symptoms that are irregular do occur seek medical attention.

### Skin Contact:

Unknown, if any symptoms that are irregular do occur seek medical attention.

<b>Human/Animal data:</b>	No toxicity studies on BUTVAR B-98 polyvinyl butyral have been conducted and no data were obtained in a search of the available scientific literature. However, toxicity data are available on BUTVAR B-72 polyvinyl butyral, a similar material: ORAL LD50 (RAT): > 10,000 mg/kg, practically nontoxic DERMAL LD50 (RABBIT): > 7940 mg/kg, practically nontoxic EYE IRRITATION (RABBIT): (FHSA) 2.8 on a scale of 110.0, slightly irritating SKIN IRRITATION (RABBIT): (FHSA) 0.0 on a scale of 8.0, non irritating
---------------------------	--

No mutagenic effect was observed when polyvinyl butyral, a component of BUTVAR B-98 polyvinyl butyral, was evaluated in microbial mutagenicity assays utilizing five Salmonella strains and one yeast strain with and without mammalian microsomal activation.

**Carcinogenic Category:** Not classified as a Carcinogen by the IARC.

**Other Carcinogenic Information:** Not available.

## SECTION 12 – ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	Not available.
<b>Persistence and degradability:</b>	Not available.
<b>Mobility:</b>	Not available.
<b>Additional Information:</b>	Not available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### Disposal Methods:

Burn in an approved incinerator or dispose of in an approved chemical landfill in accordance with all applicable local, State and Federal laws and regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

### Special Precautions/Additional Informational:

Not available.

## SECTION 14 - TRANSPORT INFORMATION

<b>UN Number:</b>	Not regulated.
<b>UN Proper Shipping Name:</b>	Not regulated.

**Class and Subsidiary risk:** Not regulated.  
**Packing Group:** Not regulated.  
**Special Precautions for User:** Not available.  
**Hazchem Code:** Not available.

### **SECTION 15 - REGULATORY INFORMATION**

**Poison Schedule Number:** None Allocated.

### **SECTION 16 - OTHER INFORMATION**

**Date of preparation of MSDS:** April 11

**Comments:**

**List of Publications referenced when creating this MSDS;**

- Hazardous Substances Information System Consolidated Lists: Safe Work Australia.
- APPROVED CRITERIA FOR CLASSIFYING HAZARDOUS SUBSTANCES [NOHSC:1008(2004)] 3rd Edition: National Occupational Health and Safety Commission.
- Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:1997).
- IATA Dangerous Goods Regulations.
- Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)].
- Australia Standard for the Uniform Scheduling of Drugs and Poisons [SUSPD] (Australian Government Department of Health and Ageing).

*This Material Safety Data Sheet (MSDS) has been prepared in compliance with the National code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011(2003)]. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this MSDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Material Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.*

**... End of MSDS ...**