

MATERIAL SAFETY DATA SHEET

ACCORDANCE TO REGULATION (EC) 1907/2006



VAC-PAK[®] 450V and 450O

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

PRODUCT NAME: Vac Pak 450V and 450O

USE OF SUBSTANCE/PREPARATION:

RECOMMENDED USE: Multilayer Polyamide Film PA/PE/PA

MANUFACTURER: Richmond Aircraft Products
12801 Ann Street
Santa Fe Springs, CA 90670

FOR MORE INFORMATION CALL: 562-906-3300

IN CASE OF EMERGENCY CALL: 562-906-3300

2. HAZARDS IDENTIFICATION

INDICATION OF DANGER: This product is a nylon copolymer film. According to Directives 67/548/EEC and 1999/45/EC, it is not classified as hazardous to humans and the environment.

Route of Entry: Skin and eye contact

Target Organs: None

Inhalation: Not a route of exposure under normal handling and usage.

Skin Contact: Not considered hazardous under normal handling and usage.

Eye Contact: Not considered hazardous. May cause mechanical irritation if film comes into contact with the eye.

Ingestion: Not a route of exposure. Not considered hazardous.

Carcinogenic Status: Not considered carcinogenic by NTP, IARC, and OSHA

3. HAZARD IDENTIFICATION COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS: None - Product is a multilayer film made of polyolefins (ISO 472), and poses no danger in its current form.

<u>Ingredient Name</u>	<u>CAS #</u>	<u>% of Ingredient</u>
Polyamide (PA6)	(CAS 25038-54-4)	N/A
Polyamide (PA 6/66)	(CAS 24993-04-2)	N/A
Polyethylene LDPE	(CAS 9002-88-4)	N/A
Additives	N/A	N/A

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Components are not classified as dangerous according to Directive 1999/45/EC. Quantities of listed compounds contained in this product are not reportable under the article exemption since they do not release or otherwise result in exposure of a hazardous chemical under normal conditions of use. Product is a solid film that requires no preparation and causes no health or environmental hazards within the meaning of Directive 67/548/EEC.

4. FIRST AID MEASURES

Inhalation:	Not an expected route of entry during normal handling and use. Remove person to fresh air and seek medical attention if adverse symptoms appear.
Skin Contact:	Seek immediate medical assistance if in contact with molten product. Do not pull solidified product away from skin.
Eye Contact:	Not an expected route of entry during normal handling and use.
Ingestion:	Not an expected route of entry during normal handling and use. Obtain immediate medical attention.
Further Information:	At room temperature the product is neither an irritant nor gives off hazardous vapors. Measures above apply to critical situations ie. Fire, incorrect processing conditions
Advice to Physicians:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point (Method Used):	N/A
LEL:	N/A
UEL:	N/A
Extinguishing Method:	Carbon dioxide, dry chemical, foam, water or other agents as appropriate for materials in surrounding fire.
Special Fire Fighting Procedures:	Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards: In case of fire it can release : water (H₂O), carbon dioxide (CO₂), and when lacking oxygen (O₂), carbon monoxide (CO), hydrocarbons, aldehydes such as acrolein and formaldehyde, and organic acids. The products of the burning are dangerous. The formation of hydrocarbons and aldehydes is possible in the initial stages of a fire (especially in between 400°C and 700°C).

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6. ACCIDENTAL RELEASE MEASURES

No specific measure necessary. Prevent material from entering drains or water courses.

7. HANDLING AND STORAGE

Handling Precautions: Use normal personal hygiene and good housekeeping. When bringing the material to processing temperatures gases might develop, forming: hydrocarbon substances with low molecular weight and their oxidation products traces of aldehydes such as acrolein and formaldehyde traces of organic acids. Ensure good ventilation/exhaustion at the workplace

Storage Requirements: Store in a cool, dry area, away from sources of ignition. Protect from direct heat and sunlight.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: Recommended, mechanical ventilation in confined areas.

Environmental Exposure Control: No specific measures necessary.

Respiratory Protection: In the event of a fine dust formed during mechanical processing such as shredding or milling, observe the relevant regulations/limits. Maximum exposure limit for breathable dust is 4mg/m² (former total dust).

Hand Protection: No specific measures necessary.

Eye Protection: No specific measures necessary.

Use safety glasses if necessary.

Skin Protection: No specific measures necessary.

OCCUPATIONAL EXPOSURE STANDARDS:

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
N/A	N/A	N/A	N/A

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Transparent or colored film
Physical Status:	Solid, TPU film
Odor:	No odor
pH:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Boiling Point:	N/A
Freezing/Melting Point:	170-200°C (338-392°F)
Ignition Temperature:	>340°C (644°F)
Decomposition:	>300°C (572°F)
Solubility:	Insoluble
Spec. Grav./Density:	900-1150 Kg/m ³

10. STABILITY AND REACTIVITY

Stability:	Normally Stable
Conditions to avoid:	Avoid exposure to open flame or temperatures exceeding recommended processing temperatures. The maximum temperature to which the film can be exposed will vary with exposure (dwell) time. RAP should be contacted if questions arise concerning specific processing conditions. Decomposes over 300°C
Materials to avoid (Incompatibility):	Strong oxidizers, acids, alkalis, halogens, halogenated hydrocarbons
Hazardous Decomposition Products:	No hazardous decomposition products known at room temperature.
Hazardous Polymerization:	Will not occur

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11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	Not determined
Chronic Toxicity / Carcinogenicity Effects:	Not expected to cause adverse health effects.
Genotoxicity:	Not expected to cause mutagenic effects.
Reproductive / Developmental Toxicity:	Not expected to cause adverse reproductive effects.
Other Data:	N/A

12. ECOLOGICAL INFORMATION

Product is not classified as hazardous according to Directive 1999/45/EC. No relevant studies identified.

Exotoxicity:	This product is not toxic
Mobility:	No relevant studies identified.
Persistence and degradability:	This product is not biodegradable
Bioaccumulative Potential:	Floats on water
Other Adverse Effects:	Small particles can have physical effects on water and soil organisms.

13. DISPOSAL CONSIDERATIONS

Dispose of in compliance with Federal, state and local government regulations. Usually is considered an inert packaging material that can be recycled, landfilled or incinerated.

European Waste Catalogue: 070213 Plastic Waste

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14. TRANSPORT INFORMATION

No special precautions to be aware of under 1907/2006/EC.

US DOT Hazard Class: Not regulated
US DOT ID Number: Not applicable
UN Proper Shipping Name: None
UN Class: None
UN Packaging Group: None
Marine Pollutant: Not applicable
Classification for AIR Transportation (IATA): Consult current IATA regulations prior to shipping by air.

15. REGULATORY INFORMATION

Quantities of listed components contained in this product are not reportable under article exemption according to Directives 67/548/EEC and 1999/45/EC.

Toxic Substance Control Act (TSCA)

TSCA Inventory Status: N/A
Other TSCA Issues: None

SARA Title III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

Ingredient Name **SARA/CERCLA RO (lb)** **SARA EHS TPO (lb)**

No ingredients listed in this section.

Section 311 Hazard Class: None.

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

Ingredient Name **Comment**

No ingredients listed in this section.

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State Right-To-Know

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>Ingredient Name</u>	<u>Weight %</u>	<u>Comment</u>
No ingredients listed in this section.	N/A	

Additional Regulatory Information:

This product is not intended to be used in any application which places the product in direct contact with the human body, or in other FDA governed applications, unless specifically designated otherwise in written material supplied by RAP to the purchaser.

WHMIS Classification (Canada):

Not a controlled substance. (Considered to be a manufactured article.)

Foreign Inventory Status:

All base monomers and other components are listed on the EINECS Inventory.

16. OTHER INFORMATION

Prepared By:

Engineering and Quality Assurance

Bibliography:

- Directive EEC 67/548 and following adaptations
- Directive 1999/45/EC, as amended
- Directive 76/769/EEC and following amendments
- Directive 2001/58/EC
- EINECS/ELINCS
- 1907/2006/EC

Current Issue Date: 01/12/12

Previous Issue Date: 01/03/12