MATERIAL SAFETY DATA SHEET

VAC-PAK® A6200

1. PRODUCT AND COMPANY NAME

PRODUCT NAME: VAC-PAK® A620

DESCRIPTION: ETFE/Fluoropolymer Release Film

MANUFACTURER: Richmond Aircraft Products
13503 Pumice Street
Norwalk, CA 90650

FOR MORE INFORMATION CALL: 562-404-2440
IN CASE OF EMERGENCY CALL: 562-404-2440

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS #	% of Ingredient
Tetrafluoroethylene	(CAS 68258-85-5)	100%
Heated above 350C can evolve degradation products:		
Hydrogen Fluoride	(CAS 7664-35-3)	<1%
Carbonyl Fluoride	(CAS 353-50-4)	<1%

Material is not known to contain Toxic Chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

MATERIAL SAFETY DATA SHEET

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH HAZARDS

Route of Entry:	Inhalation
Target Organs:	Respiratory System
Inhalation:	Inhalation of fumes from overheating ETFE may cause polymer fume fever, a flu-like illness with fever, chills and cough of approximately 24 hours duration. There are some reports in the literature of persistent pulmonary effects in individuals, especially smokers, who have repeated episodes of polymer fume fever. Because of complicating factors, such as mixed exposures and smoking history, these findings are uncertain. Protection against acute exposure should also provide protection against any potential chronic effects. Smokers should avoid contamination of tobacco products, and should wash their hands before smoking.
Skin Contact:	N/A
Eye Contact:	Eye contact with ETFE may cause mechanical eye irritation with discomfort, or tearing.
Ingestion:	N/A
Additional information:	Processing this material above 270 degrees C (518 degrees F) can liberate hydrogen fluoride which may irritate the eyes, nose and throat. Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures from thermal decomposition products

4. FIRST AID MEASURES

Inhalation:	No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary. If exposed to fumes from overheating or combustion, move to fresh air. Consult a physician if symptoms persist.
Skin Contact:	The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable. If molten polymer gets on skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical treatment for thermal burn.
Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point (Method Used):	470C (878F) ASTM D1929
LEL:	N/A
UEL:	N/A
Extinguishing Method:	Water, carbon dioxide, or dry chemicals
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus. Wear full protective equipment. Hydrogen fluoride fumes emitted during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling refuse from fire.
Unusual Fire and Explosion Hazards:	Hazardous gases/vapors produced in fire are hydrogen fluoride (HF), carbon monoxide, potentially toxic fluorinated compounds.

6. ACCIDENTAL RELEASE MEASURES

Spilled material is a slipping hazard.
Spill Clean Up
Recover undamaged and minimally contaminated material for reuse and reclamation. Shovel or sweep up

7. HANDLING AND STORAGE

Handling Precautions:	Avoid contamination of cigarettes or tobacco with dust from this material. Do not use a torch to clean this material from equipment without local exhaust ventilation and respirator.
Storage Requirements:	Keep container closed to prevent contamination.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls: Use local exhaust to completely remove vapors and fumes liberated during hot processing from the work area.

Protective Equipment: Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying of molten material. When temperatures exceed (662 deg F) 350 degrees C and ventilation is inadequate to maintain concentrations below exposure limits, use a positive pressure air supplied respirator. Air purifying respirators may not provide adequate protection. If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

Exposure Guideline/Other:

Exposure Limits

ETFE FLUOROPOLYMERS

PEL (OSHA)	Particulates (Not Otherwise Regulated) 15 mg/m3, 8 Hr. TWA, total dust 5 mg/m3, 8 Hr. TWA, respirable dust

Other Applicable Exposure Limits

Hydrogen Fluoride

PEL (OSHA):	3 ppm, 8 Hr. TWA, as F
TLV (ACGIH):	3 ppm, 2.6 mg/m3, Ceiling **as** F

Carbonyl Fluoride

PEL (OSHA)	None Established
TLV (ACGIH)	2 ppm. 5.4 mg/m3, 8 Hr. TWA STEL 5 ppm, 13 mg/m3

MATERIAL SAFETY DATA SHEET

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Red or blue film
Physical Status:	Solid
Odor:	No odor
pH:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Boiling Point:	N/A
Freezing/Melting Point:	491F -536F
Solubility:	Insoluble
Spec. Grav./Density:	1.7

10. STABILITY AND REACTIVITY

Stability:	Stable at normal temperatures and storage conditions
Conditions to avoid:	Extended overheating (e.g., >400 degrees C or 753 degrees F for two hours) can result in autocatalytic degradation with “blow backs” through extruder feed hopper or barrel front.
Materials to avoid (Incompatibility):	Incompatible or can react with finely divided metal powders (e.g., aluminum and magnesium) and potent oxidizers like fluorine (F2) and related compounds (e.g., chlorine trifluoride, ClF3). Contact with incompatibles can cause fire, an explosion.
Hazardous Decomposition Products:	Small amounts of hydrogen fluoride (HF) may be evolved at about 350 deg C (662 deg F) with larger amounts at higher temperatures.
Hazardous Polymerization:	N/A

11. TOXICOLOGICAL INFORMATION

Immediate (Acute) Effects: Not determined
Delayed (Sub-chronic and chronic) Effects: None known
Other Data:

Animal Data

ETFE
Inhalation 4 hour LC50: ~7300 mg/m3 in rats

There was no skin irritation after dermal injection of extracts from ETFE into rabbits.

The effects in animals from a single inhalation exposure to high dust concentrations caused irregular respiration, body weight loss and other nonspecific effects.

No animal test reports are available to define carcinogenic, mutagenic, developmental, or reproductive hazards.

12. ECOLOGICAL INFORMATION

Material is considered inert and not expected to be biodegradable or toxic

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 or landfilled.

14. TRANSPORT INFORMATION

US DOT Hazard Class: Not regulated
US DOT ID Number: Not applicable

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

MATERIAL SAFETY DATA SHEET

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status: In compliance with TSCA Inventory requirements for commercial purposes.

State Regulations (U.S.)

STATE RIGHT-TO-WOW
No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated.

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1 % OR MORE (0.01% FOR SPECIAL HAZARDOUS SUBSTANCES) - None known.

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM - Tetrafluoroethylene.

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS) - None known.

16. OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating

Health:	2
Flammability:	3
Reactivity:	0

Current Issue Date: 02/19/2008
Previous Issue Date: 01/10/2002