

# MATERIAL SAFETY DATA SHEET



## Stretch-Vac™ 350

### 1. PRODUCT AND COMPANY NAME

**PRODUCT NAME:** Stretch-Vac™ 350

**DESCRIPTION:** Copolymer, Medium Temperature Bagging 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

This material is non-hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910-1200

### 3. HAZARD IDENTIFICATION

#### POTENTIAL HEALTH HAZARDS

**Route of Entry:** N/A

**Target Organs:** N/A

**Inhalation:** Thermoplastic Polyurethane (TPU) film is generally non-hazardous under ambient conditions as well as under recommended processing temperatures and conditions when following good manufacturing practices. However, as is common for all Diphenylmethane Diisocyanate (MDI)-based thermoplastic urethanes, if the material is subjected to temperatures above its decomposition temperature (482F / 250C in the case of this product), MDI may be liberated. The following effects reflect the potential health hazards associated with overexposure to MDI. Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract.(nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to

# MATERIAL SAFETY DATA SHEET



concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible. In the event of material decomposition due to exceeding the decomposition temperature of this product, release of MDI may occur. As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to diisocyanates at levels well below the TLV or PEL. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic overexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent.

**Skin Contact:**

In the event of material decomposition due to exceeding the decomposition temperature of this product, release of MDI may occur. May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Contact with heated material can cause thermal burns. Prolonged contact can cause reddening, swelling, rash, and, in some cases, skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms as a result of contact with very small amounts of liquid material or as a result of exposure to vapor.

**Eye Contact:**

In the event of material decomposition due to exceeding the decomposition temperature of this product, release of MDI may occur. Vapor may cause irritation with symptoms of burning and tearing. May cause temporary corneal injury.

**Ingestion:**

Not a route of exposure. Not considered hazardous.

# MATERIAL SAFETY DATA SHEET



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## 4. FIRST AID MEASURES

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<b>Inhalation:</b>	None needed under normal usage. If exposed to vapors at elevated processing temperatures, remove to fresh air.
<b>Skin Contact:</b>	In case of skin contact, wash affected areas with soap and water. Get medical attention if thermal burn occurs.
<b>Eye Contact:</b>	In case of contact, flush eyes with plenty of lukewarm water. Get medical attention if irritation develops.
<b>Ingestion:</b>	Get Medical attention

### Notes to physician:

In the event of possible diisocyanate exposure due to thermal decomposition: Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Inhalation: Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

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## 5. FIRE FIGHTING MEASURES

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### FLAMMABLE PROPERTIES

<b>Flash Point (Method Used):</b>	>210C (410F)
<b>LEL:</b>	N/A
<b>UEL:</b>	N/A
<b>Extinguishing Method:</b>	Water, foam, dry chemical
<b>Special Fire Fighting Procedures:</b>	Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
<b>Unusual Fire and Explosion Hazards:</b>	Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

# MATERIAL SAFETY DATA SHEET



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## 6. ACCIDENTAL RELEASE MEASURES

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Always wear recommended personal protective equipment. If molten, allow material to cool and place into an appropriate marked container for disposal.

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## 7. HANDLING AND STORAGE

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**Handling Precautions:** Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Avoid breathing dust. Containers should be kept tightly closed to prevent contamination. Material is hygroscopic and may absorb small amounts of atmospheric moisture.

**Storage Requirements:** Maximum storage temperature 65C (149F)

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## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

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**Engineering Controls:** During normal processing, use general dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Special ventilation and personal protective equipment (PPE) is required to control exposure to potentially harmful decomposition products whenever a TPU is heated to temperatures above its decomposition temperature. Examples would include hot knife cutting, grinding, or sawing.

**Protective Equipment:** NIOSH approved air-supplied respirator during die cleaning, high temperature processing or when thermal decomposition is suspected. Wear heat resistant gloves when handling molten material. Safety glasses with side-shields.

**Exposure Guideline/Other:** Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Purgings should be collected as small flat thin shapes or thin strands to allow for rapid cooling.

# MATERIAL SAFETY DATA SHEET



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance:</b>	Plastic film
<b>Physical Status:</b>	Solid
<b>Odor:</b>	No odor
<b>pH:</b>	N/A
<b>Vapor Pressure:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Boiling Point:</b>	N/A
<b>Freezing/Melting Point:</b>	>150C-200C (302F-392F)
<b>Solubility:</b>	Negligible
<b>Spec. Grav./Density:</b>	1.1 – 1.3

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## 10. STABILITY AND REACTIVITY

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<b>Stability:</b>	Normally Stable
<b>Conditions to avoid:</b>	None known
<b>Materials to avoid (Incompatibility):</b>	None known
<b>Hazardous Decomposition Products:</b>	By Fire and Thermal Decomposition: Carbon Dioxide; hydrogen cyanide; Amines; 4,4'-Diphenylmethane Diisocyanate (MDI); aldehydes, Carbon monoxide, Amines, nitriles, nitrogen oxides (NOx), hydrocarbons, MDI, other potentially toxic fumes
<b>Hazardous Polymerization:</b>	Will not occur

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## 11. TOXICOLOGICAL INFORMATION

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<b>Immediate (Acute) Effects:</b>	See Section 3
<b>Delayed (Sub-chronic and chronic) Effects:</b>	See Section 3
<b>Other Data:</b>	None

# MATERIAL SAFETY DATA SHEET



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## 12. ECOLOGICAL INFORMATION

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

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## 13. DISPOSAL CONSIDERATIONS

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

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## 14. TRANSPORT INFORMATION

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**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.

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## 15. REGULATORY INFORMATION

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### United States Federal Regulations

**OSHA Hazcom Standard Rating:** Non-Hazardous

**US Toxic Substances Control Act:** Listed on the TSCA Inventory

**US EPA CERCLA Hazardous Substances (40 CFR 302):**

Components  
None

**SARA Section 311/312 Hazard Categories:** Non-Hazardous under Section 311/312

**US EPA Emergency Planning Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):**

Components  
None

# MATERIAL SAFETY DATA SHEET



US EPA Emergency Planning Right-To-Know Act (EPCRA) SARA Title III Section 311 Toxic Chemicals (40 CFR 372.65) – Supplier Notification Required:

Components

None

**State Right-To-Know Information**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Thermoplastic Polyurethane	

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## 16. OTHER INFORMATION

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**HMIS Rating**

Health: 0  
Flammability: 1  
Physical Hazard: 0

Current Issue Date: 02/19/2008  
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