

Material Safety Data Sheet

Version 1.2

Revision Date 11-4-11

May be used to comply with OSHA's Hazard Communication Standard. Complies with Federal requirements

1. PRODUCT AND COMPANY INFORMATION

Product Name : **Tillman 611, 612, 614**

Common Name : PVC film, vinyl

Chemical Formula : $(C_2H_3Cl)_n$

Manufacturer's Name and Address : **John Tillman Co.**
1300 W Artesia Blvd.
Compton, CA 90220
www.jtillman.com

Telephone : (800) 255-5480

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2. MATERIAL COMPOSITION

Due to the product form, all chemical components are bound within the coating matrix. Exposure to individual components is not expected under normal conditions of use. This material is defined as an "article" under the OSHA Hazard Communication Standard (29 CFR 1910.1200) with respect to chemical components. Listing of major components and exposure limits are given for reference only.

<u>MAJOR COMPONENTS</u>	<u>CAS No.</u>
Polyester fabric	Not applicable
PVC Resin	9002-86-2
Phthalate plasticizer	Trade secret
Phosphate plasticizer	Trade secret
Non Phthalate plasticizer	Trade secret

OTHER REGULATED COMPONENTS

Antimony Trioxide	1309-64-4
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None of the components in this mixture are expected to be biologically available under normal conditions of use including use in heat welding processes.

Processing of the material at excessive temperatures may result in the generation of smoke or fumes containing hydrogen chloride (CAS# 7647-01-0), carbon monoxide (CAS# 630-08-0), and carbon dioxide.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

In its manufactured and shipped state the product is considered non-hazardous. The product is various colored laminates. Pick up Released materials and place in appropriate containers for reuse or disposal. If significant amounts of product dusts are present, wear appropriate personal protective equipment. Product involved in fire situations may release toxic combustion products including hydrochloric acid and organic and inorganic materials of unknown composition and toxicity. Wear appropriate personal protective equipment and keep unnecessary individuals up wind of the area. Cool product in or near fires with a water spray or fog. Any wastes generated during cleanup operations should be evaluated with respect to hazardous and solid waste regulations and disposed of in a properly permitted facility in accordance with all local, State and Federal regulations.

FLASH POINT: N/A FLAMMABLE LIMITS: AUTO IGNITION: N/A
ASTM-D-1929 (in air % by Vol) TEMPERATURE: About 600°F
Lower N/A Upper N/A

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, water

SPECIAL FIRE FIGHTING PROCEDURE AND PERSONAL PROTECTION: IN CASE OF FIRE: Use water or other extinguishing medium appropriate for surrounding fires. Use self-contained breathing apparatus and full protective equipment. All fires liberate toxic gases.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Decomposition by burning in open flame may yield toxic Hydrogen Chloride Gas and small amounts of acetic acid and other chemicals.

POTENTIAL HEALTH EFFECTS:
SUMMARY: Smoke generated from heating or burning the product is the primary health effect.

INHALATION: Irritation of the upper respiratory tract may occur from fumes and smoke generated during heating.

SKIN CONTACT: Drying of skin and dermatitis may occur from prolonged exposure to fumes and smoke generated during heating, prolonged handling may cause mechanical irritation.

EYE CONTACT: Fumes from heating may cause irritation, redness and burning.

INGESTION: Not an expected route of entry.

TARGET ORGANS: Lungs/respiratory tract, skin, eyes

4. FIRST AID MEASURES

INHALATION:	If exposed to fumes from overheating or combustion, move to fresh air. Seek medical attention if symptoms persist.
SKIN CONTACT:	Wash exposed skin with soap and water. If irritation develops or persists, seek medical attention.
EYE CONTACT:	Flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
INGESTION:	Not applicable.

5. FIREFIGHTING MEASURES

FLASH POINT: N/A **LFL:** N/A **UFL:** N/A **AUTO IGN. TEMP:** N/A

Use water, dry chemical, or carbon dioxide to extinguish fires involving the product. Product in or near fires should be cooled with a water spray or fog is compatible with the other materials involved in the fire. A self contained breathing apparatus (SCBA) operating in the positive pressure mode and full fire fighting protective clothing should be worn for combating fires. See Section 10 for decomposition products that might be expected in fire situations.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: No special procedures necessary

Methods for Containment: No special procedures necessary

Methods for Clean-up: No special procedures necessary

7. HANDLING AND STORING

HANDLING: Use protective equipment recommended in Section 8. Wash hands after repeated handling. When hot air or wedge welding, insure adequate local ventilation to prevent the buildup of fumes.

Unwinding, winding and passage of the fabric through and over rollers can generate a strong electrostatic charge on the surface of the fabric. Static discharge devices should be used when handling in this way.

STORAGE: Rolled goods should be kept stored in a cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

Polyester fabric:	None established
PVC Resin (9002-86-2):	None established
Phthalate plasticizer:	None established for the plasticizers used in this product
Antimony Trioxide (1209-64-4):	
ACGIH:	0.5 mg/m ³ TWA as Sb
OSHA:	0.5 mg/m ³ TWA as Sb
NIOSH:	0.5 mg/m ³ TWA as Sb

Note: Due to product form, exposure to dust or fume is not expected to occur; exposure limits are given for reference only.

Byproducts of overheating

Hydrogen Chloride (7647-01-1):	
ACGIH:	2 ppm (2.98 mg/m ³) Ceiling
OSHA:	5 ppm (7 mg/m ³) Ceiling
NIOSH:	5 ppm (7 mg/m ³) Ceiling
(NOTE: The odor threshold for HCl is 0.25 ppm)	

Carbon Monoxide (630-08-0):	
ACGIH:	25 ppm (29 mg/m ³) TWA
OSHA:	50 ppm (55 mg/m ³) TWA
NIOSH:	35 ppm (40 mg/m ³) TWA: 200 ppm (229 mg/m ³) Ceiling

PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls:	Provide local exhaust ventilation for heat welding and sealing operations
Eye/Face:	Wear safety glasses during process
Skin:	Wear general purpose gloves during prolonged handling
Respiratory:	If exposed limits are exceeded, NIOSH approved respiratory protection must be provided
General Hygiene:	Wash hands with soap and water after handling material.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: Not applicable SPECIFIC GRAVITY 0.9 - 2.0
(760 mm Hg) (H₂O = 1)

VAPOR Not applicable pH: Not applicable
PRESSURE: (mm HG 20 C)

VAPOR DENSITY: Not applicable PERCENT VOLATILE: Nonvolatile
(Air - 1) (By Volume)

SOLUBILITY IN Negligible EVAPORATION RATE: N/A
WATER: (% by Wt.)

PHYSICAL STATE: Solid

OTHER:

APPEARANCE Clear or colored laminated sheet.
AND COLOR:

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable at normal temperatures

CONDITIONS TO AVOID: Avoid temperatures above 250° F

INCOMPATIBLE None known
MATERIALS:

HAZARDOUS Thermal decomposition products: Hydrogen chloride, carbon dioxide, carbon
DECOMPOSITION: monoxide, traces amounts of aliphatic, cyclic, and aromatic organics, metal
oxides and carbonates

HAZARDOUS Will not occur
REACTIONS:

11. TOXICOLOGY INFORMATION

PVC materials have a very low acute toxicity. PVC materials have an acute LD50 in rats of greater than 10 grams per kilogram of body weight. The product, as with all PVC materials, contains a small amount, <5 ppm, of residual vinyl chloride monomer which has been identified as a human carcinogen. OSHA has established the following exposure limits for vinyl chloride: 1 ppm 8 hour TWA PEL, a 5 ppm STEL (15 minutes) and a 0.5 ppm AL. Industrial hygiene studies have shown that under normal and expected conditions of use of PVC materials, exposures are well below applicable limits.

Once an individual has become sensitized to a material, they must be precluded from all future exposure. Any exposure, however small, will trigger a recurrence of the symptoms. These generally take the form of a skin rash for chromium compounds.

Inhalation studies with rats at concentrations of 6 to 8 times the PEL or TLV for antimony trioxide for 6 hours a day, 5 days a week for a year indicated a significant increase in the number of pulmonary tumors. There is also evidence that antimony compounds can cause birth defects in rats and mice at high dose levels. The National Institute for Occupational Safety and Health has stated that these findings are inconclusive as they relate to human health.

The antimony trioxide present in the products is bound in a polymerized rubber matrix and is not expected to be bio-available.

12. ECOLOGICAL INFORMATION

No data is available on the adverse effects of this product on the environment. Toxicity is expected to be low based on insolubility in water.

13. DISPOSAL CONSIDERATIONS

Dispose of waste in accordance with Federal, State and local environmental control regulations. This material is not hazardous in its manufactured form under the Resource Conservation and Recovery Act. (40 CFR 261)

14. TRANSPORTATION INFORMATION

This product is not currently regulated under the Department of Transportation regulations.

15. REGULATORY INFORMATION

OSHA Hazard Communication Classification for dusts and fumes and vapors: Irritant, Sensitizer, Nervous System Hazard, Reproductive Hazard, Skin Hazard, Lung Hazard, Carcinogen.

SARA Title III Classification for dusts and fumes and vapors: Acute Health Hazard, Chronic Health Hazard.

Antimony is reportable under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986. Formulation 23879 contains 3.6% antimony trioxide.

The antimony trioxide component of the product has been listed as a Substance Known to Cause Cancer by the State of California.

The residual vinyl chloride monomer of less than 5ppm, CAS # 75-01-4, in the product has been listed as a Substance Known to Cause Cancer by the State of California and as an Extraordinarily Hazardous Substance by the State of Massachusetts. Exposure to vinyl chloride is regulated by OSHA under 29 CFR 1910.1017. Users of the product are urged to obtain and read these standards to determine how their operations may be affected. See Section II.

The calcium carbonate component of the product contains less than 1 ppm each of arsenic and lead compounds. This material has been listed as Substances Known to Cause Cancer or Birth Defects by the State of California.

16: ADDITIONAL INFORMATION

None

Date: 11-4-11 _____ New X Revised

IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. **NO WARRANTY or GUARRANTEE, EXPRESSED OR IMPLIED, IS MADE REGARDING PERFORMANCE, STABILITY OR OTHERWISE.** This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State or local laws.