TRANSILWRAP COMPANY, INC.

Over 70 Years of Manufacturing and Precision Converting of Plastics

TRANSILWRAP COMPANY, INC.

9201 W. Belmont Avenue
Franklin Park IL, 60131-2842

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT & COMPANY IDENTIFICATION

MATERIAL NAME: Trans-Kote® Thermal Laminating Film

EMERGENCY TELEPHONE NUMBER 765/ 935-1520
MANUFACTURER / DISTRIBUTOR'S NAME: TRANSILWRAP CO, INC.
ADDRESSES: 9201 W. Belmont Ave. Franklin Park, IL, 60131-2842 or
300 Industrial Parkway, Richmond, IN 47374

GENERIC DESCRIPTION: Plastic Film; Laminating Film
Trans-Kote® is a registered trademark of Transilwrap Company, Inc.

This MSDS covers the following Trans-Kote® products, using either PET or PVC substrates:
Trans-Kote® MITY Thermal Laminating Film
Trans-Kote® KRTY Thermal Laminating Film
Trans-Kote® DigiKote™ Thermal Laminating Film (including Display Lustre and Display White Opaque)
Trans-Kote® ZZ Thermal Laminating Film
Trans-Kote® FG Thermal Laminating Film
Trans-Kote® TXP Thermal Laminating Film
Trans-Kote® DD Thermal Laminating Film (including AD)
Trans-Kote® TPO Thermal Laminating Film (excluding MR variety)
Trans-Kote® PAM Thermal Laminating Film (excluding MR varieties)

Various numbers may be added to the above indicating different thicknesses and sizes. Corestock configurations will have adhesive both sides and may be white or clear. Matte versions of these products are NOT covered by this MSDS.

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Two main components exist, the substrate and the adhesive. Based on the product type and the construction the composition and percentages may change.

ONLY THOSE INGREDIENTS THAT HAVE BEEN DETERMINED TO BE HAZARDOUS AS DEFINED IN 29CFR 1910.1200 OR 40CFR 372 ARE LISTED BELOW; AN INGREDIENT MARKED WITH AN ASTERISK (*) IS ALSO LISTED IN 29 CFR 1910.1200(D) #4 AS KNOWN OR SUSPECTED CARCINOGEN.

COMMENTS: NO KNOWN HAZARDOUS INGREDIENTS.

SECTION 3 – HAZARDS IDENTIFICATION

Trans-Kote® films may produce a slight odor when heated or laminated. Analysis of these vapors show traces of oxidized hydrocarbons, some of which can be irritating. Normal commercial ventilation should be used to keep any odors from becoming a nuisance.

Keep thin films away from small children, as they could restrict breathing.

Because of their toughness and shape, plastics on the floor can become a tripping or slipping hazard. Work areas should be kept clear at all times. Because of their stiffness, thin films can cause annoying "paper cuts" in the skin; thick sheet may retain sharp edges.

Thermal Laminating films are used with thermal laminating machines. Care must be used when working around this machinery, as hot parts can cause burns, and in-running nips pose serious pinch point hazards.

Carcinogenicity Information:

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

SECTION 4 – FIRST AID MEASURES

EYES: Ambient particles: Because of their hardness and inertness, very small slivers of plastic can be difficult to remove from an eye; treat as any foreign particle. Safety goggles are prudent precautions in any industrial operation. Hot polymer can cause serious burns, but it is very unlikely that hot polymer can find its way into an eye in normal operations.

SKIN: Ambient skin contact is not a problem, except for possible “paper cuts.” Contact with hot polymer will cause thermal burns. **If burned by contact with hot plastic, cool any melted material sticking to the skin as quickly as possible with cold water. Do not attempt to remove from skin, as you will pull the skin off.** These plastics have low toxicity; there is no urgent need to remove them from the skin. However, if charring and depolymerization have occurred, plastic residues could be high in monomer content. Some people can be sensitized by prolonged contact with these monomers, and it may be advisable to remove them.

Notes to Physician: These burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from skin is not necessary, as it may cause additional harm to the skin.

INHALATION: Not an issue under normal use. Use ventilation during laminating operations. If for some reason, the odors are offensive remove to fresh air. Get medical attention if a cough or other symptoms develop.

ORAL: Film is non-digestible, non-nutritive, and non-toxic. Accidental ingestion is unlikely. If swallowed, consult a doctor for advice. Ingestion of film could cause serious mechanical blockage.

COMMENT: Ambient spilled film can cause a tripping hazard; pick up or sweep up immediately.

SECTION 5 – FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED): n/a
AUTOIGNITION: n/a
FLAMMABILITY LIMITS IN AIR: LOWER: n/a **UPPER:** n/a
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
HEALTH (NFPA): 0 **(HMIS):** 0
FLAMMABILITY (NFPA): 1 **(HMIS):** 1
REACTIVITY (NFPA): 0 **(HMIS):** 0

EXTINGUISHING MEDIA: All extinguishing media may be used (water, CO_2, foam, dry chemical). Water can be used, but is not recommended due to potential splattering of molten polymer potentially spreading the fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Polymer may melt and drip burning polymer that can spread the fire and increase personal injuries.
Film may pick up strong static charges during processing. Do not use in dusty or solvent laden air, as a static discharge could cause a flash fire or explosion of the solvent or dust.

HAZARDOUS COMBUSTION PRODUCTS:
Complete combustion of Trans-Kote® laminating films produces carbon dioxide and water. Incomplete combustion will produce in addition carbon monoxide and hydrocarbon oxidation products including organic acids, aldehydes, and alcohols. PVC substrates can release trace amounts of hydrogen chloride.

SPECIAL FIRE FIGHTING PROCEDURES: SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN to prevent contact with skin or eyes. Use NIOSH-approved self-contained breathing apparatus ("air packs") when fighting these fires. **If burned by contact with hot plastic, cool melted material sticking to the skin as quickly as possible with cold water.** See other first aid information, above.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up and recycle or landfill.

PROTECTIVE EQUIPMENT:
EYES: Safety Glasses are prudent
SKIN: if quantity to be picked up is large, work gloves are recommended.
INHALATION: n/a
WASTE DISPOSAL METHOD: recycle, incinerate or landfill.

D.O.T. (49CFR 171.8)/ E.P.A. (40CFR 117) SPILL REPORTING INFORMATION: Recover spilled material and place in suitable containers. The material can probably be recycled. If recycling is not practical, consult local authorities for proper disposal.

SECTION 7 – HANDLING AND STORAGE

HAZARDOUS SUBSTANCE: not a hazardous material.
REPORTABLE QUANTITY: not reportable under section 313
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Use the same precautions as you would for storing wood or paper products: keep away from flames and sources of ignition. Store in areas considered suitable for human occupancy to avoid premature bonding of the film to itself.

Because dyne treatments dissipate, all thermal laminating films have a shelf life. Whenever possible, use materials shortly after they are received. If materials must be stored for any length of time, optimum storage parameters are:

- Maximum 75°F ambient temperature; 45% Relative Humidity is ideal.
- Store out of direct sunlight on lower racks
- Store in original boxes. Repackage unused footage in original packaging. This is especially important for films with a nylon component. Seal packaging film with good tape.
- Do not store near heat sources, such as radiators or air vents.
- Rotate your stock -- use oldest stock first (FIFO principle).

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:
EYES: Safety glasses are prudent in any industrial operation.

SKIN: Gloves, long sleeves for working on hot laminating equipment. There are no problems associated with skin contact of the film at room temperature.

INHALATION: n/a

VENTILATION: normal industrial ventilation should be adequate.
LOCAL EXHAUST: RECOMMENDED
MECHANICAL EXHAUST (GENERAL): RECOMMENDED
SUITABLE RESPIRATOR: n/a

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (@ 760 MM HG): n/a
SPECIFIC GRAVITY (@ 77 DEG F): 0.915-1.3
MELTING POINT: 180-240°F
VAPOR PRESSURE (AT 77 DEG F): n/a
VAPOR DENSITY (AIR = 1 @ 77 DEG F): n/a
PERCENT VOLATILE BY VOLUME (%): 0
EVAPORATION RATE (ETHER = 1): n/a
SOLUBILITY IN WATER (%): negligible
ODOR, APPEARANCE, COLOR: mild, characteristic smell

NOTE: THE ABOVE INFORMATION IS NOT INTENDED FOR USE IN PREPARING PRODUCT SPECIFICATIONS. CONTACT TRANSILWRAP BEFORE WRITING SPECIFICATIONS.

SECTION 10 – STABILITY & REACTIVITY

STABILITY: stable
INCOMPATIBILITY (MATERIAL TO AVOID): strong oxidizers.
CONDITIONS TO AVOID: temperatures above 160°F. (Film may bond to itself).

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal conditions of use. See above for products of combustion.
HAZARDOUS POLYMERIZATION: will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

TRANSILWRAP has not conducted feeding or toxicology studies on Trans-Kote® Thermal Laminating Films. All of the information included in this section is based on studies done by manufacturers of individual components.

No studies have shown toxic or allergic effects on animals or humans. These polymers have clearance for widespread use in food packaging and / or cooking. Specific guidelines for food are published elsewhere. Please consult this prior to use for food applications.

SECTION 12 – ECOLOGICAL INFORMATION

No specific studies have been conducted. Toxicity is expected to be low due to the low solubility of these compounds in water. They are resistant to biodegradation and therefore may remain in the ecosystem for a long period of time.

SECTION 13 – DISPOSAL CONSIDERATIONS

E.P.A. PRIORITY POLLUTANTS (40CFR 122.53): NONE
Dispose of in accordance with local, state, and federal regulations.

RECYCLING: Laminated or non-laminated film contains several layers of different polymers. They can be recycled with schemes that can use mixed polymers.

INCINERATION: Trans-Kote® Thermal Laminating Films have a very high fuel value, and burn clean, making incineration with energy recovery a preferred mode of disposal.

LANDFILL: Because Trans-Kote® is not hazardous, it is readily landfilled, if more suitable disposal cannot be arranged.
RCRA HAZARD CLASS (40CFR 261) (IF DISCARDED): Not Hazardous

SECTION 14 – TRANSPORT INFORMATION

PROPER SHIPPING NAME (49CFR 172.101): Plastic Film or Sheet O/T Cellulose
D.O.T. HAZARD NAME (49CFR 172.101): Not Hazardous
D.O.T. ID NO (49CFR 172.101): Not Regulated
D.O.T. HAZARD CLASS (49CFR 172.101): None

SECTION 15 – REGULATORY INFORMATION

CONEG
All of the films covered by this MSDS contain consistently less than 100 ppm of combined lead, cadmium, mercury or hexavalent chromium, meeting CONEG requirements.

TOYS
We can provide material that is certified safe for toy products under 16 CFR ChII part 1303, which stipulates that lead content must be less than 0.06% (600ppm).

We also can certify compliance with ASTM Z66.1-1964, composition for "surfaces, which might be chewed by children." This standard limits heavy metals lead and barium to less than 1%, and antimony, arsenic, cadmium, mercury and selenium to less than 0.06% (600 ppm) either individually or combined.

STATE RIGHT-TO-KNOW LAWS:
CALIFORNIA: Warning: substances known to the state of California to cause cancer, birth defects or other reproductive harm: NONE at required reporting levels.

PENNSYLVANIA: Substances on the Pennsylvania hazardous substances list present at a concentration of 1% or more (0.01% for special hazardous substances): NONE

NEW JERSEY: 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

TSCA INVENTORY STATUS:
All components are listed on the TSCA inventory**.**

SARA Section 311 Hazard: NONE

SECTION 16 – OTHER INFORMATION

Disclaimer:
THE DATA CONTAINED IN THIS MSDS HAS BEEN COMPILED FROM PUBLICLY AVAILIBLE SOURCES AND IS OFFERED IN GOOD FAITH. THE DATA RELATES ONLY TO THE DESIGNATED PRODUCT(S) AND NOT TO THE USE OF SAID PRODUCT(S) IN COMBINATION WITH OTHER MATEIRALS. ALL MATERIALS MAY PRESENT UNKNOWN HAZARDS AND SHOULD BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXITS. RESPONSIBILITY FOR PROPER PRECAUTIONS AND SAFE USE OF THE PRODUCT RESTS WITH THE USER. ALL DATA IN THIS MSDS IS TYPICAL OF THE PRODUCT AS A WHOLE, NOT SPECIFIC TO AN INDIVIDUAL BATCH OR LOT. IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

IN THE EVENT THAT YOU DISAGREE WITH THESE RECOMMENDATIONS, OR LEARN OF DATA THAT WOULD CONTRADICT ANY OF THIS INFORMATION, PLEASE CONTACT TRANSILWRAP SO THAT WE MAY INVESTIGATE AND POSSIBLY UPDATE OUR MSDS. THANK YOU FOR HELPING US TO PROVIDE THE BEST INFORMATION POSSIBLE.

SECTION 16 – CONTINUED

DATE ENTERED: November 5, 1996
DATE REVISED: November 7, 2003 (Replaces Version of September 26, 2003)
REVISED BY: Robert Flaherty

MSDS SECTIONS REVIEWED AND UPDATED:
Section 1 – Chemical Product & Company Information
Section 5 – Fire Fighting Measures