

AMERICAN ADHESIVES COATINGS COMPANY
MATERIAL SAFETY DATA SHEET

ISSUE DATE: MARCH 1997

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER: A-1205 & B-2205
PRODUCT DESCRIPTION: HOT MELT ADHESIVE

NAME AND ADDRESS:
NORTH AMERICAN COATING SCIENCES
12 OSGOOD STREET
LAWRENCE, MA 01842

EMERGENCY NUMBERS:
PRODUCT INFORMATION 978-688-7400
REGULATORY (MSDS) 978-688-7400

The purpose of this MSDS is to transmit important product safety information. Please review this information with those who will use the product. For specific details on a particular product, please consult the technical data sheet.

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>COMPOSITION</u>	<u>NOMINAL WT. %</u>	<u>EXPOSURE LIMITS*</u>	
Vinyl Acetate Monomer	<.15	TWA:	10 ppm
CAS RN: 108-05-4		PEL-STEL:	20 ppm
		TLV-STEL:	15 ppm

* EXPOSURE LIMITS include ACGIH TLVs and OSHA (vacated) PELs.

PEL/TWA (OSHA Permissible Exposure Limit/Time-Weighted Average): No OSHA PEL for this mixture. For particulates not otherwise regulated (dust): 15 mg/m³ for total dust and 5 mg/m³ for respirable dust. (See Section 8)

TLV/TWA (ACGIH Threshold Limit Value/Time-Weighted Average): No ACGIH TLV for this mixture. For particulates not otherwise classified (dust): 10 mg/m³ for total dust and 3 mg/m³ for respirable dust. (See Section 8)

The additives (if any are present in this product) are encapsulated in a thermoplastic resin with limited

release under normal conditions of use, transportation, and storage. Increased release may occur when the adhesive product (or material/product manufactured from it) is subject to heating or excessive heat,

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION (continued)

or other processes which enhance the potential for the generation of particulates, fumes and/or vapors. A qualified health specialist should evaluate the specific potential for release under user's conditions of handling of this material.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A solid plastic pellet or mass with slight odor. Contains small amounts of a component that is considered to be a possible cancer-causing agent.

PRIMARY ROUTES OF ENTRY: Swallowing. Skin Contact. Eye. or Inhalation.

MEDICAL CONDITIONS POSSIBLE AGGRAVATED: Any pre-existing disorders or diseases of the respiratory system. Certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the processing emissions.

POTENTIAL HEALTH EFFECTS OF THIS ADHESIVE:

In solid form this adhesive is not considered to be a health hazard, although the pellets and the dusts generated from them may be mildly irritating to the skin and eyes by mechanical action. If swallowed, adhesive may pose possible intestinal obstruction. Dust created during handling or processing may be mildly irritation to the respiratory system.

When heated this adhesive may release fumes and/or vapors that are irritating to the eyes, nose, throat and skin. Overexposure to fumes or vapors may also cause headache, nausea, shortness of breath and cough. Molten or heated material can cause serious burns to unprotected skin and eyes.

POTENTIAL HEALTH EFFECTS OF OTHER COMPONENTS

VINYL ACETATE MONOMER (VAM) has been classified by the International Agency for Research on Cancer (IARC) as a category "2B" carcinogen that indicates that it is "possibly carcinogenic to humans".

SECTION 4 - FIRST AID MEASURES

FOR OVEREXPOSURE BY:

SWALLOWING: If product is ingested, contact a physician or Poison Control Center as appropriate whenever any foreign object is swallowed.

SKIN CONTACT: If contacted by molten adhesive, cool immediately with cold or ice water. Do not attempt removal of any solidified material. **GET MEDICAL ATTENTION PROMPTLY.**

EYE CONTACT: If contacted by molten adhesive, **IMMEDIATELY** flush eyes with plenty of cool water for at least 15 minutes. Do not permit victim to rub eyes. **GET MEDICAL ATTENTION IMMEDIATELY.**

SECTION 4 - FIRST AID MEASURES (continued)

INHALATION: Immediately remove victim to fresh air. If victim has stopped breathing give artificial respiration, preferably mouth-to-mouth. **GET MEDICAL ATTENTION IMMEDIATELY.**

NOTE TO PHYSICIANS: In case of most burns, allow solidified material to slough off on its own. Attempted removal may lead to more damage of the skin and underlying tissues. If removal is indicated (e.g., solidified material is located on a critical part of the hand or face), removal with mineral oil is recommended. This adhesive is only slightly soluble in mineral oil. The mineral oil tends to help the adhesive release from the burned tissue.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Does not apply
AUTO-IGNITION TEMPERATURE:	Not determined
FLAMMABLE LIMITS IN AIR, % BY VOL.	LOWER: Does not apply
	UPPER: Does not apply

NFPA RATING: HEALTH () FLAMMABILITY () REACTIVITY ()
No NFPA Rating available

KNOWN OR ANTICIPATED PRODUCTS OF COMBUSTION: Carbon monoxide is the primary combustion product. (See also Section 10)

EXTINGUISHING MEDIA: Use dry chemical, foam, or carbon dioxide. Water tends to spatter molten hot melt due to the elevated application temperatures required.

FIRE FIGHTING INSTRUCTIONS: (Note - Individuals should perform only those fire-fighting procedures for which they have been trained). Fire fighters should wear self-contained breathing apparatus in the positive pressure mode with a full facepiece when there is a possibility of exposure to smoke, fumes or hazardous decomposition products. If possible, water should be applied as a spray from a fogging nozzle since this adhesive is a surface burning material.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS: Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill release response plan should be developed and implemented. Plastic pellets are listed as "significant materials" by US EPA (40CFR 122.26 (b) (12)) and may need to be discussed in an application for a storm water discharge permit.

ACCIDENTAL RELEASE PROCEDURES: Use good housekeeping practices since spilled pellets may be a slipping hazard. Wear appropriate respiratory protection and protective clothing as described in Section 8. Contain spilled material. Transfer to secure containers. In the event of an uncontrolled release of this material, the user should determine if the release is reportable under applicable laws and regulations.

SECTION 7 - HANDLING AND STORAGE

HANDLING: The handling of pellets in both loading and unloading operations as well as fabrication may cause dust to be formed, and necessary precautions for personal protection (see Section 8) should be used. When transferring pellets, precautions such as grounding and bonding can prevent the build-up of static electricity.

STORAGE: Store in a dry place away from moisture, excessive heat and sources of ignition. Container or package headspace may contain vinyl acetate monomer vapors.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

CONTROL MEASURES: Engineering controls should be used whenever feasible to maintain concentrations below acceptable exposure limits (Section 2) including, but not limited to, enclosures, local ventilation and dilution ventilation.

RESPIRATORY PROTECTION: Where engineering controls are not feasible or sufficient to achieve full conformance with acceptable exposure limits (Section 2), use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration on contaminant(s) in air and in accordance with OSHA (29 CFR 1910.134) / ANSI Standard Z88.2.

PROTECTIVE CLOTHING: Wear heat protective gloves and clothing if there is a potential for contact with heated material.

EYE PROTECTION: Wear safety glasses meeting the specifications of OSHA 29CFR 1910.133 / ANSI Standard Z87.1 where no contact with the eye is anticipated. Chemical safety goggles meeting the specifications of OSHA 29CFR 1910.133 / ANSI Standard Z87.1 should be worn whenever there is the possibility of splashing or other contact with the eyes.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	Does not apply
MELTING POINT:	238-240 ^o F Ring & Ball
VAPOR PRESSURE:	Does not apply
DENSITY:	0.95 to 0.98 g/cc @ 25 deg C
VAPOR DENSITY (AIR=1)	Does not apply
SOLUBILITY IN WATER:	Insoluble
APPEARANCE AND ODOR:	A translucent solid plastic pellets with slight odor

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Generally stable below or within recommended processing conditions.

HAZARDOUS POLYMERIZATION: Not likely

SECTION 10 - STABILITY AND REACTIVITY (continued)

CONDITIONS & MATERIALS TO AVOID: May burn or react violently with fluorine/oxygen mixtures with 50 to 100% fluorine. May be decomposed by strong oxidizing agents such as nitric and sulfuric acids, halogens, hydrogen peroxide and chlorinating agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Under certain conditions, thermal decomposition products have been reported. They may include, but are not limited to, carbon, oxides of carbon, oxides of nitrogen, vinyl acetate, water, acrolein, formaldehyde, other aldehydes, ketones, alcohols, acetic acid, fatty acids, methane, ethane, acetylene, other organic vapors, and fumes. (See also Section 5)

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION (FROM SUPPLIERS LITERATURE) FOR THIS ADHESIVE

ETHYLENE VINYL ACETATE COPOLYMER:

Acute Data:

LC50 (inhl) rat: No data available

LD50 (skin) rabbit: No data available

LD50 (oral) rat: >1.000 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE INFORMATION (FROM THE LITERATURE) FOR THIS ADHESIVE

This material is generally inert and insoluble and is not expected to have any adverse effect on the environment. This material may deteriorate by a number of mechanisms including photo - and thermo-oxidative degradation. Photodegraded polymers are also more easily biodegraded.

ECOTOXICITY DATA (FROM THE LITERATURE) FOR THIS ADHESIVE

No data available on this product. However, birds, fish and other wildlife may eat pellets that may obstruct their intestinal tracts.

SECTION 13 - DISPOSAL CONSIDERATIONS

This material, if disposed of in its pure state, is not a hazardous waste under federal regulations. All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

SECTION 13 - DISPOSAL CONSIDERATIONS (continued)

Information provided in this Material Safety Data Sheet applies only to the product as manufactured by North American Coating Sciences. Processing, use, and contamination may make this information inappropriate for the material requiring disposal. State and local laws and regulations may differ from Federal requirements, and requirements may change or be re-interpreted.

It is the responsibility of the waste generator to characterize waste streams relative to the pertinent regulatory provisions (including RCRA "characteristic" waste definitions 40 CFR 261 Subpart C) to ensure that applicable requirements are reviewed and met.

SECTION 14 - TRANSPORTATION INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):

Not regulated by DOT as a hazardous material.

SECTION 15 - REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA):

This product is not listed in the TSCA Inventory of Chemical Substances.

SARA TITLE III (SECTIONS 311/312) HAZARD CATEGORIES:

Delayed/Chronic Health Hazard

One of more of the components of this product is associated with the health hazard(s) listed above. Since in most cases we have no data on the mixture and this component(s) is present at greater than 0.1 or 1.0 percent, we are conservatively assigning this hazard(s) to our product.

SARA TITLE III (SECTION 313):

This product contains no SARA 313 "toxic chemical" above threshold levels.

CALIFORNIA PROPOSITION 65:

This product may be found to contain one or more of the listed chemicals covered by Proposition 65. Some of these chemicals could be intentionally added ingredients.

However, there may also be others that are naturally occurring contaminants or unintentionally introduced impurities that appear in the raw materials or manufacturing process used to produce the product. While we do not routinely analyze our products or supplier raw materials for such impurities and contaminants, the possibility of their presence in trace quantities exists.

SECTION 15 - REGULATORY INFORMATION (continued)

In order to comply with the California law we are therefore providing the following statement:

WARNING: This product contains (or may contain) a chemical (or chemicals) known to the State of California to cause cancer, birth defects and/or other reproductive harm.

NOTE: The regulatory information presented here should not necessarily be considered as all-inclusive. Other local, state, federal, and international regulations may also apply.

SECTION 16 - OTHER INFORMATION

The information presented herein has been obtained from sources believed to be reliable. The information in Section II (Toxicological Information), 12 (Ecological Information) and 15 (Regulatory Information) represents selected data that North American Coating Sciences believes may be pertinent for the use of this material. However, because of the possibility of human or mechanical error by our sources, North American Coating Sciences, or others does not guarantee the accuracy, adequacy, or completeness of any information, and is not responsible for any errors or omissions or for any results obtained from use of such information. We assume no liability or responsibility, express or implied, for errors or omissions of any kind, and no warranties of merchantability or fitness, express or implied, are made or are to be implied. Consequently, you should review the information to determine whether it is adequate and appropriate to all aspects of your intended use of this material.