



## **HAZARD COMMUNICATION PROGRAM**

## **FOREWORD**

This program is a response to a federally mandated requirement. On September 23, 1987, the Federal Occupational Safety and Health Administration expanded the scope of its Hazard Communications Standard 29 CFB 1910.1200. The Hazard Communications Standard now covers all employers who have employees exposed to hazardous chemicals in their workplace. The standard now applies to colleges and universities and mandates the establishment of a written hazardous materials communication program in order to inform employees about the hazards of chemicals they may encounter in the course of employment.

The program has been developed by the College's Safety in the Workplace Committee. SWC is responsible for periodically reviewing the program.

## **I. INTRODUCTION**

### **POLICY STATEMENT**

It is the policy of Skidmore College to purchase and use the least hazardous materials available and feasible for any intended application. Skidmore College is committed to the creation of a safe and healthful work environment for all faculty members, staff, and other employees and to comply with all applicable safety laws and regulations. Where the use of hazardous materials is necessary, appropriate application controls will be implemented to reduce employee exposure. Information and training about hazardous materials will be given to all appropriate employees so they can participate in their own protection.

It is the responsibility of Department Chairpersons, Office Directors, and other supervisors to ensure that information concerning hazardous materials is obtained and made available to affected employees. It is the employee's responsibility to follow safe work practices as outlined in the information provided.

To ensure that all employees are aware of these potential material hazards, Skidmore College has established the **Hazardous Materials Communication Program**. As with any program, the effectiveness of this **Hazardous Materials Communication Program** depends upon the active support and involvement of all personnel.

### **PROGRAM CONTENT**

This Hazardous Materials Communication Program is designed to define requirements to be followed in the inventorying, labeling, information analysis, and training of employees exposed to hazardous substances.

### **ACCESS TO PROGRAM**

The contents of this program are available to all employees at all times including business hours, as designated, and appropriate Government representatives.

Copies will be retained and maintained by all Department Chairpersons, Office Directors, and Supervisors. A copy of the program will also be available in the Department of Campus Safety and Scribner Library.

## **HAZARDOUS MATERIALS DEFINITION AND INVENTORY**

### **DEFINITION OF HAZARDOUS MATERIALS**

The success and quality of the hazardous materials inventory is dependent on the adequacy and accuracy of the hazard assessment.

Manufacturers and importers are required to review available scientific information relating to potential hazard of the materials they manufacture or import and to provide this information to purchasers by providing material safety data sheets (MSDS) with each purchase. Purchasers are permitted to rely upon the MSDS information. Appendix A includes several illustrations of MSDSs.

**Materials listed in the following source documents are considered to be hazardous at all times.**

29CFR 1910, Subpart Z, Toxic and Hazardous Substances, published by Occupational Safety and Health Administration,

Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment, published by the American Conference of Governmental Industrial Hygienists (ACGIH).

Annual Report on Carcinogens, published by The National Toxicology Program (NTP), and Monographs, published by the International Agency for Research on Cancer (IARC).

Documents 1, 3, and 4 list chemicals, which have been evaluated and found to be a suspect or confirmed carcinogen.

### **INVENTORY PROCEDURE**

A physical inventory of all hazardous materials, including mixtures, stored or used in each college department or office shall be conducted. The inventory will be updated as new materials are introduced and/or ordered by departments or offices.

## **The following procedure is to be used for all inventories.**

The inventory form format, as shown in Appendix B, should be used. This will also serve as the MSDS file/binder index.

Each page of the inventory shall clearly indicate either the room housing the listed materials or the name of the person responsible for the use or storage of the listed materials. Date of inventory and person who prepared the list must also be clearly indicated.

The name of each item listed should be identical to the name listed on the material safety data sheet (MSDS) and on the container label.

The items must be listed alphabetically.

The name of the manufacturer, supplier, or importer should be indicated.

The column titled "Hazard Substance Comment" should be used to briefly indicate special warnings (such as highly flammable, carcinogen, explosive, etc.) that are described on the item's MSDS or label.

The amount of each substance including the unit of measure must be indicated on the form.

The emergency phone number which is on the MSDS must be listed.

The NFPA hazard identification codes for health, flammability, and reactivity and, if applicable, specific hazard should be filled in if the information is available on the MSDS sheet.

All prior years' indexes are to be kept on file until such time as the College can develop an interactive College wide computer system.

## **INVENTORY LOCATION**

Each Department or Office shall supply a copy of its hazardous materials inventory to the Safety in the Workplace Committee or its designee by 15 October each year. The originating department/office must keep a copy of the inventory as the index for its MSDS file/binder. (See appendix B.) Until the development of a college-wide interactive computer system, the SWC will provide the annually updated inventory of hazardous materials across the campus to Department of Campus Safety.

## **MATERIAL SAFETY DATA SHEETS (MSDS)**

### **GENERAL**

Hazardous materials manufacturers and importers must develop material safety data sheets (MSDSs) for each hazardous material they produce or import. MSDS sheets must be prepared in English, identify all materials, list the physical and chemical characteristics of the material and include acute and chronic health effects and related health information. The sheets should include exposure limits, information as to the degree to which the chemical is considered a carcinogen and the precautionary measures that should be taken as well as what emergency and first aid procedures are recommended. The identification of the organization responsible for preparing the MSDS must be included as well. (See Appendix A for the form of an MSDS.)

The balance of this section describes who is responsible for obtaining MSDSs, where they are to be filed, who will have access to them, and how the files are to be updated.

### **OBTAINING MSDSs**

The overall responsibility for obtaining MSDSs for chemicals in the department's or office's inventory belongs to the Department Chairperson or Office Director. Under the Federal OSHA Hazard Communication Standard, hazardous material suppliers are required to supply an MSDS with the initial shipment of a hazardous material and with the first shipment after an MSDS has been updated. If there is no MSDS sent with the initial shipment, then it is the responsibility of the Department Chairperson or Office Director to obtain one from the manufacturer/distributor before a hazardous substance is used.

The Director of Purchasing is responsible for assisting the Department Chairperson or Office Director in any reasonable way in securing the MSDS.

### **MSDSs LOCATION**

A copy of all MSDSs for hazardous materials used at the College will be maintained in each dept in a specified location. They are to be filed in alphabetical order.

It is the responsibility of the Department Chairperson or Office Director to maintain the MSDS file and make it readily accessible during each work shift to employees when they are in their work area(s).

The Department Chairperson or Office Director shall prepare an index of the MSDS file in conjunction with the chemical inventory (see section E above and Appendix B). These reports, that serve as both hazardous materials inventories and MSDSs indexes, are to be sent to the Safety in the Workplace Committee each year (i.e. by 15 October) or more frequently if a hazardous item has been added to the inventory.

A copy of all the MSDS indexes collected from each office or department will be organized into a master file that is kept in the Department of Campus Safety. (See Appendix C.) These paper inventories will serve as the centralized inventory of hazardous substances (until a computer database can be established) and will provide emergency personnel with information about the location of hazardous materials on campus and emergency phone numbers for each.

### **MSDS ACCESSIBILITY**

The MSDS file in a department or office shall be readily accessible during each working day and during normal working hours to employees working with the hazardous materials associated with those MSDSs.

Employees will be allowed to read the MSDS file and make notes but will not be permitted to remove the MSDS from the file.

### **MSDS UPDATING**

Department Chairpersons and Office Directors are responsible for ensuring that all MSDS in their file are current and complete.

### **READING AN MSDS**

The Occupational Safety and Health Administration (OSHA) form 174 specifies all the information that must be included on a MSDS. However, MSDS formats vary significantly as is illustrated within Appendix A which provides four sample MSDSs.

The Department Chairperson or Office Director responsible for obtaining, updating, and maintaining MSDSs is also responsible for ensuring that the information contained on the MSDS conforms to OSHA form 174. The following describes typical information sections found in most MSDS forms.

## **Section I–Identification of Product**

This identifies the chemical name, trade name or synonym, manufacturer's name, chemical formula, and emergency phone number for more detailed information.

## **Section II–Hazardous Ingredients**

Hazardous ingredients are those substances which have been defined as hazardous due either to flammability characteristics or to their potential to have adverse health effects on the worker. The percentage of each hazardous ingredient in the product is provided, as well as the Threshold Limit Value.

## **Section III–Physical Data**

This is primarily technical data is used by chemists and industrial hygienists when doing calculations to determine the safe use parameters of the substance.

## **Section IV–Fire and Explosion Hazard Data**

In this section, data is provided which describes the ability of the substance to burn or explode. The method for extinguishing a fires specific substances is also provided. Pertinent data in this section is:

1. **Flash Point**–This is the lowest temperature at which the liquid gives off sufficient vapor to form an ignitable mixture with air and produce a flame when an ignition source is brought near the surface of the liquid.
2. **Extinguishing Media**- The type of fire extinguishing material to be used when a particular substance is burning is provided here.
3. **Special Fire Fighting Procedures**–These procedures describe the fire fighting equipment needed if the substance is involved in a fire. Some substances can give off toxic gases when burning; therefore, a special piece of personal protection equipment would be worn by persons fighting the fire. Talk to your supervisor regarding your actions in the event of a fire involving a hazardous substance.
4. **Unusual Fire and Explosion Hazards**–This section provides information on substance incompatibility or its ability to react with other substances to create a flammable atmosphere.

## Section V–Health Hazard Data

Data included in this section is very important to individual employees. This information will help personnel recognize the effects of overexposure to a particular hazardous substance, and the emergency and first-aid procedures necessary in the event of overexposure.

Terms and their definitions found in this section follow:

1. **Threshold Limit Value**–The value printed on the MSDS expresses the airborne concentration of material to which nearly all persons can be exposed day after day without adverse health effects. Threshold Limit Values (TLV) may be expressed in three ways; as a Time Weighted (TWA), as a Short Term Exposure Limit (STEL), and/or as the Ceiling Exposure Limit (C). The TLV is used by engineers and industrial hygienists as a guide in the control of health hazards.
2. **Effects of Overexposure**–Describes what physical effects might be felt (dizziness, headaches, skin irritation, dermatitis, etc).
3. **Emergency and First-Aid Procedures**–Explains the procedures to follow should it become necessary to provide first-aid treatment to a person who may be overcome by a hazardous substance. The procedures may address exposures that occur through inhalation of the substance, contact with skin, or ingestion (swallowing).

## Section VI–Reactivity Data

This section presents information on reactive substances. Reactive substances are materials which, under certain environmental or induced conditions, enter into violent reaction with spontaneous generation of large quantities of heat, light, gases (flammable and non-flammable), or toxicants that can be destructive to life and property. Reactions occur often when incompatible materials are mixed together.

**Some loosely categorized types of reactive chemicals are:**

1. **Explosives**—(i.e. nitroglycerin), reacts to friction, heat, or shock.
2. **Acids**—Don't mix with sensitives.
3. **Oxidizers**—Don't mix with reducers.
4. **Water Sensitives**—Should not be mixed with water.
5. **Pyrophors**—Those substances that generate sparks or heat when friction is applied—like a red-tip match head.

When reviewing a particular data sheet, note the conditions to avoid, and incompatibility (materials to avoid). In general, isolate from other potentially reactive substances. Use appropriate personal protection gear that is recommended in Section VIII—Special Protection Information.

**Section VII—Spill or Procedures**

This section directs persons to take certain actions in the event of a hazardous substance spill or leak. Do not attempt to contain a spill or leak by yourself! Get help from your supervisor!

**Section VIII—Special Protection Information**

This section specifies the proper personal protection devices for specific situations. Types of recommended equipment will include respirators, goggles, face shield and safety glasses, gloves, protective aprons, footwear, etc.

Ventilation equipment will not necessarily be applicable. These requirements are based on amount used, container substance is stored in, conditions use occurs in, etc.

**Section IX—Special Precautions**

Describes proper storage and handling procedures. This Section is important and provides many of the dos and don'ts associated with the substance. It will also alert you to situations to avoid when handling or storing the substance.

## **LABELING**

### **GENERAL**

Since chemical suppliers are required to label their containers by the OSHA standard, Skidmore College will rely upon these labels to provide chemical safety information to employees. However, where hazardous chemicals are purchased in bulk and transferred to unlabeled containers for use, additional labeling will be necessary. This section describes situations where labeling will be used, the general information contained on the label, and who is responsible for assuring that labeling requirements are met. All labels must be legible, written in English, properly displayed, and not marred or defaced in any way.

### **LABELS ON EXISTING SUPPLIER-PROVIDED CONTAINERS**

It is the responsibility of the Department Chairperson or Office Director to ensure that labels are attached to incoming materials and that all manufacturer/distributors' labels remain on containers as received. All chemicals and hazardous substances must be dated, with a permanent mark, when they are received.

### **ALTERNATIVE LABELING SYSTEMS:**

When chemical materials are dispensed from their original labeled containers, the information from the label will also be transferred to the receiving container. The only exception to this is where an employee receiving the chemical from the original containers uses that chemical in its entirety during that day (on his/her shift).

#### **Single-use containers:**

Where the receiving container is disposable and will be used only once, simple labels can be used. Such labels are to include the name of the chemical or material corresponding to the MSDS and a few signal words noting outstanding hazards (e.g. flammable, oxidizer, etc.). These must be written on the container with an indelible marker.

#### **Reusable containers:**

Where the chemical is repeatedly dispensed into and used from the same container, full precautionary labels must be used. These labels will be permanently affixed to the container and made of, or coated with a material not affected by the chemical. Appendix D shows a sample label.

**BULK STORAGE:**

Labeling bulk storage drums, whether stored inside or outside, must be sufficient to assure that public safety officials have appropriate information in an emergency situation. The label shall contain the identity of the chemical material as it is shown on the MSDS with appropriate signal words.

## **TRAINING**

### **GENERAL**

The essence of hazard communication is to properly inform and train employees. The objective of this activity is to make employees aware of OSHA's *Hazard Communication Standard* and *Skidmore's Hazard Communication Program*, to assure that employees have sufficient knowledge of hazardous materials used in the course of their work assignment, and to encourage employees to work safely and participate in their own protection.

### **PROGRAM DESIGN/CONTENT:**

The training of employees on the Hazard Communication Program is coordinated by the College's Committee on Safety in the Workplace.

The Hazard Communication Training is divided into two parts: The "General Program" and the "Job Specific Program". The Committee on Safety in the Workplace is responsible for ensuring that the "General Program" content is taught. The "Job Specific Program" content will be taught by the appropriate Department Chairperson or Office Director.

1. The General Program will consist of at least the following information:
  - a. The existence of the OSHA hazard communication standard and the requirements of the standard (i.e. Right to know information).
  - b. The components of the *Skidmore's Hazard Communication Program*.
  - c. Where the College keeps the written Hazard Communications Program, lists of hazardous chemicals, and the required material safety data sheets.
  - d. How the hazard communication program is implemented in the workplace, how to read and interpret information on labels and MSDS, and how employees can obtain and use the available hazard information.

Appendix E gives suggestions of source documents for the General Training Program.

2. The Job Specific Program shall consist of at least the following information.
  - a. The hazards of the chemicals in the work area.  
Operations in the employees' work areas where hazardous chemicals are present.
  - b. Measures employees can take to protect themselves from the hazards.
  - c. Specific procedures put into effect by the employer to provide protection such as work practices and the use of personal protective equipment.
  - d. Methods and observations - such as visual appearance or smell - employees can use to detect the presence of a hazardous chemical to which they may be exposed.

The Job Specific Program shall be repeated for each new hazardous material introduced into the employees' workplace.

### **TRAINING DOCUMENTATION**

After completion of the Hazardous Materials Communication Training, each employee shall complete a documentation form. The form shall be signed by the employee and his/her supervisor and a copy forwarded to the Human Resources Department for placement in the employee's file.

Appendix F illustrates the form to be used to acknowledge that training has been completed.

## **Appendix (A) illustrates forms to be utilized**

This Appendix illustrates four types of MSDS.

- \* The first MSDS is blank and is OSHA form 174 dated September 1985.
- \* The second MSDS is from Comstar Intl.Inc for Muriatic acid
- \* The third MSDS is from Minwax company for paste wax
- \* The fourth MSDS is from Starkey Chemical Process Company for Ethyl Ether, Ethyl Alcohol, Methanol, N-Butyl Alcohol, and Amyl Acetate.

MATERIAL SAFETY DATA SHEET

STENCIL CORRECTION FLUID

SECTION I - IDENTIFICATION

[3 pages]

MANUFACTURER'S NAME..... STARKEY CHEMICAL PROCESS COMPANY  
9600 W OGDEN AVE  
LAGRANGE, IL 60525  
1-800-323-3040  
EMERGENCY PHONE NUMBER... 24 HOUR INFOTRAC 1-800-535-5053  
RESELLER'S NAME.....

EFFECTIVE DATE..... n/a  
REVISED DATE..... 8/1/91 [Revised: Date Only- 01/02/99]  
PRODUCT IDENTIFIER..... CD1,2,3,4,5  
TRADE NAME..... STENCIL CORRECTION FLUID  
CHEMICAL FAMILY..... n/a

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	HAZARDOUS INGREDIENT PERCENT	TLV (Units)	HAZARDOUS INGREDIENT CAS/NA/UN NUMBERS
Ethyl Ether*	60%	400 ppm	cas 60-29-7
Ethyl Alcohol*	<25%	1000 ppm	cas 64-17-5
Methyl Alcohol**	< 5%	200 ppm	cas 67-56-1
N-Butyl Alcohol*	< 3%	50 ppm	cas 71-36-3
Amyl Acetate*	< 2%	100 ppm	cas 628-73-7
Nitrocellulose	5%	n/a	cas 9004-70-0

\*\*Poison by ingestion in quantities greater than 5% or 1 oz total volume.

SPECIAL... \*This chemical is subject to S.A.R.A. Title III section 313 part 372 reporting.  
Volatile Organic Compounds 74% 4.81#/gallon

SECTION III - PHYSICAL DATA

BOILING POINT..... 156-173<sup>o</sup>F  
FREEZING POINT..... n/a  
VOLATILITY/VOL(%)..... 95%  
MELTING POINT..... liquid  
VAPOUR PRESSURE..... 274.66  
VAPOUR DENSITY (air=1)... heavier than air

MATERIAL SAFETY DATA SHEET

STENCIL CORRECTION FLUID

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT AND METHOD OF DETERMINATION..... -49°F tag closed cup  
LOWER EXPLOSION LIMIT(% BY VOL)..... 1.85  
UPPER EXPLOSION LIMIT(% BY VOL)..... 11.2  
MEANS OF EXTINCTION..... alcohol foam, CO<sub>2</sub>, dry chemical  
FOR FIRE..... Use self-contained breathing apparatus. Use water spray to cool containers.  
EXPLOSION DATA..... Material is highly flammable. Keep tightly closed in controlled cool room.

SECTION V - HEALTH HAZARD DATA

ROUTES OF ENTRY  
SKIN CONTACT SKIN ABSORPTION EYE INHALATION INGESTION  
yes yes yes yes yes  
ACUTE AND CHRONIC OVER EXPOSURE EFFECTS..... Prolonged or repeated exposure by inhalation of vapor concentrations may cause damage to nervous system, blood & kidneys.  
CARCINOGENICITY, REPRODUCTIVE EFFECTS.... n/a  
SYMPTOMS..... EYES: irritation, redness, tearing, blurred vision. SKIN: prolonged/repeated contact causes irritation, defatting & dermatitis. INHALATION: dizziness, weakness, nausea, headache. INGESTION: nausea, vomiting, diarrhea.  
SENSITIZATION TO MATERIAL SPECIFIC FIRST AID PROCEDURES..... May aggravate existing respiratory problems. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention. For skin, wash thoroughly with soap and water. In case of inhalation, move to a ventilated area. Support or restore breathing. For ingestion, induce vomitin. Seek medical attention.

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... stable  
CONDITIONS OF REACTIVITY..... Heat, sparks, open flames and sources of ignition.  
INCOMPATIBLE MATERIALS... Strong oxidizing agents, strong acids, strong bases & selected amines.  
HAZARDOUS DECOMPOSITION PRODUCTS..... Combustion can product carbon dioxide and/or carbon monoxide.  
HAZARDOUS POLYMERIZATION..... will not occur  
POLYMERIZATION AVOID..... n/a

SECTION VII - SPILL OR LEAK PROCEDURE

MATERIAL SAFETY DATA SHEET

STENCIL CORRECTION FLUID

HAZARDOUS DECOMPOSITION PRODUCTS..... Combustion can product carbon dioxide and/or carbon monoxide.
HAZARDOUS POLYMERIZATION..... will not occur
POLYMERIZATION AVOID..... n/a

SECTION VII - SPILL OR LEAK PROCEDURE

LEAK AND SPILL PROCEDURES Eliminate all ignition sources (including smoking materials). Stop spill at source. For small spills, use absorbant material to clean up spill. For large spills, dilute with water. Leaking containers should be removed to outdoors or an isolated ventilated area.
WASTE DISPOSAL..... Do not allow to enter sewers or water courses. Incineration is permitted in accordance with applicable regulations.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION... For large quantities, use NIOSH approved cartridge respirator or self-contained breathing apparatus.
VENTILATION..... Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure level below 200 ppm.
PROTECTIVE GLOVES..... For large quantities, use nitrile vinyl gloves.
EYE PROTECTION..... For large quantities, use safety glasses.
OTHER PROTECTIVE EQUIPMENT..... Safety showers and eye wash stations are recommended.
HANDLING PROCEDURES AND EQUIPMENT..... Keep away from sparks and flame. Keep vapors below 200 ppm. Keep container closed when not in use. Inhalation of vapors should be avoided. Do not take internally. Do not eat, drink or smoke while using this product.

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS..... ORM-D 3 HMIS HEALTH
DOT SHIPPING NAME... CONSUMER COMMODITY 4 HMIS FLAMMABILITY
UN NUMBER..... n/a 0 HMIS REACTIVITY
NA #..... n/a H HMIS PERSONAL PROTECTION

OTHER..... There is no requirement for hazardous information on shipping papers except for air, ocean shipments. The shipping description would then be: FLAMMABLE LIQUID, N.O.S. (ETHYL ALCOHOL, DIETHYL ETHER, NITROCELLULOSE), 3, UN1993, PG I

The information in this document is believed to be correct as of the date issued. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINES FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

## **Appendix (B) illustrates forms to be utilized**

This Appendix illustrates the format for the MSDS's indexes (all indexes for the MSDS must be kept for 30 years)

The MSDS index will have three purposes they are as follows:

1. Listing the MSDS's in alphabetical order (use name as it appears on the MSDS sheets)
2. Hazardous inventory
3. 209 U form for fire department

Chemical Name	Manufacturers	Hazardous	Quantity	Emergency Phone	Health	Fire	Specific	Reactivity
		Substance			Hazards	Hazards	Hazard	
#64 Filler	Cementex Company, Inc		5 gal	800-782-9052	0	0	na	0
2 part glue	Elmer's glue		2 gals	614-431-6600				
Acetylene	Praxair	y	3@120cf ea	514-333-5630	1	1	na	0
Acrylic Latex Caulk	Dap		2 tubes	800-543-3840	na	na	na	0
Aluminum Rods	L-TEC		30 LBS	216-992-1265				
Argon	Praxair	y	2@336 cf ea	800-424-9300				
Brazing Rods	L-TEC		25 LBS	216-992-1265	0	0	na	1
Clay (Dry Milled Fireclay)	A.P. Green Refractories Co.		500 lbs.	na	0	0	na	0
Dap '33' Glazing	Dap		1 can	800-543-3840	0	0	na	0
Denatured alcohol	Lynsol		1 gal	N.A	1	4	na	0
Dri-Touch IRPI	Birchwood		10 oz.	617-937-7940	2	2	na	0
Envirotex Lite Resin	Environmental Tech		n/a	800-424-9300	1	2	na	0
Flexible Mold Comp	Smooth-On		n/a	908-604-2224				
Grinding Wheels	Walter Co.		50	NA	2	0	na	0
Latex Enamel	Pittsburgh		2 gals	NA	3	0	0	0
Latex L-200	Cementex Company, Inc		5 gal	800-782-9056	0	na	na	0
Latex Semi-Gloss Base	Cook & Dunn		10 cans	201-507-8887	1	na	na	0
Muiratic acid	Sunnyside	y	1.5 gals	718-445-7900	1	0	na	0
Oxygen	Paxair		2@249 cf ea	800-424-9300	0	0	na	0
Parafin Wax	Stevenson-Cooper		60 lbs	215-223-2600	1	na	na	0
Paste finish wax	Minwax		1 qt	N/A	2	2	0	0
Plasteline, Hard Styling Clay	Chavant, Inc.		50 lbs.	800-242-8268	0	2	na	0
Plaster of Paris	Gold Bond		500 lbs.	704-365-0950	0	na	na	0
Plastic Roof Cement	Monsey		n/a	215-933-8888	1	2	na	0
Polyurethane	Minwax		2 qts.	NA	2	2	na	0
Por-A-Kast Curative	Synair Corporation		2 gal ea	423-698-8801	1	1	na	0
Por-A-Kast Mark 15 Curative	Synair Corporation		2 gal	423-698-8801	1	1	na	0
Por-A-Kast Mark 15 Prepol	Synair Corporation		2 gal	423-698-8801	3	1	na	1
Por-A-Kast Prepolymer	Synair Corporation		2 gal	423-698-8801	1	1	na	0
Por-A-Mold,333 Thixotropic Curative	Synair Corporation		15 gal	423-698-8801	1	1	na	0
Por-A-Mold,333Thixotropic Prepolymer	Synair Corporation		15 gal	800-424-9300	3	1	na	1
Presto Black (BST4)	Birchwood		n/a	800-424-9300	2	0	na	0
PVC Solvent Cement	Oatey		1-16 oz. Can	303-623-5716				
Quick Dry Spray	PPG		n/a	304-843-1300	2	3	na	0

Lacq.								
Sand Paper for Grinders	Standard Abrasives, Inc.		50 sheets	818-349-5650	1	na	na	0
Satin Shield (SS10)	Birchwood		1-10 oz. Can	800-424-9300	1	0	na	0
Shellac	Bullseye		2 qts.	617-679-5938	0	0	na	0
Stainless Steel Rods	Teledyne McKay		50 lbs.	717-849-2490				
Stargon	Union carbide	y	2@ 344 cf ea	800-822-4357	0	na	na	0
Synlube 531 Aerosol	Synair Corporation		20@14oz can	423-698-8801	1	4	na	1
Thinner (Livos)	Livos Pflanzenfarben		35 g	505-438-3448	1	4	na	0
Titebond (woodglue)	Franklin Intl., Inc.		2 gal	614-445-1300	1	2	na	0
Tungsten	L-Tec Welding&Cutting		4 boxes	803-669-4411				



# Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

## U.S. Department of Labor



Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

IDENTITY *(As Used on Label and List)*

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

### Section I

Manufacturer's Name

Emergency Telephone Number

Address *(Number, Street, City, State, and ZIP Code)*

Telephone Number for Information

Date Prepared

Signature of Preparer *(optional)*

### Section II - Hazard Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;  
Common Name(s))

OSHA PEL    ACGIH TLV    Other Limits  
Recommended %*(optional)*

### **Section III - Physical/Chemical Characteristics**

Boiling Point

Specific Gravity (H<sub>2</sub>O = 1)

Vapor Pressure (mm Hg.)

Melting Point

Vapor Density (AIR = 1)

Evaporation Rate  
(Butyl Acetate = 1)

Solubility in Water

Appearance and Odor

### **Section IV - Fire and Explosion Hazard Data**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
---------------------------	------------------	-----	-----

Extinguishing Media

Special Fire Fighting Procedures

Unusual Fire and Explosion Hazards

(Reproduce locally)

OSHA 174, Sept. 1985

### Section V - Reactivity Data

Stability	Unstable	Conditions to Avoid
-----------	----------	---------------------

Stable
--------

Incompatibility (*Materials to Avoid*)

Hazardous Decomposition or Byproducts

Hazardous Polymerization	May Occur	Conditions to Avoid
--------------------------	-----------	---------------------

Will Not Occur
----------------

### Section VI - Health Hazard Data

Route(s) of Entry:      Inhalation?                      Skin?                      Ingestion?

Health Hazards (*Acute and Chronic*)

Carcinogenicity:              NTP?                      IARC Monographs?              OSHA Regulated?

Signs and Symptoms of Exposure

Medical Conditions  
Generally Aggravated by Exposure

Emergency and First Aid Procedures

## Section VII - Precautions for Safe Handling and Use



**MATERIAL SAFETY DATA SHEET**  
Complies with OSHA Hazard Communication  
Standard 29 CFR 1910.1209

Fire: 0  
Health: 3  
Reactivity: 0  
Specific: 0

Identity: MURIATIC ACID

Code:

**SECTION 1: MANUFACTURER'S NAME & ADDRESS**

ComStar Intl. Inc.  
20-45 128th STREET  
COLLEGE POINT, NY 11356

Emergency Telephone: (718)445-7900  
Telephone number for information:(718)445-7900  
Preparation Date: 04/09/1992  
Signature of Preparer( optional):

**SECTION 2: HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity)	OSHA PEL	ACGIH TLV	Other Limits Recommend.	Percentage (Optional)
HYDROCHLORIC ACID CAS# 7647010	1MG/M3	1MG/M3		

**SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS**

Boiling Point (°F): 200  
Vapor Pressure@70°F: NOT EST.  
Vapor Density(Air = 1): NOT EST.  
Solubility in Water: COMPLETELY  
Appearance & Odor: CLEAR,PUNGENT

Specific Gravity (H2o = 1): 1.16(9.67LBS/G)  
Melting Point: N/A  
Evaporation Rate:  
(Butyl Acetate = 1): NOT EST.

**SECTION 4: FIRE & EXPLOSION HAZARD DATA**

Flash Point (°F): NONE  
Extinguishing Media: DRY CHEMICAL, WATERSPRAY,CO2 OR FOAM  
Special Firefighting Procedures: Self-contained respiratory protection should be provided for firemen fighting in buildings or confined areas.  
Unusual Fire & Explosion Hazards: VAPOR FUMES CAN BE GENERATED IF PRODUCT COMES IN CONTACT WITH DAMP AREAS

Flammability Limit: NONE  
LET NONE  
UEL

1 of 2 (CSS)



# MATERIAL SAFETY DATA SHEET

PASTE WAX Regular

## SECTION I PRODUCT INFORMATION

MSDS DATE: 07/22/88  
MANUFACTURERS NAME: Minwax Company, Inc.  
ADDRESS: 102 Chestnut Ridge Plaza  
Montvale, NJ 07645  
EMERGENCY PHONE NUMBER:  
DISTRIBUTOR:  
CHEMICAL NAME:  
FORMULA: Mixture  
PART NUMBER: 11123  
CATEGORY:  
BRIEF DESCRIPTION:

## SECTION II HAZARDOUS INGREDIENTS & EXPOSURE LIMITS

HAZARDOUS COMPONENT(S)	CAS #	%	LIMIT VALUES	
mineral spirits (stoddard solvent)	8052-41-3	77.00	PEL	500 ppm
			PEL	2,900 mg/m3
			TWA	100 ppm
			TWA	525 mg/m3

## SECTION III TYPICAL PHYSICAL PROPERTIES

BOILING POINT: 313F  
VAPOR PRESSURE: 2 mmHg  
VAPOR DENSITY: 4.8  
SOLUBILITY IN WATER: Nil  
APPEARANCE AND ODOR: Creamy Orange semi paste; mild hydrocarbon odor  
SPECIFIC GRAVITY: 0.770  
% VOLATILE/VOLUME: 79.3%  
pH:  
MISC. INFORMATION:

\*\*\*\*\* NFPA RATINGS \*\*\*\*\*  
HEALTH = 2      FLAMMABILITY = 2      REACTIVITY = 0      SPECIAL HAZARD =

-573-

PASTE WAX Regular

SECTION IV FIRE & EXPLOSION HAZARD DATA

FLASH POINT: 105F

FLAMMABLE LIMITS:

LOWER EXPLOSIVE LIMIT (LEL): 0.9

UPPER EXPLOSIVE LIMIT (UEL): 6.0

EXTINGUISHING MEDIA:

CO2, dry chemical, alcohol foam and water fog.

SPECIAL FIRE FIGHTING PROCEDURES:

Wear self-contained breathing apparatus. Use water to cool exposed containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Product gives off toxic by-products when burned.

SECTION V HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

EYES:

Severe irritation, redness, tearing or blurred vision.

SKIN:

Can cause defatting and drying of the skin leading to irritation and dermatitis.

INGESTION:

Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration can be fatal due to chemical pneumonitis.

INHALATION:

Can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, nervous irritability.

FIRST AID PROCEDURES

EYE CONTACT:

Flush with plenty of water.

SKIN CONTACT:

Wash with soap and water.

INGESTION:

Do not induce vomiting. Call physician immediately. Keep patient warm and quiet.

INHALATION:

Remove to fresh air. Aid in breathing if necessary. Call a physician.

PASTE WAX Regular

---

SECTION VI REACTIVITY DATA

---

STABILITY: Stable  
HAZARDOUS POLYMERIZATION: Will not occur  
CONDITIONS TO AVOID:  
None  
INCOMPATIBILITY (materials to avoid):  
Strong Oxidizing agents  
HAZARDOUS DECOMPOSITION PRODUCTS:  
CO, CO2 and unidentified organic compounds.

---

SECTION VII SPILL OR LEAK PROCEDURES / WASTE DISPOSAL

---

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:  
Provide adequate ventilation. Soak up with absorbent material and place in leak proof drums for disposal.  
WASTE DISPOSAL:  
Dispose in accordance with federal, state and local regulations.

---

SECTION VIII SPECIAL PROTECTION

---

LOCAL EXHAUST: As needed  
SPECIAL EXHAUST:  
OTHER EXHAUST:  
MECHANICAL: As needed  
PROTECTIVE GLOVES: Rubber, neoprene  
EYE PROTECTION: Safety glasses  
OTHER PROT. EQUIPMENT: aprons, boots, arm guards or full body suit  
RESPIRATORY PROTECTION: Full face or half-mask air purifying respirator if needed.  
VENTILATION: Provide constant flow of fresh air.

---

SECTION IX SPECIAL PRECAUTIONS

---

PASTE WAX Regular

SECTION IX SPECIAL PRECAUTIONS cont.

PRECAUTIONS IN HANDLING AND STORAGE:

Do not store or use near heat, sparks or open flame. Close container after each use. Store only in original container. Wash with soap and water before eating, drinking or smoking.

OTHER PRECAUTIONS:

ADDITIONAL INFORMATION TO ADD ABOUT PRODUCT:

While this information and recommendation set forth herein are believed to be accurate as of the date hereof, Corbus Inc. makes no warranty of fitness for a particular purpose with respect hereto and disclaims all liabilities from reliance thereon.

## Appendix (D) labels

For uniformity purposes the labels shall adhere to the following:

\_\_\_\_\_  
CHEMICAL NAME

\_\_\_\_\_  
Chemical Manufacturer's / Importer Name

**PHYSICAL HAZARDS**

<p><b>HEALTH HAZARD</b></p> <p>4 Deadly 3 Extreme danger 2 Hazardous 1 Slightly hazardous 0 Normal material</p>		<p><b>FIRE HAZARD</b> Flash Points</p> <p>4 Below 73° F 3 Below 100° F 2 Above 100° F, no exceeding 200° F 1 Above 200° F 0 Will not burn</p>
<p><b>SPECIFIC HAZARD</b></p> <p>ACID-Acid ALK-Alkali COR-Corrosive OXY-Oxidizer P-Polymerizable R-Radioactive W-Use No Water</p>		<p><b>REACTIVITY</b></p> <p>4 May detonate 3 Shock &amp; heat may detonate 2 Violent chemical change 1 Unstable if heated 0 Stable</p>

**ROUTE OF EXPOSURE**

INHALATION	INGESTION	ABSORPTION THROUGH SKIN
------------	-----------	-------------------------

**HEALTH HAZARDS**

CORROSIVE		
NO HEALTH HAZARD	TOXIC	HIGHLY TOXIC
CARCINOGEN	IRRITANT	SENSITIZER

\_\_\_\_\_  
Address

\_\_\_\_\_  
Emergency Phone

(✓ Mark Appropriate Protection Required)

**PERSONAL PROTECTION**

<input type="checkbox"/> Safety Glasses	<input type="checkbox"/> Apron	<input type="checkbox"/> Respirator
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Boots	<input type="checkbox"/> Self Contained Air Respirator
<input type="checkbox"/> Gloves	<input type="checkbox"/> Splash Goggles	<input type="checkbox"/> Full Protection Suit
<input type="checkbox"/> OTHER	<input type="checkbox"/> OTHER	<input type="checkbox"/> OTHER

**TARGET ORGANS**

SKIN	LUNGS	CARDIOVASCULAR SYSTEM
EYES	KIDNEYS	CENTRAL NERVOUS SYSTEM
BLOOD	LIVER	AUTONOMIC NERVOUS SYSTEM
HEART	RESPIRATORY SYSTEM	REPRODUCTIVE SYSTEM

TOL3-46V

EMED Co., Inc.  
Box 369  
Bilo., NY 14240

**Appendix (E) Hazardous Materials Communication Program Standard**  
**Employee Training Format**

1. The General Program will consist of at least the following information:
  - A. **Right to know information.**  
(Use hand out book 210A.)
  - B. **The existence of the OSHA hazard communication standard and the requirements of the standard.**  
(Use video for standard training format basic.)
  - C. **The components of the hazard communication program in the employees' workplaces. Operations in the employees' work area where hazardous chemicals are present.**  
(This would be depend on what Department you are training tailored to each department.)
  - D. **Where the College will be keeping the written hazard evaluation procedures, communications programs, lists of hazardous chemicals, and the required material safety data sheets.**  
(Use Appendix (C) illustrates the location of the MSDS Binders and the person responsible for the maintaining of them.)
  
2. The Job Specific Program will consist of at least the following information.
  - A. **How the hazard communication programs is implemented in that workplace, how to read and interpret information on labels and MSDS, and how employees can obtain and use the available hazard information.**
  - B. **The hazards of the chemicals in the work area.**
  - C. **Measures employees can take to protect themselves from the hazards**
  - D. **Specific procedures put into effect by the employer to provide protection such as work practices and the use of personal protective equipment.**
  - E. **Methods and observations - such as visual appearance or smell - employees can use to detect the presence of a hazardous chemical they may be exposed to.**
  - F. **The Job Specific Program will be repeated for each new hazardous material introduced into the employees' workplace.**

# MANAGER TRAINING OF EMPLOYEE CHECKLIST

## Hazardous Materials Communication Program

Has the employee been informed and trained in the following:

- |  | YES   | NO    |
|--|-------|-------|
| 1. <u>Information:</u> Has the employee been informed of the following:  |       |       |
| (a) The requirements of this section.  | _____ | _____ |
| (b) Any operation in the work area where hazardous substances are present  | _____ | _____ |
| (c) The location of the written Hazard Communication Program   | _____ | _____ |
| (d) Availability of the written program.   | _____ | _____ |
| (e) Location and availability of hazardous substances list(s).   | _____ | _____ |
| (f) Location and availability of Material Safety Data Sheets.  | _____ | _____ |
| 2. <u>Training:</u> Has the employee been trained in the following:  |       |       |
| (a) Methods and observations that may be used to detect the presence or release of hazardous substances in the work areas. | _____ | _____ |
| (b) The physical and health hazards of the substances in the work areas.   | _____ | _____ |
| (c) How employees can protect themselves from these hazards.   | _____ | _____ |
| (d) Procedures the employer has implemented for employee protection.   | _____ | _____ |
| (e) Appropriate work practices.  | _____ | _____ |
| (f) Emergency procedures.  | _____ | _____ |
| (g) Personal protective equipment to be used.  | _____ | _____ |
| (h) Explanation of labeling systems.   | _____ | _____ |
| (i) Explanation of material safety data sheets.  | _____ | _____ |
| (j) How employees can obtain and use appropriate hazard information.   | _____ | _____ |
| (k) Personal hygiene when working with substances.   | _____ | _____ |
| (l) General first aid for contact with hazardous substances.   | _____ | _____ |

Employee Signature \_\_\_\_\_ Manager's Signature \_\_\_\_\_

Date \_\_\_\_\_ Date \_\_\_\_\_

Appendix (F)

Hazardous Materials Communication Program

Employee Training Document  
&  
Request for Materials Safety Data Sheets

**TRAINING ACKNOWLEDGEMENT**

---

I have received information on the Hazard Communication Standard 29 CFR 1910.1200 or the appropriate state standard and understand how to interpret and to use the labeling systems and Material Safety Data Sheets (MSDSs) that are in use and accessible to me in my work area. I agree to observe and follow the safe work practices as presented to me in the training sessions I attended on \_\_\_\_\_ at \_\_\_\_\_.

Employee's Signature \_\_\_\_\_ Date \_\_\_\_\_

The above named employee has been informed and instructed by \_\_\_\_\_ work practices, chemical hazards recognition, interpretation and use of chemical labels, MSDSs, the CFR 29, 1910.1200 (e) or appropriate state standard and the location at which these items are accessible to the employee.

Supervisor's Signature \_\_\_\_\_ Date \_\_\_\_\_

**REQUEST FOR MATERIAL SAFETY DATA SHEETS**

DATE OF REQUEST \_\_\_\_\_

DEPARTMENT \_\_\_\_\_

TO: \_\_\_\_\_

FROM: \_\_\_\_\_

I hereby request that I be given the Material Safety Data Sheets on the following hazardous substance(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date Received \_\_\_\_\_

Acknowledge \_\_\_\_\_ (Requesting Employee)

DEPARTMENT MANAGER \_\_\_\_\_

DATE \_\_\_\_\_

cc: Corporate Safety Department