APR 2 2 1986

CHEMICALS PPG INTEROFFICE / LAKE CHARLES

8779T-87823

TO Distribution DATE April 18, 1986

FROM R. J. McCorquodale SUBJECT Haz Com Training

As you know, May 25th, 1986, is the implementation date for OSHA's Hazard Communication Standard. I have attached for your use a copy of the written Lake Charles program.

Briefly stated, the Standard requires producers of hazardous chemicals to identify and label their products as to hazardous properties and consumers to provide training to employees who may come into contact with those chemicals.

As an employer who not only consumes hazardous chemicals produced by others, but are ourselves a producer, our requirements are a bit more involved. The attached written program details our method for meeting all the requirements of the law.

We are currently obtaining and entering into the computer Material Safety Data Sheets from vendors and General Office (our products and intermediates). This effort, along with the Vessel Inventories supplied by operations, provides us an information base for all hazardous chemicals in our complex. From this base, we will produce hazard summaries and printed material for inclusion in a set of binders which will be located throughout the complex.

The Standard requires we provide a method for employees to obtain, in their work location, information as to the hazardous properties of chemicals with which they are called upon to work.

It also requires we train these employees in several areas -

1) Information about the law and general information on hazardous materials
2) Procedure on how to obtain information
3) Hazards within their normal work location

Item 1 has been completed and was fairly comprehensive as to most aspects of the law, including to a degree, the employees' responsibility.

Items 2 and 3 are still to be accomplished. You were informed that you would be conducting the second phase of the training activity which would include hands-on training as to how employees would access the computer via remotely located CRTs.

SL 087797

This has changed as follows:

Employee access to information will take two routes:

A) Each control room and selected maintenance shops will house binders which will contain information as detailed in Part IV, A and B, of the attached program.

B) Micro-fiche readers are being located throughout the plant (see Appendix "C" of Haz Com Program) for use by all employees. The fiche will be indexed to allow quick access to an MSDS for those chemicals we have in our complex.

The decision to use micro-fiche readers versus CRTs for employee access to Haz Com data was based on several factors. The ultimate result will be to require less training and allow the employee to obtain the data without constantly tying up a supervisor's time and a CRT.

The attached, Part II Training Guidelines, are provided for your use in meeting the rest of Haz Com Standards training requirements. How you actually conduct this training is left to your discretion, but the listed objectives must be met.

The Area and Shift Safety Coordinators/Supervisors will receive training on the overall program by Tuesday, April 22nd, and are a resource you should definitely utilize. An Area Supervisor must conduct the portion of the training relating to area hazards and detection and protection methods. Your safety representative can be helpful in areas directly relating to Haz Com and how the program will work and be maintained.

The training must be completed by Friday, May 23rd, but preferrably, you will complete by Friday, May 16th.

Sample fiche are attached. We must have the attached attendance forms back to Jon Shepherd once your training is complete. These will be maintained as our permanent record for compliance. You should have 100% attendance. Where this does not occur, identify those who did not attend so we can pursue later.

RJM/fb

Attachment

Distribution:

SPU Leaders

SL 087798

HAZARD COMMUNICATION TRAINING

PART II - UNIT HAZARDS

TRAINING GUIDELINES

Purpose:

The purpose of this portion of Hazard Communication Training is to provide employees with information regarding the hazards they might be exposed to in their work area and how they will obtain specific chemical hazard information.

Training Objectives:

The employee after completing this training should be able to:

1.) Identify the chemical hazards associated with their routine work tasks and how to protect themselves.

2.) Obtain information on hazards associated with non-routine work which they are assigned.

3.) Describe the methods or observations that could be used to detect the presence or release of a hazardous chemical in the work area. (Examples - odor or visual appearance; monitoring alarms; portable or fixed detector systems; etc.)

4.) Locate Material Safety Data Sheet information on the microfiche.

5.) Describe in general the Lake Charles Hazard Communication Program.

Information Resources:

1.) This guide.
2.) The Lake Charles Hazard Communication Program bulletin - attached.
3.) Your unit's material and vessel inventories.
4.) Written procedures for your unit regarding handling, use, or storage of hazardous chemicals.
5.) Written procedures for your unit regarding hazardous chemical emergencies.
6.) The attached sample of micro-fiche copy MSDSs.

HAZARD COMMUNICATION TRAINING

PART II - UNIT HAZARDS

ATTENDANCE SHEET

SPU # _____ DATE _____

NAME	BADGE	NAME	BADGE

SL 087800

PPG INDUSTRIES, INC. CHEMICALS P. O. BOX 1000 LAKE CHARLES, LA. 70602

Lake Charles Hazard Communication Program

I. PURPOSE

This bulletin has been prepared to provide basic information on implementation and administration of the Lake Charles Hazard Communication Program.

II. INTRODUCTION

The Lake Charles Hazard Communication Program has been established to assure compliance with OSHA's Hazard Communication Standard (29CFR-1910.1200). The goal of the standard is to reduce or eliminate workplace injuries and illnesses by providing employees and contractors the necessary information to work safely with or around potentially hazardous materials.

III. ACCOUNTABILITIES

Safety Department

The Plant Industrial Hygienist will be responsible for administering the Hazard Communication Program. This includes, but is not limited to: program implementation and review, training specification, and maintenance of the internal material safety data system and material inventory.

Purchasing Department - The Manager of Purchasing will insure that:

1. MSDSs are provided by vendors for all materials deemed "hazardous" (see definitions-Appendix A). All MSDSs received are to be forwarded immediately to the Plant Industrial Hygienist for review and input to the Internal Material Safety Data System.
2. All contractors entering the facility to perform work in an Operating Unit have received the necessary hazard information for that area, and have trained their employees to be able to use such information.
3. Vendors/contractors who provide their own materials (which may be hazardous) to be applied or installed submit MSDSs for such prior to beginning work. Such MSDSs shall be forwarded to the Safety Department for evaluation.

Warehouse/Receiving Department - The Receiving Department will:

1. Insure that all containers of hazardous materials (see definition - Appendix A) received have appropriate hazard labeling.
2. In the event that required labels are missing or defaced - affix the appropriate PPG hazard summary label to the container(s) and notify the Manager of Purchasing of the deficiency.

3. Forward to the Safety Department all MSDSs received as part of the shipping papers.

4. Insure that the necessary MSDS has been received from the vendor/manufacturer prior to adding any hazardous material to the storestock inventory. This applies also to changes in suppliers.

Shipping Department(s)

All Shipping personnel will insure that required hazard labeling is attached to all shipments of PPG products leaving the facility.

Operating Units

Each Operating Unit will review their Vessel and Material inventory listing (maintained by the Safety Department) on a quarterly basis. Any revisions shall be communicated in a timely fashion to the Safety Department.

Maintenance and Engineering

1. Construction Work - The Maintenance planner or Area engineer who is planning work within an operating unit to be performed by a Contractor will include with bid packages (or construction bulletin, if an agency contractor) copies of the Hazard Summary sheets for that unit.

2. Equipment sent out for overhaul - Whenever equipment (such as valves, SRVs, heat exchangers, etc.) is sent out of the plant for maintenance/overhaul without having been thoroughly cleaned or decontaminated, it must be labeled/tagged and copies of the appropriate hazard summary sheets included with the shipping papers (e.g., a valve in chlorine service, include the chlorine hazard summary).

Field Engineering

Field Engineers will ensure that Contractors and their employees are aware of hazards associated with the worksite and comply with any work practices, including personal protective equipment, established to control those hazards.

Supervisors - Supervisors will ensure that:

1. Employees are informed of the hazards associated with non-routine tasks which they are assigned to perform prior to beginning the job.

2. Newly assigned employees are informed of the hazards associated with their routine tasks prior to beginning their new job.

3. All employees are informed of new hazards in the area due to either a new material being introduced to the area, or newly discovered hazard information on existing material(s).

Employees

It is the employee's responsibility to understand the hazards associated with their work, and to comply with all work practices, including use of personal protective equipment, designed to control those hazards.

IV. PROGRAM DESCRIPTION

Employees will be informed as to the presence, nature and control methods for potentially hazardous materials found in their work area by a combination of material inventories, hazard summary tables, container labeling, material safety data, and - as appropriate - safe work procedures. Details of each element are described below. In addition, each employee working with or around hazardous materials will receive training to enable them to understand and control those hazards.

A. Hazard Communication Binder

1. Operating Units - Each Operating Unit will maintain in the Control Room a binder containing the following information:
   a. Chemicals Inventory & MSDS Index - A listing of all raw materials and production chemicals; process and treatment chemicals; process by-products and wastes; and final products. The listing will reference the applicable MSDS system number.
   b. Vessel Inventory - A listing of each process vessel by ID# (=SAC #) indicating the identity and maximum amount of each hazardous chemical present (or expected) in quantities of 1% - by weight - or greater (0.1% for carcinogens) and an over-all hazard rating for the vessel.
   c. Program Description - A copy of this document.

2. Maintenance Shops - Each Maintenance Shop will maintain in a readily accessible location a binder containing the following information:
   a. Maintenance Materials Inventory & MSDS Index - A listing of all maintenance materials used in the Complex. The listing will reference the applicable MSDS system number.
   b. Program Description - A copy of this document.

B. LABELING

1. PPG products - All containers of PPG - Lake Charles products will be labeled or tagged with the proper PPG label (as specified by Chemical's Product Safety Department) prior to leaving the Complex.

2. Purchased materials (does not apply to pipeline or bulk shipments) - All purchased hazardous materials should have existing labeling. These must not be removed or otherwise made unreadable. In those instances where labels are missing or defaced, the Receiving Department will affix the appropriate HSIS label to the container(s). (See Appendix B for details.)

3. Lab samples - All process samples not analyzed by the person taking the sample must be tagged using the "laboratory sample tag" issued by the Lab storeroom. The tag must indicate the originating unit and the applicable vessel ID # to allow identification of the contents.

4. Contaminated equipment or materials leaving the complex - Any equipment or material which leaves the complex and has not been thoroughly cleaned or decontaminated will be tagged "CAUTION- CONTAMINATED

EQUIPMENT/MATERIAL - see shipping papers for details". A copy of the appropriate hazard summary table(s) should be attached to the Return Material Form or other paperwork accompanying the material. NOTE: This does not apply to waste materials covered under other regulations.

C. MATERIAL SAFETY DATA SHEETS

1. PPG Products (supplied to customers)

The Chemicals-Product Safety Department will develop and distribute material safety data sheets for all PPG products. All requests from customers for product MSDS's should be referred to that group to insure that only the most current data sheets are provided.

2. In-Plant MSDS Collection

Employees who need to reference a Material Safety Data Sheet should go to one of the locations listed in Appendix C. There they will find on microfiche a comprehensive "library" of MSDSs for all products, intermediates and by-products, and purchased materials used within PPG Chemicals. If the number of the MSDS is not known beforehand, a comprehensive index listing is also provided on microfiche. An updated version of this information will be distributed quarterly.

If necessary, a printed copy of single MSDSs may be obtained through the Safety Office.

D. SAFE WORK PROCEDURES

PPG-Lake Charles has had for many years various work procedures designed to control the physical and health hazards of chemicals which are present at this location. Some are found in control rooms in the operations procedures manuals. Others involve the use of permits or tags, details on these procedures can be found in the Supervisor's Safety Procedures manual. All employees are expected to be familiar with and follow these procedures.

E. EMPLOYEE INFORMATION

Employees may obtain further information on details of the Hazard Communication program including the complete OSHA standard; the master chemical inventory; and details on PPG hazard determination procedures by coming to the Safety Office (or Shift Superintendent's Office on backshifts).

Questions which arise concerning this program should be directed to your Area Safety Coordinator or the Safety Office.

LAKE CHARLES HAZARD COMMUNICATION PROGRAM

APPENDIX A - DEFINITIONS

1. Hazardous Material - Any chemical or mixture of chemicals which represents either a health or physical hazard to exposed employees.

2. Health Hazard - A chemical or mixture of chemicals for which there is significant evidence that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, hematopoietic agents, and which can damage the lungs, skin, eyes or mucous membranes (see other definitions below for clarification).

3. Physical Hazard - A chemical or mixture of chemicals for which there is valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (i.e., reactive) or water-reactive. (see definition below for clarification)

4. Carcinogen - A chemical which causes or is suspected to cause cancer. (example - vinyl chloride, asbestos)

5. Combustible Liquid - Liquids with a flashpoint between 100°F and 200°F (example - kerosene)

6. Compressed Gas - A gas or mixture of gases with a pressure exceeding 40 psi at 70° F or 104 psi at 130°F or a liquid having a vapor pressure exceeding 40 psi at 100°F. (example - bottled gases [air, nitrogen, argon, etc.])

7. Corrosive - A chemical which causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. (example - caustic, sulphuric acid, nitric acid, hydrochloric acid)

8. Explosive - A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure or high temperature. (example - unsupported acetylene, nitroglycerin)

9. Flammable - This includes liquids that have a flashpoint of less than 100°F, some vigorously burning solids, and gases that form a flammable mixture with air of 13% or less or gases that, when mixed with air, have a flammable range of 12% or wider. (example - acetone, gasoline, magnesium [flammable solid], ethylene)

10. Hematopoietic Agent - A chemical which affects the blood or blood forming organs. (example - benzene)

11. Hepatotoxin - Chemicals which may damage the liver. (example - chlorinated solvent)

12. Irritant - A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. (example - chlorine)

13. Nephrotoxin - Chemicals which may damage the kidneys. (example - mercury)

14. Neurotoxin - Chemicals that produce their primary toxic effects on the nervous system. (example - phenol, lead)

15. Organic Peroxide - A very reactive compound that may decompose violently, ignite a fire and/or supply oxygen and fuel to support a fire. It contains the bivalent -O-O- structure. (example - MEKP [methyl ethyl ketone peroxide], IPP [diisopropyl peroxydicarbonate])

16. Oxidizer - A chemical other than a blasting agent or explosive that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases (example - oxygen, potassium permanganate)

17. Pyrophoric - A chemical that will ignite spontaneously in air at a temperature of 130°F or below. (example - white phosphorus)

18. Reproductive Toxin - Chemicals which adversely affect reproductive capabilities including chromosomal damage (mutations), effects on the unborn child (teratagenisis). (example - EGMME [ethylene glycol mono methyl ether])

19. Sensitizer - A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical. (example - nickel fume, TDI [toluene diisocynate])

20. Toxic - A chemical that when inhaled, ingested, or absorbed through the skin in sufficient quantities can quickly cause death, injury or illness.

21. Unstable - A chemical which will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure, or temperature.

22. Water Reactive - A chemical that reacts with water to release a gas that is either flammable or presents a health hazard. (example - sodium)

LAKE CHARLES HAZARD COMMUNICATION PROGRAM

APPENDIX B

LABELING - PPG CHEMICALS HEALTH & SAFETY INDEX SYSTEM

PURPOSE:

The PPG-Chemicals Group Health & Safety Index System (HSIS) has been established to provide a back-up labeling system where necessary for purchased materials and in-plant by-products and intermediates. It is not meant to be used on containers of outgoing PPG products. (Those will use the regular product labels developed by Chemicals Product Safety Department.)

DESCRIPTION:

The Health & Safety Index System label (see example attached) provides physical and health hazard information in two ways. First, using three numeric hazard indices it provides information on health, flammability and reactivity hazard severity. Second, it describes specific acute health hazards and, if applicable, target organs for any chronic health effects. Finally, the label provides recommendations for personal protective equipment use where direct contact with the material is expected. If additional information is needed, the MSDS # is referenced at the top of the label.

HOW TO OBTAIN:

The Storeroom will maintain a selection of pre-printed labels. When replacement or special labels are needed they will be requested through the Safety Department. The necessary job will be submitted and the labels will print out that evening at Data Processing. Data Processing will then route the finished job to the Storeroom in the usual manner.

LAKE CHARLES HAZARD COMMUNICATION PROGRAM

APPENDIX C

LOCATIONS FOR MICROFICHE MSDS SETS

CHLOR-ALKALI OPERATIONS

Chlorine
- Electrolyzers Control Room
- Mercury Cells Control Room
- Chlorine C Control Room
- Liquefaction Control Room

Caustic
- Caustic A Control Room
- Caustic C Control Room
- Pels Control Room

Power
- Power A
  - Riverside Control Room
  - Powerhouse A Control Room
- Power C Control Room
- Brine Field (Sulphur)

Shipping
- Ton Cylinder Building

Maintenance Services
- A Toolroom
- C Toolroom

DERIVATIVES

EDC/VDC Control Room (will cover EC/Hcl also)
Per/Tri Control Room
Shipping Building
TE II Control Room
VCM II Control Room
WTU Control Room
Maintenance - B Toolroom

SILICA PRODUCTS

Silicas Furnace Control Room

MAINTENANCE AND ENGINEERING

Construction - Field Engineering Office
Shops - Garage Office
Stores - Storeroom Office

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ENVIRONMENTAL CONTROL/LABORATORY

Laboratory Storeroom

DISTRIBUTION & CUSTOMER SERVICE

Operations - Shift Superintendent's Office

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HAZARD COMMUNICATION II

I. LAKE CHARLES HAZARD COMMUNICATIONS PROGRAM

PURPOSE: Ensure that hazards are evaluated and those that are affected by these hazards are adequately trained.

II. IDENTIFYING CHEMICAL HAZARDS

Five properties of hazardous chemicals and examples from your work area are:

PROPERTY	WORK AREA CHEMICALS
Flammable	
Toxic	
Corrosive	
Oxidizer	
Explosive	

III. PROTECTION GUIDELINES

Examples of protection against the hazards listed in Item II are:

Flammable:	WBOF permit, no smoking rule, detector systems, sprinkler systems, ignition source permits, proper storage and containers, safe operating guidelines, etc.
Toxic:	Respirators, gloves, slicker suits, boots, tank entry permits, area monitoring, operating guidelines, proper cleaning of tanks, air line masks, evacuation procedures, etc.
Corrosive:	Gloves, slickers, boots, goggles, face shield, labeling containers, proper emergency procedures, safety showers, eye wash.
Oxidizer:	Proper labeling, proper containers, safe operating guidelines, proper storage, etc.
Explosive:	Proper labeling, storage, handling and employee training.

IV. METHOD OF EXPOSURE AND SYMPTOMS

Exposure	Symptoms
Inhalation	Irritation
Absorption	Itching or Burning
Ingestion	Nausea or Dizziness
	Trouble Breathi-

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V. HAZARDOUS CHEMICAL DETECTION

The presence of hazardous chemicals can be detected by several means. Some of these in your area are:

Piping and Tank Identification
Hazard Warning Signs
JSI
Detector Systems
Odor or Visual Detection
Employee Training
Alarms
Etc.

VI. Employees' temporarily assigned to a new work area should review the hazard guidelines for that area. Safety Data Sheets will be located in each control room. Maintenance materials inventory and M.S.D.S. index will be located in each Maintenance Shop.

VII. Location of M.S.D.S. information is on the microfiche (see attached sheet).

MICROFICHE OPERATING PROCEDURES FOR M.S.D.S.

1. Pull carrier toward you to open glass.
2. Insert microfiche between glass with bar code in the lower left corner.
3. Push carrier back to close glass.
4. Turn switch to high.
5. Focus with round knob.
6. Adjust pointer to lower right corner to locate index.
7. Data is organized in a top to bottom order.

SL 087812

PPG INDUSTRIES, INC. CHEMICALS P.O. BOX 1000 LAKE CHARLES, LA. 70602

LAKE CHARLES HAZARD COMMUNICATION PROGRAM
(Issue Date - 5/5/86)

I. PURPOSE

This bulletin has been prepared to provide basic information on implementation and administration of the Lake Charles Hazard Communication Program.

II. INTRODUCTION

The Lake Charles Hazard Communication Program has been established to assure compliance with OSHA's Hazard Communication Standard (29CFR-1910.1200). The goal of the standard is to reduce or eliminate workplace injuries and illnesses by providing employees and contractors the necessary information to work safely with or around potentially hazardous materials.

III. ACCOUNTABILITIES

Safety Department

The Complex Industrial Hygienist will be responsible for administering the Hazard Communication Program. This includes, but is not limited to: program implementation and review, training specification, and maintenance of the internal material safety data system and material inventory.

Purchasing Department - The Manager of Purchasing will insure that:

1. MSDSs are provided by vendors for all materials deemed "hazardous" (see definitions-Appendix A). All MSDSs received are to be forwarded immediately to the Complex Industrial Hygienist for review and input to the Internal Material Safety Data System.
2. All contractors entering the facility to perform work in an Operating Unit have received the necessary hazard information for that area, and have trained their employees to be able to use such information.
3. Vendors/contractors who provide their own materials (which may be hazardous) to be applied or installed submit MSDSs for such prior to beginning work. Such MSDSs shall be forwarded to the Safety Department for evaluation.

Warehouse/Receiving Department - The Receiving Department will:

1. Insure that all containers of hazardous materials (see definition - Appendix A) received have appropriate hazard labeling.

2. In the event that required labels are missing or defaced - affix the appropriate PPG HSIS label to the container(s) and notify the Manager of Purchasing of the deficiency.

3. Forward to the Safety Department all MSDSs received as part of the shipping papers.

4. Insure that the necessary MSDS has been received from the vendor/manufacturer prior to adding any hazardous material to the storestock inventory. This applies also to changes in suppliers.

Shipping Department(s)

All Shipping personnel will insure that required hazard labeling is attached to all shipments of PPG products leaving the facility.

Operating Units

Each Operating Unit will be responsible for notifying the Safety Department in a timely fashion of any changes to their vessel or chemical inventories. In return the Safety Department will provide an updated listing.

Maintenance and Engineering

1. Construction Work - The Maintenance planner or Area engineer who is planning work within an operating unit to be performed by a Contractor will include with bid packages (or construction bulletin, if an agency contractor) copies of the Hazard Summary sheets for that unit.

2. Equipment sent out for overhaul - Whenever equipment (such as valves, SRVs, heat exchangers, etc.) is sent out of the plant for maintenance/overhaul without having been thoroughly cleaned or decontaminated, it must be labeled/tagged and copies of the appropriate Material Safety Data Sheets included with the shipping papers (e.g., a valve in chlorine service, include the chlorine MSDS).

Field Engineering

Field Engineers will ensure that Contractors and their employees are aware of hazards associated with the worksite and comply with any work practices, including personal protective equipment, established to control those hazards.

Supervisors - Supervisors will ensure that:

1. Employees are informed of the hazards associated with non-routine tasks which they are assigned to perform prior to beginning the job.

2. Newly assigned employees are informed of the hazards associated with their routine tasks prior to beginning their new job.

3. All employees are informed of new hazards in the area due to either a new material being introduced to the area, or newly discovered hazard information on existing material(s).

Employees

It is the employee's responsibility to understand the hazards associated with their work, and to comply with all work practices, including use of personal protective equipment, designed to control those hazards.

IV. PROGRAM DESCRIPTION

Employees will be informed as to the presence, nature and control methods for potentially hazardous materials found in their work area by a combination of material inventories, hazard summary tables, container labeling, material safety data, and - as appropriate - safe work procedures. Details of each element are described below. In addition, each employee working with or around hazardous materials will receive training to enable them to understand and control those hazards.

A. Hazard Communication Binder

The primary method for maintaining and communicating information about hazardous materials will be through use of the "Hazard Communication Binder" located in the Operating Units, Maintenance Shops, and at other key sites. These binders must be situated in a readily accessible location next to a microfiche reader.

Each binder will contain the following:

1. Internal Material Safety Data Sheet Collection (IMSDS) - A set of 40+ microfiche "pages" containing the Chemicals Group IMSDS "library". Instructions for use and a comprehensive index is provided.

2. Information specific to binder's location - Each binder will be tailored to its specific location to contain:

   a. The Unit Chemicals Inventory - A listing of all raw materials and production chemicals; process by-products and wastes; and final products. The listing will reference the applicable IMSDS number. (This inventory does not list laboratory chemicals, however, the applicable IMSDS number can be found using the index mentioned in #1 above.)
   b. The Unit Vessel Inventory - A listing of each process vessel/tank by SAC #/Name indicating the identity and maximum amount present of each chemical present (or expected) in quantities of 1% by weight - or greater (0.1% for carcinogens). The applicable IMSDS numbers and an over-all "worst case" hazard summary is also provided for each vessel.
   c. Maintenance type materials may be referenced using the IMSDS comprehensive index.

3. Program Description - A copy of this document.

B. LABELING

1. PPG products - All containers of PPG - Lake Charles products will be labeled or tagged with the proper PPG label (as specified by Chemical's Product Safety Department) prior to leaving the Complex.

2. Purchased materials (does not apply to pipeline or bulk shipments) - All purchased hazardous materials should have existing labeling. These must not be removed or otherwise made unreadable. In those instances where labels are missing or defaced, the Receiving Department

will affix the appropriate Health & Safety Index System (HSIS) label to the container(s). (See Appendix B for details.)

3. Process equipment and piping - While process vessels, tanks, pumps, piping, etc., will not be physically labeled, "label" information may be obtained by referring to the appropriate unit's Vessel Inventory. When dealing with pumps, heat exchangers, pipes, etc. - which are not directly identified on the vessel inventory. You should ask Operations to identify the vessel which the chemicals come from.

4. Intra-complex transfer of materials or equipment - All containers of chemicals (drums, "eggs", hoppers, etc.) or contaminated equipment must be clearly marked with the originating unit, contents, and hazards of the material before leaving the area. This identification may be accomplished using the HSIS labels described in Appendix B or any other means which accomplishes the same thing.

5. Lab samples - All process samples not analyzed by the person taking the sample must be tagged using the "laboratory sample tag" issued by the Lab storeroom. The tag must indicate the originating unit, the applicable vessel or chemical name to allow identification of the contents and the sample date.

6. Contaminated equipment or materials leaving the complex - Any equipment or material which leaves the complex and has not been thoroughly cleaned or decontaminated will be tagged "CAUTION- CONTAMINATED EQUIPMENT/MATERIAL - see shipping papers for details". A copy of the appropriate MSDS should be attached to the Return Material Form or other paperwork accompanying the material. NOTE: This does not apply to waste materials covered under other regulations.

C. MATERIAL SAFETY DATA SHEETS

1. PPG Products (supplied to customers)

The Chemicals-Product Safety Department will develop and distribute material safety data sheets for all PPG products. All requests from customers for product MSDS's should be referred to that group to insure that only the most current data sheets are provided. (G.O. Phone # 2604)

2. Internal MSDS Collection

The IMSDS collection is part of the Hazard Communication Binder referred to above. Employees who need to reference a Material Safety Data Sheet should go to one of the locations listed in Appendix C. There they will find on microfiche a comprehensive "library" of MSDSs for all products, intermediates and by-products, and purchased materials used within PPG Chemicals. If the number of the MSDS is not known beforehand, a comprehensive index listing is also provided. An updated version of this information will be distributed quarterly.

If necessary, a printed copy of single MSDSs may be obtained through the Safety Office.

D. SAFE WORK PROCEDURES

PPG-Lake Charles has had for many years various work procedures designed to control the physical and health hazards of chemicals which are present at this location. Some are found in control rooms in the operations procedures manuals. Others involve the use of permits or tags, details on these procedures can be found in the Supervisor's Safety Procedures manual. All employees are expected to be familiar with and follow these procedures.

E. EMPLOYEE INFORMATION

Employees may obtain further information on details of the Hazard Communication program including the complete OSHA standard; the master chemical inventory; and details on PPG hazard determination procedures by coming to the Safety Office (or Shift Superintendent's Office on backshifts).

Questions which arise concerning this program should be directed to your Area Safety Coordinator, Shift Safety Coordinator, or the Safety Office.

LAKE CHARLES HAZARD COMMUNICATION PROGRAM

APPENDIX A - DEFINITIONS

1. Hazardous Material - Any chemical or mixture of chemicals which represents either a health or physical hazard to exposed employees.

2. Health Hazard - A chemical or mixture of chemicals for which there is significant evidence that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, hematopoietic agents, and which can damage the lungs, skin, eyes or mucous membranes (see other definitions below for clarification).

3. Physical Hazard - A chemical or mixture of chemicals for which there is valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (i.e., reactive) or water-reactive. (see definition below for clarification)

4. Carcinogen - A chemical which causes or is suspected to cause cancer. (example - vinyl chloride, asbestos)

5. Combustible Liquid - Liquids with a flashpoint between 100°F and 200°F (example - kerosene)

6. Compressed Gas - A gas or mixture of gases having a pressure exceeding 40 psi at 70° F or 104 psi at 130°F or a liquid having a vapor pressure exceeding 40 psi at 100°F. (example - bottled gases [air, nitrogen, argon, etc.])

7. Corrosive - A chemical which causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. (example - caustic, sulphuric acid, nitric acid, hydrochloric acid)

8. Explosive - A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure or high temperature. (example - unsupported acetylene, nitroglycerin)

9. Flammable - This includes liquids that have a flashpoint of less than 100°F, some vigorously burning solids, and gases that form a flammable mixture with air of 13% or less or gases that, when mixed with air, have a flammable range of 12% or wider. (example - acetone, gasoline, magnesium [flammable solid], ethylene)

10. Hematopoietic Agent - A chemical which affects the blood or blood forming organs. (example - benzene)

11. Hepatotoxin - Chemicals which may damage the liver. (example - chlorinated solvent)

12. Irritant - A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. (example - chlorine)

13. Nephrotoxin - Chemicals which may damage the kidneys. (example - mercury)

14. Neurotoxin - Chemicals that produce their primary toxic effects on the nervous system. (example - phenol, lead)

15. Organic Peroxide - A very reactive compound that may decompose violently, ignite a fire and/or supply oxygen and fuel to support a fire. It contains the bivalent -O-O- structure. (example - MEKP [methyl ethyl ketone peroxide], IPP [diisopropyl peroxydicarbonate])

16. Oxidizer - A chemical other than a blasting agent or explosive that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases (example - oxygen, potassium permanganate)

17. Pyrophoric - A chemical that will ignite spontaneously in air at a temperature of 130°F or below. (example - white phosphorus)

18. Reproductive Toxin - Chemicals which adversely affect reproductive capabilities including chromosomal damage (mutations), effects on the unborn child (teratagenisis). (example - EGMME [ethylene glycol mono methyl ether])

19. Sensitizer - A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical. (example - nickel fume, TDI [toluene diisocynate])

20. Toxic - A chemical that when inhaled, ingested, or absorbed through the skin in sufficient quantities can quickly cause death, injury or illness.

21. Unstable - A chemical which will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure, or temperature.

22. Water Reactive - A chemical that reacts with water to release a gas that is either flammable or presents a health hazard. (example - sodium)

LAKE CHARLES HAZARD COMMUNICATION PROGRAM

APPENDIX B

LABELING - PPG CHEMICALS HEALTH & SAFETY INDEX SYSTEM

PURPOSE:

The PPG-Chemicals Group Health & Safety Index System (HSIS) has been established to provide a back-up labeling system where necessary for purchased materials and in-plant by-products and intermediates. It is not meant to be used on containers of outgoing PPG products. (Those will use the regular product labels developed by Chemicals Product Safety Department.)

DESCRIPTION:

The Health & Safety Index System label (see example attached) provides physical and health hazard information in two ways. First, using three numeric hazard indices it provides information on health, flammability and reactivity hazard severity. Refer to the table below for the rating.

Numerical Rating	Degree of Hazard
4	Severe
3	Serious
2	Moderate
1	Slight
0	Minimal

Second, it describes specific acute health hazards and, if applicable, the carcinogenicity status and target organs for any chronic health effects. Finally, the label provides recommendations for personal protective equipment use where direct contact with the material is expected. If additional information is needed, the MSDS # is referenced.

HOW TO OBTAIN:

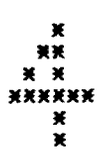
The Storeroom will maintain a stock of blank labels. When labels are needed they can be filled in using information supplied by the Safety Department. If a large number of identical labels are needed, they can be pre-printed by computer. Contact your Safety Coordinator for specific information.

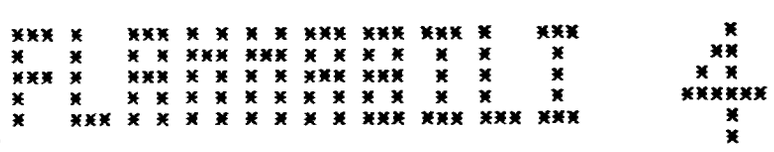
SL 087820

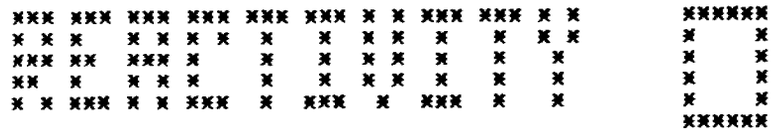
LABEL EXAMPLE

TEST NEW PRODUCT

MSDS NUMBER: 00068







PERSONAL PROTECTION

PROTECTIVE EQUIPMENT (DIRECT CONTACT)
RESPIRATOR TYPE: VAPOR
EYE PROTECTION: GOGGLES/FACE SHIELD
GLOVES: POLYETH IMP
CLOTHING: CHEMICAL SUIT
FOOTWEAR: RUBBER BOOTS

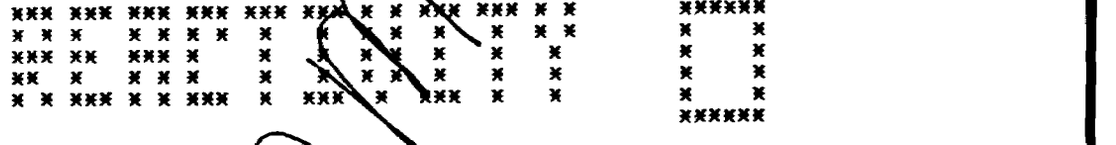
EYE/SKIN CONTACT
SKIN IRRITATION: PRIMARY IRRITANT/SENSITIZER
EYE IRRITATION: CORROSIVE/IRREVERSIBLE

ACUTE TOXICITY
SKIN ABSORPTION: MODERATE
INGESTION: SERIOUS

CHRONIC/SUBCHRONIC TOXICITY
CARCINOGENICITY STATUS: HUMAN
TARG ORG/EFF: LUNGS KID BLOOD STOM REPRO

TEST NEW PRODUCT

MSDS NUMBER: 00068



PERSONAL PROTECTION

PROTECTIVE EQUIPMENT (DIRECT CONTACT)
RESPIRATOR TYPE: VAPOR
EYE PROTECTION: GOGGLES/FACE SHIELD
GLOVES: POLYETH IMP
CLOTHING: CHEMICAL SUIT
FOOTWEAR: RUBBER BOOTS

EYE/SKIN CONTACT
SKIN IRRITATION: PRIMARY IRRITANT/SENSITIZER
EYE IRRITATION: CORROSIVE/IRREVERSIBLE

ACUTE TOXICITY
SKIN ABSORPTION: MODERATE
INGESTION: SERIOUS

CHRONIC/SUBCHRONIC TOXICITY
CARCINOGENICITY STATUS: HUMAN
TARG ORG/EFF: LUNGS KID BLOOD STOM REPRO

SAMPLE

SL 087821

LAKE CHARLES HAZARD COMMUNICATION PROGRAM

APPENDIX C

LOCATIONS FOR MICROFICHE MSDS SETS

CHLOR-ALKALI OPERATIONS

Chlorine
- Electrolyzers Control Room and Maintenance Shop
- Mercury Cells Control Room and Maintenance Shop
- Chlorine C Control Room and Maintenance Shop
- North Liquefaction Control Room and Maintenance Shop
- South Liquefaction Control Room and Maitnenance Shop

Caustic
- Caustic A Control Room and Maintenance Shop
- Caustic C Control Room and Maintenance Shop
- Pels Control Room

Power
- Power A
  - Riverside Control Room
  - Powerhouse A Control Room
- Power C Control Room and Maintenance Shop
- Brine Field (Sulphur)

Shipping
- Ton Cylinder Building

Maintenance Services
- A Toolroom
- C Toolroom

DERIVATIVES

EDC/VDC Control Room (will cover EC/HCl & Shipping also)
Per/Tri Control Room
TE II Control Room
VCM II Control Room
WTU Control Room
Maintenance - Per/Tri Shop
EC/HCl Shop
VC II Shop
TE II Shop
WTU Shop

SILICA PRODUCTS

Silicas Furnace Control Room

SL 087822

MAINTENANCE AND ENGINEERING

Construction - Field Engineering Office
Salvage Yard - Office
Shops - Garage Office
Stores - Storeroom Office

ENVIRONMENTAL CONTROL/LABORATORY

Laboratory Storeroom

DISTRIBUTION & CUSTOMER SERVICE

Operations - Shift Superintendent's Office