HAZARD COMMUNICATION PROGRAM

University of Dayton

Reference
29 CFR 1910.1200

June 2013

Approved by: Robin Oldfield
Director for Environmental Health & Safety /Risk Management

Updated by: Katherine Cleaver & Denny Gault
Environmental Health & Safety/Risk Management

University of Dayton,
Environmental Health & Safety/Risk Management;
Department of Facilities Management
300 College Park
Dayton, Ohio 45469-2904
Phone (937) 229-4503 Fax (937) 229-4395
# TABLE OF CONTENTS

Forward...........................................................................................................................................3  
1. Introduction..................................................................................................................................4  
   1.1 Terms and Definitions  
   1.2 Regulatory Compliance  
   1.3 Coordination of Efforts  
   1.4 Chemicals Excluded from the HCP  
2. Responsibility for Safety..............................................................................................................8  
   2.1 Individual Employee  
   2.2 Supervisors and Principal Investigators  
   2.3 Department Deans, Chairs and Division Heads  
   2.4 Departmental or Divisional Safety Committees  
   2.5 Environmental Health & Safety/Risk Management  
3. Safety Data Sheets.......................................................................................................................9  
4. Labeling and Other Forms of Warning.......................................................................................10  
5. Chemical Inventory/Audits...........................................................................................................13  
6. Employee Training and Information...........................................................................................13  
7. Contractors..................................................................................................................................14  
   7.1 Informing Contractors of Hazards  
   7.2 Hazardous Chemicals used by Contractors  
8. Employee Rights........................................................................................................................15  

APPENDIX A - Sample MSDS.........................................................................................................16  
APPENDIX B - Sample Chemical Inventory....................................................................................19  
APPENDIX C - Incident Hazard and Report Form...........................................................................21  
FORWARD

The Occupational Safety and Health Administration (OSHA) promulgated a final standard entitled "Hazard Communication" (29 CFR 1910.1200) on November 25, 1983. By May 23, 1988, every employer with a "hazardous substance" in its work place must have implemented a written program for compliance with the Hazard Communication Standard (HCS). In 2012 OSHA modified the HCS to incorporate the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS). This written program is readily available to all employees, their designated representatives and to any representative of the Assistant Secretary of Labor for OSHA.

The HCS is based on a simple concept-that employees have both a need and a “Right-to-Know” the hazards and identities of the chemicals they are exposed to when working. They also need to know what protective measures are available to prevent adverse effects from occurring. The HCS is designed to provide employees with the information they need.

Knowledge acquired under the HCS will help employers provide a safer workplace for their employees. When employers have information about the chemicals being used, they can take steps to reduce exposure, substitute less hazardous materials, and establish safe work practices. These efforts will help prevent the occurrence of work-related illnesses and injuries caused by chemicals.

All University departments that use, handle, or store hazardous materials and chemicals are equally responsible to comply with the Federal, State, and local regulations. Environmental Health & Safety/Risk Management (EHS/RM) will provide the necessary assistance to ensure these regulations are followed in a manner prescribed by law.
1. INTRODUCTION

The purpose of the Hazard Communication Standard is to ensure that all of the hazards of chemicals produced or imported are classified, and the information of these chemicals is communicated to employees. The University of Dayton's Hazard Communication Program will:

- Require that each University Department identify and list hazardous chemicals for their area or areas of responsibility.
- Ensure employees can obtain Safety Data Sheets and that hazardous chemicals are labeled.
- Develop and implement a written hazard communication program and employee training.
- Communicate hazard information to University employees through labels, safety data sheets and formal training programs.

It is important that all University departments assume responsibility for hazardous chemical management. All employees will have access to pertinent safety information through their supervisory staff or department chairperson/director. The employees who work in any given area that use hazardous chemicals are best able to detect potential hazards in either the facility or in the work procedures. When safety concerns arise, employees are encouraged to contact their supervisor.

1.1 Terms and Definitions

The following terms and definitions are used as part of the Hazard Communication Program: 29 CFR 1910.1200(c)

*Article* means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, *e.g.*, minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

*Chemical* means any substance, or mixture of substances.

*Chemical manufacturer* means an employer with a workplace where chemical(s) are produced for use or distribution.

*Chemical name* means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

*Classification* means to identify the relevant data regarding the hazards of a chemical; review the data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical
hazards.

*Common name* means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

*Container* means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

*Designated representative* means any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

*Director* means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

*Distributor* means a business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

*Employee* means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

*Employer* means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

*Exposure or exposed* means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (*e.g.* accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (*e.g.* inhalation, ingestion, skin contact or absorption.)

*Foreseeable emergency* means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

*Hazard category* means the division of criteria within each hazard class, *e.g.*, oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

*Hazard class* means the nature of the physical or health hazards, *e.g.*, flammable solid, carcinogen, oral acute toxicity.

*Hazard not otherwise classified (HNOC)* means an adverse physical or health effect identified
through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Hazard statement means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous chemical means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health hazard means a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to §1910.1200—Health Hazard Criteria.

Immediate use means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Importer means the first business with employees within the Customs Territory of the United States which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

Label means an appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label elements means the specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Mixture means a combination or a solution composed of two or more substances in which they do not react.

Physical hazard means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. See Appendix B to §1910.1200—Physical Hazard Criteria.

Pictogram means a composition that may include a symbol plus other graphic elements, such as
a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

*Precautionary statement* means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

*Produce* means to manufacture, process, formulate, blend, extract, generate, emit, or repackage.

*Product identifier* means the name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

*Pyrophoric gas* means a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

*Responsible party* means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

*Safety data sheet (SDS)* means written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.

*Signal word* means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.

*Simple asphyxiant* means a substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

*Specific chemical identity* means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

*Substance* means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

*Trade secret* means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix E to §1910.1200—Definition of Trade Secret, sets out the criteria to be used in evaluating trade secrets.
*Use* means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

*Work area* means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

*Workplace* means an establishment, job site, or project, at one geographical location containing one or more work areas.

### 1.2 Regulatory Compliance

The purpose of this program is to inform employees and comply with OSHA Hazard Communication Standard, Part 29 Code of Federal Regulation 1910.1200. This program applies to all work locations where University of Dayton employees might be exposed to hazardous chemicals under normal working conditions or during an emergency situation.

### 1.3 Coordination of Efforts

For any safety and health program, success depends on commitment at every level of the University. This will occur if supervisors and department chairpersons/directors understand the program, and are committed to its success, and if employees are motivated by the people presenting the information. Cooperation between academic, research, and administrative departments will guarantee effectiveness of the program.

### 1.4 Chemicals Excluded from the HCP

Exclusions from the HCP include hazardous wastes, ionizing or non-ionizing radiation, biological hazards, and any consumer product that is used in the workplace for the purpose intended by the chemical manufacturer or importer, and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended.

### 2.0 Responsibility for Safety

#### 2.1 Individual Employee

Each individual is responsible for conducting activities in a manner that will not endanger him/herself or any others. Any difficulty in performing procedures safely is to be reported to the immediate supervisor. Individuals are also expected to take an active part in correcting and reporting hazards by submitting an Incident and Hazard Report form to EHS/RM (see Appendix B).

#### 2.2 Supervisors, Principal Investigators and Group Leaders

Supervisors and Principal Investigators are to implement all possible measures to provide a safe working environment for those under their direction and to instruct them in safe work procedures. Supervisors will identify training needs of the employees and ensure that the employees are properly trained, current and up-to-date to safely perform the job. Situations
requiring further assistance should be reported to the Department Head and to Environmental Health & Safety/Risk Management. Supervisors are responsible for addressing employee non-compliance and shall be responsible to report an unsafe condition, a near miss injury or an injury or incident via an Incident and Hazard Report form to EHS/RM (see Appendix B).

2.3 Department Deans, Chairs and Division Heads
Department Deans and Chairs are responsible for overseeing the application of health and safety programs by ensuring that supervisory personnel reporting to them assume their responsibilities for adhering to safety regulations and guidelines. They are also required to identify those situations requiring further assistance or intervention from Environmental Health & Safety/Risk Management. Unsafe conditions, near miss injuries or an injury or incident should be reported via the Incident and Hazard Report form to EHS/RM (see Appendix B).

2.4 Departmental or Divisional Safety Committees
Departmental or Divisional Safety Committees are empowered and responsible for their department or division’s coordination of occupational health and safety activities at their level and annual review of the Hazard Communication Program with recommended changes as the program is implemented in their department or division. The Safety Committees will advise Environmental Health & Safety/Risk Management of concerns involving hazardous chemicals and unsafe work practices.

2.5 Environmental Health & Safety/Risk Management

The role of Environmental Health & Safety/Risk Management is to assist employees, departments, and outside contractors with the task of working safely with hazardous chemicals. EHS/RM will annually review the Hazard Communication Program to ensure compliance with changes in the laws and regulations. It is the goal of EHS/RM to guide each department to the highest level of compliance by empowering each employee and supervisor working with hazardous chemicals. EHS/RM will provide the training and skills to work safely and reduce risk to themselves, other employees, students, and property. EHS/RM will audit the Hazard Communication Plan to measure its effectiveness and application.

3.0 Safety Data Sheets

The Safety Data Sheet is a summary of the important health, safety, and toxicological information on the chemical or the mixture ingredients. The Safety Data Sheet should be supplied by the chemical manufacturer or distributor. If a Safety Data Sheet is not provided with a shipment that has been labeled as a hazardous chemical, the employee shall obtain one from the chemical manufacturer or importer as soon as possible. These data sheets are managed and accessible through an on-line service, “MSDS Online”, which is managed by Environmental Health & Safety/Risk Management and is developed using the chemical inventory supplied by the chemical user. Access to MSDS Online can be arranged through EHS/RM. Departments receiving their own SDS(s) shall retain copies, or can forward them to EHS/RM for retention. All existing chemicals in use shall have the most current SDS on file. If the particular chemical is removed from the work area on a permanent basis, then the SDS may be removed from the binder, but shall be retained and shall be forwarded to EHS/RM.
Safety Data Sheets for each chemical must be readily accessible during each work shift in the work area or lab where it is used. UD maintains electronic SDSs through the online management system, “MSDS Online”. Each department or work area is responsible for submitting a chemical inventory to EHS/RM, which is then entered into MSDS Online. Each work area, lab, or chemical storage area is provided with a username and password to be able to access the online system and SDSs for their work area. For those departments or work areas that have not submitted an inventory to EHS/RM or do not wish to have electronic access to SDSs, must keep a 3-ring binder clearly labeled “Safety Data Sheets”, and must store all of the SDSs for chemicals in work area in an orderly manner. The SDS(s) must be kept in alphabetical order along with a chemical inventory of the work area or lab. The work area or lab relies on the chemical manufacturer’s information to ascertain whether or not the chemical is hazardous. Departments shall ensure that in all cases, the required information is provided for each hazardous chemical, and is readily accessible during each work shift to the employees when they are in the work area(s).

Where employees must travel between workplaces during a work shift, the SDS may be kept at a central location at the primary workplace facility. Departments shall ensure that their employees can immediately obtain the required information in an emergency.

An example of a SDS is in Appendix A.

4.0 Labeling and Other Forms of Warning

29 CFR 1910.1200(f) contains specific labeling requirements. Labeling must be on all hazardous chemicals that are shipped and used in the workplace.

MANUFACTURER CHEMICALS

Chemical manufacturers, importers, and distributors, shall ensure that each container of hazardous materials leaving their facility is labeled, tagged, or marked, with the following information:

1. Product identifier
2. Signal word
3. Hazard statement(s)
4. Pictogram(s)
5. Precautionary Statement(s)
6. Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

ON-CAMPUS/WORKPLACE CHEMICAL CONTAINER LABELING

Each hazardous material transferred outside the lab or work area that is not in its original container MUST also be labeled in accordance with 29 CFR 1910.1200(f). These workplace labels must contain:

1. The information specified above; or
2. Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

3. **At a minimum, the complete product identifier and hazard statement shall be provided on each workplace container.** In addition, the laboratory chemical inventory and SDSs must also be readily accessible to employees/students/visitors in their work areas throughout each work shift.
An example of a computer-generated GHS label which contains all the elements of a chemical manufacturer label is shown below:

**SAMPLE LABEL**

**PRODUCT IDENTIFIER**

CODE ____________________  
Product Name ____________________

**SUPPLIER IDENTIFICATION**

Company Name ____________________  
Street Address ____________________  
City __________________ State ________  
Postal Code __________ Country ________  
Emergency Phone Number ________________

**HAZARD PICTOGRAMS**

SIGNAL WORD  
Danger

**HAZARD STATEMENT**

Highly flammable liquid and vapor.  
May cause liver and kidney damage.

**SUPPLEMENTAL INFORMATION**

Directions for use  
______________  
______________  
______________

Fill weight: ______  Lot Number: _____  
Gross weight: ______ Fill Date: _____  
Expiration Date: ________________

**PRECAUTIONARY STATEMENTS**

Keep container tightly closed. Store in cool, well ventilated place that is locked.  
Keep away from heat/sparks/open flame. No smoking.  
Only use non-sparking tools.  
Use explosion-proof electrical equipment.  
Take precautionary measure against static discharge.  
Ground and bond container and receiving equipment.  
Do not breathe vapors.  
Wear Protective gloves.  
Do not eat, drink or smoke when using this product.  
Wash hands thoroughly after handling.  
Dispose of in accordance with local, regional, national, international regulations as specified.  

**In Case of Fire:** use dry chemical (BC) or Carbon dioxide (CO₂) fire extinguisher to extinguish.

**First Aid**

If exposed call Poison Center.  
If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.

An example of a workplace container stating the minimum **product identifier and hazard statement:**

**Weld-on P-68 Low VOC Primer**

Hazard statement: Highly flammable liquid and vapor. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation, drowsiness or dizziness. May form explosive peroxides.
In the lab or work area all containers must be labeled and identified as to the contents of the container. If you transfer chemicals from a labeled container to a portable container that is intended only for your immediate use and during that work shift only, no labels are required on the portable container.

In addition to container labeling, placards may be placed in areas and laboratories that routinely use, store, or handle hazardous chemicals. Warning placards should identify the hazard involved, any restrictions of personnel or students, and a contact person in the event of an emergency. These placards are available upon request through EHS/RM through the UD Laboratory Signage Program.

Any label that becomes damaged, defaced, or illegible shall be replaced with a new label. Labeling compliance shall be the responsibility of the department that receives the material and each department shall ensure that its hazardous chemicals are stored in appropriate containers with the appropriate label. In work areas, such as central receiving, where employees handle chemicals in sealed containers or boxes which are not opened under normal conditions of use shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced. Labels shall be legible, in English, and displayed on the container, readily available in the work area throughout each work shift.

5.0 Chemical Inventory and Audits

The HCP requires the employer to maintain a list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate Safety Data Sheet (the list may be compiled for the workplace as a whole or for individual work areas).

A chemical inventory (See appendix B: Sample Chemical Inventory) is required by the University of Dayton to be performed annually, listing all the hazardous materials in each department. Sometimes people think of “chemicals” as being only liquids in containers. However, this hazard communication program covers chemicals in all physical forms—liquids, solids, gases, vapors, fumes and mists—whether they are “contained” or not. The hazardous nature of the chemical and the potential for exposure are the factors which determine whether a chemical is covered. If it’s not hazardous, it is not covered. Hazardous chemical means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Chemicals are listed alphabetically by section according to the most commonly used name (e.g. bleach). A chemical name, manufacturer's name, CAS number, synonyms and the average quantity in storage on a monthly basis, as well as the hazard classification, product/mixture name and percentage of ingredients in the product/mixture if applicable is also required on this listing. The listing is to be posted or made available at all times and a copy is sent to EHS/RM annually for submission of our complete chemical inventory for the campus.

6.0 Employee Training and Information

Information and training is a critical part of the hazard communication program. Information regarding hazards and protective measures are provided to workers through written labels and
safety data sheets. Through this training, workers will learn to read and understand such information, determine how it can be obtained and used in their own workplaces, and understand the risks of exposure to the chemicals in their workplaces as well as the ways to protect themselves.

Information and training shall be provided to employees regarding hazardous chemicals in their work area before their initial assignment, and whenever new physical or health hazards are exposed to employees. Exposure or exposed means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g., accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g., inhalation, ingestion, skin contact or absorption.) The information and training shall include:

**INFORMATION**

1. Any operations in the work area where hazardous chemicals are present.
2. The location and availability of the written hazard communication program, include the required list of hazardous chemicals and Safety Data Sheets.
3. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.
4. Physical and health hazards of the chemicals in the work area.
5. The measures employees can take to protect themselves from these hazards, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.
6. The details of the hazard communication program developed by the EHS/RM, including an explanation of the labeling system and the safety data sheet, and how employees can obtain and use the appropriate hazard information.

**TRAINING**

Employees are responsible for participating in Hazard Communication Training, understanding emergency procedures (including any workplace safety monitoring devices), using the correct personal protective equipment when working with or around hazardous chemicals, and practicing safe and sensible work habits as directed by their supervisor. Departments are responsible for informing EHS/RM in writing of any employees that may require training under this program before, or at the time of their initial assignment, to work with hazardous chemicals. If a new hazardous chemical is introduced in the workplace that was not covered in the employee’s training, the supervisor is responsible for providing training and informing EHS/RM.

**7.0 Contractors**

**7.1 Informing Contractors of Hazards**

The University of Dayton strives to communicate chemical hazards through labeling and warning signs. Contractors shall read and follow labels and warning signs for that particular work area. A copy of the HCP, chemical inventories and Safety Data Sheets are available upon
request or any contractor doing work at the University if they require further information regarding hazardous chemicals.

7.2 **Hazardous Chemicals Used by Contractors**

Similarly, all outside contractors are required to inform the University and particularly EHS/RM of chemicals or hazardous materials that they may use in the workplace and could be exposed to the University community. Safety Data Sheets and safe work practices may be requested by EHS/RM from any contractor at any time while working on University property.

8.0 **Employee Rights**

All employees have the right, without prejudice or discipline, to obtain additional information and/or copies of this written program, the Hazard Communication Standard, Safety Data Sheets, or the hazardous chemical inventory for their workplace from the University of Dayton. Requests can be made to Environmental Health & Safety/Risk Management, Monday through Friday, 8:00 am – 5:00 pm by contacting Robin Oldfield (EHS/RM Director) or Katherine Cleaver (EHS/RM Assistant Director) at (937) 229-4503.
APPENDIX A

Sample SDS
SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WELDON P-68™ Low VOC Primer for PVC and CPVC Plastic Pipe

PRODUCT USE: Low VOC Primer for PVC and CPVC Plastic Pipe

SUPPLIER: IPS Corporation

MANUFACTURER: WELDON-ON

EMERGENCY: Telephone: CHEMTREC: Tel. 800.255.7244, 813-240-2955 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health Acute Toxicity: Category 4 Physical Flammable Liquid: Category 2

Environmental Acute Toxicity: None Known

Skin Irritation: Category 3

Skin Sensitization: NO

Eye: Category 28

Exposure Statements:

P205: Keep away from heat, sparks,/open flames and vapor/dense smoke. No smoking

P261: Avoid breathing dust/mist/splashes/mists.

P280: Wear eye protection/goggles and/face protection/leather protective gloves.

P405: Keep container tightly closed.

Precautionary Statements:

FIRST AID MEASURES:

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritant develops, seek medical advice.

Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice immediately.

Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to drink. Do not induce vomiting. Seek medical advice immediately.

SECTION 5 - FIREFIGHTING MEASURES:

Suitable Extinguishing Media: Dry chemical, carbon dioxide gas, foam, Houston, water fog

Unsuitable Extinguishing Media: Water spray or steam.

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Personal Precautions: Keep away from heat, sparks, and open flames. Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.

Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water courses.

Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closed vessel.

Materials not to be used for clean up: Aluminum or plastic containers.

SECTION 7 - HANDLING AND STORAGE:

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing. Keep away from ignition sources; use only electrically grounded handling equipment; ensure adequate ventilation; use exhaust hoods. Do not eat, drink or smoke while handling.

Storage: Store in ventilated room or shade below 44°F (11°C) and away from direct sunlight.

Environmental: Keep away from ignition sources; incompatible materials: oxidizers, alcohols, aldehydes, anhydrides, chlorinated compounds, strong oxidizers.

Follow all precautionary information on container label, product bulletin and solvent cement literature.

SECTION 8 - LIMITATIONS OF USE:

Tetrahydrofuran (THF) 50 ppm 100 ppm 200 ppm 300 ppm

Methyl Ethyl Ketone (MEK) 350 ppm 750 ppm 1500 ppm

Cylohexanone 20 ppm 50 ppm 100 ppm

Acetone 500 ppm 1000 ppm

Engineering Controls: Use local exhaust as needed.

Personal Protective Equipment (PPE): Use respiratory protection if necessary.

Eye Protection: Avoid contact with eyes; wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc., as may be appropriate for the exposure.

Skin Protection: Prevent contact with the skin as much as possible. Solid rubber gloves should be used for frequent immersion. Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application procedures and precautions are used for making structural joints.

Respiratory Protection: Prevent inhalation of the solvent. Use in a well-ventilated room. Open doors and windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.

If normal use, the Exposure Limit Value will not usually be reached. When limits are approached, use respiratory protection equipment.

WELDON-ON P-68™ Low VOC Primer for PVC and CPVC Plastic Pipe

Data Revised: DEC 2011

Supersedes: OCT 2010

GHS SAFETY DATA SHEET

Runname: W-ONP68_hoc.11.11.txt Page 1 of 2

12/14/2011 03:50 PM

17
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear or yellow, thin liquid
Odor: Not Applicable
Odor Threshold: 0.88 ppm (Cyclohexanone)

Melting/Freezing Point: -106°C (-150°F) Based on first melting component: THF
Boiling Point: 88°C (186°F) Based on first boiling component: Acetone
Flash Point: 20°C (68°F) TCC based on Acetone
Specific Gravity: 0.943 @ 20°C (68°F)
Flash Point: 20°C (68°F) TCC based on Acetone
Solubility: Solvent portion soluble in water. Resin portion separates out.
Partition Coefficient n-octanol/water: Not Available
Flammability Limits: LEL: 11% based on Cyclohexanone
Vapor Pressure: 190 mm Hg @ 20°C (68°F) Acetone
Auto-Ignition Temperature: >381°C (820°F) based on THF
Decomposition Temperature: Not Applicable
Other Data: Viscosity: Water-thin

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable

Hazardous decomposition products: None in normal use. When exposed to heat, this product gives off oxides of carbon and water.

Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources.

Incompatible Materials: Oxidizers, strong acids and bases, amines, amines.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.

Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival irritation on contact with the liquid.

Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.

Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects: None known to humans.

Toxicity: LC50: 1.0 ppm

Teratogenicity (THF): Oral: 284 mg/kg (rat) Inhalation 3 hrs: 21,000 mg/m³ (rat)

Methyl Ethyl Ketone (MEK): Oral: 2737 mg/kg (rat), Dermal: 6490 mg/kg (rabbit)

Cyclohexanone: Oral: 1530 mg/kg (rat), Dermal: 546 mg/kg (rabbit)

Acetone: Oral: 5800 mg/kg (rat) Inhalation 50,100 mg/m³ (rat)

Ecotoxicological Effects:

Teratogenicity: Not Established

Mutagenicity: Not Established

Reproductive Effects: Not Established

Sensitization: Not Established

Synonymic Products: Not Established

SECTION 12: ECOLOGICAL INFORMATION

Exposure: None

Mobility: In normal use, emission of volatile organic compounds (VOCs) to the air takes place, typically at a rate of ≤ 1.0 g/l.

Degradability: Biodegradable

Bioaccumulation: Minimal to none.

SECTION 13: WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14: TRANSPORT INFORMATION

Proprietary Name: Flammable Liquid, n.o.s. (Acetone, Terahydrofurane)

Hazard Class: 3

Secondary Risk: None

Identification Number: UN 1600

UN Group: PG I (Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as ORM-D). UN 1893, PED

TGO INFORMATION

TGS CLASS: FLAMMABLE LIQUID 3

SECTION 15: REGULATORY INFORMATION

Precautionary Labeling: Highly Flammable, inert

Ingredient Listings: USA TSCA, Europe EMGD, Canada OHS, Australia

Symbols: GHS, Kana-EU/TCG, Japan MITI (EMGS)


Safety Phrases: S45: Keep container in a well ventilated area. S65: Keep away from sources of ignition - No smoking. S60: Avoid contact with skin.

SECTION 16: OTHER INFORMATION

Specification Information: 1801, Safety Health & Environmental Affairs. All information is obtained from the results of the tests obtained from the tests conducted by the European

E-mail: <EHSins@pcorpc.com> Directly on RGS (Restriction of Hazardous Substances).

Release date for release: 12/14/2011. Updated GHS Standard Formatted

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of

knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or its results to be obtained from the use thereof.

18
APPENDIX B

Sample Chemical Inventory
<table>
<thead>
<tr>
<th>Chemical Inventory</th>
<th>CAS #</th>
<th>Manufacturer</th>
<th>Quantity w/ units</th>
<th>% If Mixture</th>
<th>Hazard Class</th>
<th>Date of Acquisition</th>
<th>Expiration Date (if applicable)</th>
<th>Room/Storage Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Ether</td>
<td>60-29-7</td>
<td>Cumberland Swan</td>
<td>4 L</td>
<td>Flammable</td>
<td>12/23/2002</td>
<td>12/23/2003</td>
<td>Flammable cabinet</td>
<td></td>
</tr>
<tr>
<td>Nickel Carbonyl</td>
<td>7440-02-0</td>
<td>Sigma Chemical co.</td>
<td>200 mg</td>
<td>Poison</td>
<td>2/16/2002</td>
<td></td>
<td>Shelf</td>
<td></td>
</tr>
<tr>
<td>Nitric Acid</td>
<td>7697-37-2</td>
<td>Mallinckroidt Baker</td>
<td>500 mL</td>
<td>Oxidizer</td>
<td>11/5/2002</td>
<td></td>
<td>Shelf</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>007664-93-9</td>
<td>Cytec Industries, Inc.</td>
<td>1 L</td>
<td>Corrosive</td>
<td>3/4/2003</td>
<td></td>
<td>Acid cabinet</td>
<td></td>
</tr>
</tbody>
</table>

**This is a sample inventory. These are all variables EHS feels are important & best rely information for quick reference. The CAS # and Manufacturer are important for looking up the MSDS information.**

Do Inventory- all chemicals, gas cylinders, scintillation fluid, materials in lab refrigerators and cabinets, radioactive materials (if you need to get rid of any hazardous waste, please call EHS at x94503)
APPENDIX C

Incident and Hazard Report Form
Incident and Hazard Report Form

Date:___________________________________________________________________

Date: (of Incident):______________________________ Time:_____________________

Name, address, and phone number of person making report: _______________________
________________________________________________________________________
________________________________________________________________________

Name, address, and phone number of person to be contacted for further information:
________________________________________________________________________
________________________________________________________________________

Location of incident:_______________________________________________________

Give description of incident or hazard, any action taken and treatment, if any:
________________________________________________________________________
________________________________________________________________________

Describe damage to property or vehicle if applicable:___________________________
________________________________________________________________________
________________________________________________________________________

What recommendations would you make to prevent the situation from reoccurring?
________________________________________________________________________

Has Public Safety been notified? □ YES □ NO

Has Human Resources been notified? □ YES □ NO

Please send original to: Robin Oldfield & EHS
300 College Park
Dayton, OH 45469-2905
(937) 229-2904

This is a confidential report
APPENDIX D


29 CFR 1910.1200 APPENDICES:

Appendix A TO §1910.1200—Health Hazard Criteria (Mandatory)

APPENDIX B TO §1910.1200—Physical Criteria (Mandatory)

APPENDIX C TO §1910.1200—Allocation of Label Elements (Mandatory)

APPENDIX D TO §1910.1200— Safety Data Sheets (Mandatory)

APPENDIX E TO §1910.1200— Definition of "Trade Secret" (Mandatory)

APPENDIX F TO §1910.1200— Guidance for Hazard Classifications Re: Carcinogenicity (Non-Mandatory)