

## BP-Husky Refining

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# TOLEDO REFINERY

## HAZARD COMMUNICATION PROGRAM

# CONTENTS

	<b>PAGE</b>
<b>POLICY .....</b>	<b>3</b>
<b>PURPOSE .....</b>	<b>3</b>
<b>RESPONSIBILITIES .....</b>	<b>3</b>
<b>DEFINITION OF TERMS .....</b>	<b>5</b>
<b>CHEMICAL INVENTORY .....</b>	<b>6</b>
<b>CONTAINER LABELING .....</b>	<b>6</b>
<b>MATERIAL SAFETY DATA SHEETS .....</b>	<b>8</b>
<b>HAZARD DETERMINATION .....</b>	<b>11</b>
<b>TRAINING AND INFORMATION.....</b>	<b>11</b>
<b>CONTRACTOR EMPLOYEES .....</b>	<b>12</b>
<b>HAZARD COMMUNICATION PROGRAM EVALUATION .....</b>	<b>12</b>
<b>APPENDIX A - CHECKLIST FOR HAZARD COMMUNICATION PROGRAM .....</b>	<b>14</b>

## **POLICY**

All BP-Husky Toledo Refinery employees and Contractor employees have a “right to know” about the hazards and the identities of the chemicals and the products used and produced in this workplace.

## **PURPOSE**

The Hazard Communication Program helps support a safe workplace for employees and contractor employees. The workforce will have the knowledge of chemical hazards and know the proper protective measures to use when working with hazardous chemicals. The Hazard Communication Standard, 29CFR 1910.1200, set by the Occupational Safety and Health Administration (OSHA), details the requirements of this regulation. BP - Husky complies with this standard.

## **RESPONSIBILITIES**

### **A. Program Administrator**

The Industrial Hygienist is responsible for the administrative control of the Hazard Communication Program at the Toledo Refinery. These duties include:

1. Insure that the written program is readily available to all employees.
2. Approve the purchase and use of new chemicals.
3. Periodically review, audit, and revise the Hazard Communication Program.
4. Maintain and update the chemical inventory.
5. Maintain and update the electronic material safety data sheet (MSDS) system.
6. Assist supervisors with obtaining new placards for equipment.
7. Provide the quarterly update CD-ROM for purchased chemicals and process stream chemicals to the Emergency Operations Center (EOC).

### **B. Supervisor**

Each supervisor that manages employees is responsible for compliance with the Hazard Communication Program in their assigned areas. These duties include:

1. Coordinate the process to complete a “New Chemical Purchase Approval Sheet” when a new chemical is to be used via an MOC (See SAF 107-FM01).
2. Inform and train employees when a new chemical is used in the work area.
3. Provide and enforce the use of personal protective equipment when working with chemicals.
4. Ensure that their employees have the knowledge on how to find an MSDS.
5. Ensure that all containers are labeled or placarded.
6. Obtain the process information necessary to order a new process stream equipment sign.

### **C. Employees and Contractor Employees**

All workers on the work site of the Toledo Refinery have the responsibility to follow the Hazard Communication Program elements. These duties include:

1. Obtain and review the MSDS for any chemical with which you work.

2. Be informed about the health and/or physical hazards of chemicals and products in your work area.
3. Comply with annual regulatory training and testing requirements.
4. Read/refer to the MSDSs and use proper personal protective equipment.
5. Report missing container and/or equipment labels to your supervisor.
6. Inform BP - Husky and provide MSDSs of chemicals you bring on site.

#### **D. Health and Safety Department**

All jobs in the health and safety department have the responsibility to help the Toledo Refinery with guidance on how to comply with the Hazard Communication Program.

These duties include:

1. Assist Operations, Optimization, Maintenance, Contractors, and Laboratory with chemical hazard assessments.
2. Ensure that the ERT complies with the Hazard Communication Standard.
3. Follow the program requirements for new chemical use and/or purchase.
4. Understand how to find an MSDS.
5. Assist supervisors with obtaining new signs and/or labels.

#### **E. Environmental Department**

1. Approve the purchase and use of new chemicals.
2. Educate and remind employees of proper disposal and waste handling of chemicals.
3. Assure that all waste drum containers are labeled.

#### **F. Emergency Operations Center**

1. Understand how to find a purchased MSDS during an emergency.
2. Understand how to find a process stream MSDS during an emergency.
3. Provide the MSDS for purchased and/or process stream chemicals to medical providers following an incident.

#### **G. Corporate Product Safety & Toxicology**

The Corporate Product Safety & Toxicology Group has the duty to support BP - Husky's efforts to comply with Hazard Communication Standard (HCS):

1. Provide revision information regarding the HCS.
2. Develop guidelines for labeling BP products and workplace chemicals, including appropriate hazard warnings.
3. Maintain technical and regulatory information for evaluating hazard communication requirements.
4. Maintain a technical capability for evaluating hazards and conduct hazard determinations of BP-produced chemicals.
5. Publish new MSDSs for BP products and intermediate streams.
6. Maintain copies of MSDSs and the documentation supporting hazard identification and evaluation of BP-produced chemicals.
7. Administrate the electronic MSDSs systems.
8. Develop the label information for new process equipment.

9. Provide quarterly update CD-ROM to the Program Administrator as a hard copy back-up.

## DEFINITION OF TERMS

1. **Article** – a manufactured item other than a fluid or particle which is formed to a specific shape or design during manufacturing. Its end-use function is dependent in whole, or in part upon its shape or design. It does not release a significant amount of chemical to workers nor create a physical hazard or health risk.
2. **Chemical** – any element, chemical compound, or mixture of elements or compounds.
3. **Chemical manufacturer** – an employer with a workplace where chemical(s) are produced for use or distribution.
4. **Chemical name** – the scientific designation of a chemical or a name that will clearly identify the chemical for the purpose of conducting a hazard evaluation.
5. **Combustible liquid** – a liquid having a flashpoint at or above 100 °F, but below 200 °F.
6. **Common name** – any designation or identifications such as code name or generic name used to identify a chemical other than by its chemical name.
7. **Compressed gas** – any material that is a gas at normal temperature and pressure, and contained under pressure as a dissolved gas or liquefied by compression or refrigeration.
6. **Container** – any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. Pipes, piping systems, engines, fuel tanks or other operating systems in a vehicle are not considered containers.
7. **Employee** – a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Office workers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.
8. **Employer** – a business where chemicals are either used, distributed or are produced for use or distribution, including a contractor or subcontractor.
9. **Exposure or exposed** – that an employee is subjected in the course of employment to a chemical that is a physical or a health hazard, and includes potential (accidental or possible) exposure.
10. **Flammable** – any solid, liquid, vapor, or gas that ignites easily and burns readily.
11. **Flashpoint** – the minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near its surface or within a vessel.
12. **Hazardous chemical** – any chemical that is a physical hazard or a health hazard.
13. **Hazard warning** – any words, pictures, symbols, or combination thereof, appearing on a label or other appropriate form of warning which convey the hazard(s) of the chemical(s) in the containers.
14. **Health hazard** – a material considered hazardous to human health due to at least one statistically significant study, conducted in accordance with scientific principles.
15. **Identity** – any chemical or common name that is indicated on the material safety data sheet for the chemical.

16. **Immediate use** – 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.
17. **Label** – any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.
18. **Material safety data sheet (MSDS)** – written or printed material concerning a hazardous chemical which is prepared in accordance with the format of the OSHA Hazard Communication Standard.
19. **Mixture** – any combination of two or more chemicals that are not the result of a chemical reaction.
20. **Organic peroxide** – a compound containing the bivalent -O-O- structure.
21. **Oxidizer** – a chemical that initiates or promotes combustion in other materials thereby causing fire either of itself or through the release of oxygen or other gases.
22. **Physical hazard** - a substance for which there is valid evidence that it is a combustible liquid, compressed gas, explosive, flammable, organic peroxide, oxidizer, pyrophoric, unstable (reactive), or water reactive.
23. **Pyrophoric** – materials that ignite spontaneously in air below 130 °F.
24. **Trade secret** – 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.
25. **Unstable (reactive)** – a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under condition of shocks, pressure or temperature.
26. **Water reactive** – a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.
27. **Workplace** – an establishment, job site or project, at one geographical location containing one or more work areas.

## CHEMICAL INVENTORY

The Toledo Refinery shall maintain an up-to-date listing (inventory) of produced (intermediate streams and finished products) and purchased chemicals at the facility. The listing is maintained electronically in the IHS Dolphin Comply Plus system at:

<http://bp2.complyplus.com>

Search by logging into R&M\_Refining\_Toledo Refinery and complete a search with no criteria in the search areas. This will provide a complete listing of chemicals at the Toledo Refinery.

## CONTAINER LABELING

Toledo Refinery must ensure that all hazardous chemicals in the workplace are labeled, tagged or marked as follows:

1. The identity of the hazardous chemical, common or chemical name must appear on the label.
2. Each container of hazardous materials in the workplace must have a label,

- tag or other marking that indicates the appropriate hazard warnings. If the chemical is also regulated by an OSHA substance specific standard, the operating unit must ensure that the hazard warning meets the requirements of that standard as well. (For example Benzene warning). In addition, the hazard warning must be consistent with the MSDS. The Hazardous Materials Identification System (HMIS) will be used to indicate the correct health, flammability, and reactivity ratings, and the correct PPE index completed on the label.
3. Workplace labeling will consist of signs affixed to each individual stationary process container. These signs must be displayed prominently on the container.
  4. Existing labels may not be removed or defaced on incoming containers of hazardous chemicals unless the container is immediately re-marked with information required by the HCS.
  5. Toledo Refinery will ensure that labels or other forms of warning are legible, in English, prominently displayed, and readily available to any affected employees.
  6. A chemical shall not be received without proper labeling.
  7. Incoming materials without labels may be received directly from tank cars into receiving vessels and stored in a specific area that is properly labeled for the type of chemical stored there. The incoming containers must be properly placarded as required by Hazard Communication and Department of Transportation (DOT) regulations.
  8. Pumps, compressors, pipes and piping systems do not have to be labeled to meet this standard.
  9. Precautionary labels are not required on portable containers into which hazardous chemicals are transferred from labeled containers and which are intended only for the immediate use (i.e., during the employee's work shift) of the employee who performs the transfer.

### **Exceptions**

These materials are exempted from the labeling requirements:

- hazardous wastes - pesticides - manufactured articles - consumer products

### **Product Shipments**

All shipments leaving the refinery, with the exception of pipeline shipments, are labeled. The label includes all appropriate information such as chemical identity, hazard warnings and the name and address of the responsible company.

### **Workplace Labels - Process Areas**

Workplace labeling at Toledo Refinery takes the form of special signs to each "container." The signs will include the following information: HMIS rating, Property Record (PR) number or Equipment Number, vessel name, MSDS numbers for chemicals inside the vessel, health hazards, physical hazards and target organ

effects. This will enable personnel to immediately identify work area chemicals to which they may be exposed.

### **Workplace Labels - OM&S**

Labeling in the Oil Movement & Storage (OM&S) area will use the same sign system as the process areas.

### **Workplace Labels - Rail Cars and Tanker Trucks**

If a tanker or rail car remains within a facility longer than 24 hours, then it becomes a "container" and must be labeled. Containers of this type will be included in the OM&S HCS Manual for these "Temporary Containers."

When a rail car or tanker truck of material enters the refinery, a placard from the supplier should be supplied with the shipment. If an MSDS is not included with the shipping papers, then the Safety Department must be contacted. For shipments received on a regular basis, the MSDS should be kept in the electronic database of chemicals.

### **Workplace Labels - Laboratory Samples**

When a sample is taken for refinery laboratory analysis, it must be labeled properly to alert the lab of the hazards of the material. The sample tags will be preprinted with all the vessel information and sample information necessary. All that will need to be added is the date and time. These tags will be stores items in the warehouse. Each control room will have a sample of how each tag from its area is to be made out in the event the warehouse does not have sufficient tags.

The laboratory will not pick up process sample(s) if they are missing a label. It is the laboratory's responsibility to note how many samples at each sample pick-up station were not picked up due to improper labeling. The laboratory supervisor will notify the appropriate process supervisors to explain that samples were not analyzed because of improper labeling.

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

The Material Safety Data Sheet, or MSDS, is a primary source of information about the hazards, both physical and health related, for chemicals found in the workplace. Per OSHA's Hazard Communication Standard, for each hazardous chemical found at Toledo Refinery, BP is required to obtain and retain on file, a copy of the MSDS for that hazardous chemical. A copy of these MSDSs shall be made readily available for any employee or contractor at Toledo Refinery upon request.

MSDSs for purchased chemicals are found via the electronic system at:

<http://bp2.complyplus.com>

MSDSs for process stream components are found via the electronic system at:

<http://msds.bpweb.bp.com/login.asp>



## 1. General Format for a Standard MSDS

Not all MSDSs follow the exact same format, but, at a minimum, the information contained on all MSDSs must include the following:

- Item 1: The chemical name, common names, trade name, CAS number and the identity used on the label, except as provided in the Trade Secrets section.
- Item 2: Physical and chemical characteristics, including vapor pressure and flash point.
- Item 3: Physical hazards, including the potential for fire, explosion, or reactivity.
- Item 4: Known acute and chronic health effects of exposure, including signs and symptoms of exposure based on substantial scientific evidence.
- Item 5: The known primary route of exposure.
- Item 6: The permissible exposure limit for those toxic substances for which the Federal Occupational Safety and Health Administration has promulgated a permissible exposure limit.
- Item 7: Precautions for safe handling and use.
- Item 8: Recommended engineering controls.
- Item 9: Recommended work practices.
- Item 10: Recommended personal protective equipment.
- Item 11: Emergency and first aid procedure and programs for cleanup of leaks or spills.
- Item 12: The date of preparation of the material Safety Data Sheet and of any changes to it.
- Item 13: The name, address, and telephone number of employer, manufacturer, importer, supplier, or responsible party preparing the material Safety Data Sheet.
- Item 14: If no relevant information is found for any given category on the material Safety Data Sheet, the chemical manufacturer, importer, or employer preparing the MSDS shall mark it to indicate that no applicable information was found.
- Item 15: Where complex mixtures have similar hazards and contents, (i.e., the chemical ingredients are essentially the same, but the specific composition varies from mixture to mixture), the chemical manufacturer, importer, or employer may prepare one Material Safety Data Sheet to apply to all of these similar mixtures.

**In the event of a power failure or if help is required to find an MSDS outside of day shift Monday - Friday hours due to an emergency, a contingency plan is in place to provide this information by the following:**

- A) An index identifying the MSDS number is contained on a CD-ROM. The Emergency Operations Center (EOC) will use this index to find the MSDS in the hard copy book. The hard copy purchased chemical MSDS books are located on the first floor of the HSSE building.

- B) For help locating a MSDS for process streams, a CD-ROM will be accessible to the EOC.
- C) These CD-ROMS will be updated quarterly by the Hazard Communication Program Administrator.

2. **Vendor (Purchased) Chemical MSDSs**

An MSDS must be available for any purchased chemical. If a chemical is in use at Toledo Refinery and no MSDS exists, then action must be taken to secure an MSDS as soon as possible.

No chemical will be purchased until the MSDS has been reviewed and approved. The "New Chemical Purchase Approval Sheet must be completed by the person who wants to bring in the new chemical. A management of change (MOC) meeting will also be scheduled. The HSE department will have the final approval on accepting the use of the new chemical. Any requisition for a new chemical submitted without proper approval shall not be purchased.

3. **Location of MSDSs at Toledo Refinery**

Toledo Refinery MSDSs can be found electronically at:

<http://bp2.complyplus.com> (MSDSs for purchased products)

<http://msds.bpweb.bp.com/login.asp> (MSDSs for process streams)

One, up-to-date, hard-copy book of MSDSs are kept in the HSE building, **first** floor. A CD-ROM is available for process stream MSDSs in the event of a power failure, and is located in the EOC.

4. **Employee Access to MSDSs**

All employees have access to the electronic system to obtain an MSDS. If a printed copy is needed, the employee can contact his/her supervisor if a printer is not available to the employee.

5. **MSDS Updates**

Material Safety Data Sheets (MSDSs) will be updated or revised by the Corporate Product Safety & Toxicology Group and/or the manufacturer to reflect new or significant information. For purchased products, the Industrial Hygienist will coordinate the update to the hard copy book and IHS Dolphin Comply Plus system. Refinery streams and finished product MSDS changes will be communicated and updated by the Corporate Product Safety & Toxicology Group. They will send an updated CD-ROM quarterly to the Toledo Refinery.

## HAZARD DETERMINATION

The BP - Husky Health, Safety, and Environmental Department (HSE) will evaluate the potential hazards of chemicals purchased by the Toledo Refinery. The Management of Change (MOC) process is used for this task by completing the "New Chemical Purchase Sheet" (SAF 107-FM01). The Corporate Product Safety & Toxicology Group will determine hazards of streams and finished products. The corporate group will communicate changes or other amendments to the Toledo Refinery.

There are two types of hazards:

### 1. Physical

A chemical or a mixture of chemicals will be considered to be a physical hazard if there is scientifically valid evidence that it is a combustible liquid, compressed gas, organic peroxide, oxidizer, explosive, or a flammable, pyrophoric, unstable (reactive), or water-reactive material.

### 2. Health

A chemical or a mixture of chemicals will be considered a health hazard if there is evidence that acute or chronic health effects may occur in exposed employees. "Health hazard" is a term used for chemicals that are:

- a. carcinogens
- b. reproductive toxins
- c. corrosives
- d. toxic
- e. irritants
- f. sensitizers
- g. hepatotoxins
- h. neurotoxins
- i. nephrotoxins

## TRAINING AND INFORMATION

Each employee will require annual training on Toledo Refinery Hazard Communication Program. Every employee will also receive information and training on all the hazardous chemicals found in their work area. Additional training will be given whenever a new chemical is introduced to their work area, or, whenever a new physical or health hazard unknown to the employee is introduced.

### A. Information Guidelines

Employees and others working with a hazardous chemical at the Toledo Refinery are to be informed of:

1. How to access the written Hazard Communication Program.
2. The requirements of the Hazard Communication Standard (HCS).
3. Operations and/or processes in the work area where the employee is potentially exposed to a hazardous chemical.

4. How to access the list of all the hazardous chemicals used in the employee's work area.
5. How to access the electronic MSDS system for produced and purchased products and streams.

**B. Training Guidelines**

The training benchmark is to have each employee that works with hazardous chemicals become informed of the hazardous properties of the material. The employee will receive training to protect him/her self by using the appropriate engineering controls, personal protective equipment or work practices.

**CONTRACTOR EMPLOYEES**

**A. Contractor Compliance Guidelines**

Contractor employees who are likely to be exposed to BP chemicals, or chemicals that the contractor brings on site, will do the following:

1. Attend BP - Husky New Hire and Contractor Safety Training.
2. Provide MSDSs to HSE department for chemicals brought on-site.
3. Understand how to access or obtain information on the Toledo Refinery Hazard Communication Program.

**B. Contractor Responsibility**

1. It is the responsibility of the contractor to provide training to their employees on their company's Hazard Communication Program. Contractors who work at other BP locations should be aware that specific procedures slightly from one facility to another. Proof of training at another BP facility will not be accepted as proof of training at Toledo Refinery.
2. In the special case of chemicals which will be used only once in an area, for instance, acid cleaning of towers, the MSDS will be on-site temporarily. When the material is no longer used, then the MSDS will be removed from the work site and not added to the electronic MSDS system or site chemical inventory.

**HAZARD COMMUNICATION PROGRAM EVALUATION**

Evaluation of the program will include:

1. Periodic corporate audits of the Toledo Refinery Hazard Communication Program.
2. Site evaluation, using the procedural checklist (Appendix A).

Any deficiencies will be recorded, assessed, and corrected. Additionally, the Hazard Communication Program will be modified if necessary.

**Revision history**

The following information documents at least the last 3 changes to this document, with all the changes listed for the last 6 months.

<b>Date</b>	<b>Revised By</b>	<b>Changes</b>
8/1/11	<b>Hasbrouck</b>	Re-name IH Procedure to SAF-107 and change header and footer and add revision history. First issuing as SAF, so it is revision 0. No change to content of procedure. MOC#20114521-001
1/11/12	<b>Michael Chambers</b>	Changed procedure owner to Michael Chambers, Approver to Robert Myak, effective date to January 10, 2012, and revision number to 1. Changed Chemical inventory section on page 6 to reflect change to the dolphin system for purchased chemical inventory. Changed link for purchased MSDSs on page 8 and 10. Changed location of MSDS books to the first floor of the HSSE building on page 9. Changed Industrial Hygienist's role under MSDS Updates section on page 10. Added MOC number in Appendix B on page 16. MOC#M2012117-001
6/19/13	<b>Michael Chambers</b>	Removed appendix B – New Chemical Approval Sheet and made it a form (SAF 107-FM01). MOC#M20132213-001

## APPENDIX A

### CHECKLIST FOR HAZARD COMMUNICATION COMPLIANCE

<u>Comments</u>	<u>Yes</u>	<u>No</u>
1. Does everyone on the unit/area know how to access the written hazard communication program containing the elements set out under the refinery's program?		
2. As new chemicals have been introduced, were they reviewed and approved beforehand by the Safety Department, Industrial Hygiene and Environmental Department?		
3. Are fixed and portable containers of chemicals labeled?		
a. Are the labels or signs legible?		
b. Do they identify the chemicals or mixtures and are those chemicals and mixtures on the unit/areas list of hazardous chemicals?		
c. Do the labels or signs have appropriate hazard warnings?		
<u>Comments</u>	<u>Yes</u>	<u>No</u>
d. Is each intermediate/finished product located in a process vessel, listed on a diagram or flow chart?		
e. Are lab samples properly identified and labeled?		
	<u>Yes</u>	<u>No</u>
3. Does the facility have and maintain required MSDSs? Finished Products? Intermediates? Purchased Products		
4. Is the unit/area training program effective?	<u>Yes</u>	<u>No</u>
a. Are records maintained for training?		

CHECKLIST FOR THE HAZARD COMMUNICATION PROGRAM (continued)		
	<u>Yes</u>	<u>No</u>
b. Is the training conducted at time of hire-in, new assignment and whenever a new chemical/hazard is introduced?		
c. Are employees aware of the OSHA standard and that BP must have a hazard communication program?		
d. Do employees know:		
1) What operations in their area use hazardous chemicals?		
2) Where MSDSs are kept or accessed?		
3) Where the employer's written hazard communication is kept or accessed?		
<u>Comments</u>	<u>Yes</u>	<u>No</u>
4) What the odor or other alarms and alerts of a hazardous chemical release are?		
5) What measures they can take to protect themselves?		
6) How to read labels and MSDSs and interpret them?		
6. Is the unit/area Hazard Communication Program made available to contractors if they request information from it?		