Hazard Communication
Safe Use of Hazardous Materials

Safety

This self-directed learning module contains information you are expected to know to protect yourself, our patients, and our guests.

Target Audience: All Teammates

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Instructions:

The material in this module is an introduction to important general information on hazard communication. After completing this module, contact your supervisor to obtain additional information specific to your department.

- Read this module.
- If you have any questions about the material, ask your supervisor.
- Complete the online posttest for this module. Once you pass the posttest, print it or a copy of your transcript and give it to your supervisor.
- The Job Aid on page 14 should be customized to fit your department’s policies and procedures and then used as a quick reference guide.
- Completion of this module will be recorded under My Learning in PeopleLink.

Learning Objectives:

When you finish this module, you will be able to:

- Explain the purpose of the Right-to-Know standard.
- Discuss the changes from Material Safety Data Sheets (MSDS) to Safety Data Sheets (SDS) and new labeling requirements needed to implement the Global Harmonized System (GHS).
- Describe the new pictograms that will be used on new warning labels.
- Describe how to properly label materials poured into a secondary container.
- State how to obtain additional information regarding the disposal of hazardous waste materials.
- Describe where to find procedures to follow in the event of a chemical spill.
Hazard Communication Standard

The federal government passed a law to protect employees who work with materials that may be unsafe or harmful to their health. This is the Occupational Safety & Health Administration’s (OSHA) “Hazard Communication (HazCom) Standard” (29 CFR 1910.1200).

HazCom (also known as the employee Right-to-Know) is an information system that alerts employees to the dangers of exposure to chemicals in the workplace. Your health and safety depend on knowing the correct way to handle, store, transport and dispose of chemicals. Understanding this information may help prevent injuries, serious illness, even death due to explosions, fires, or overexposure to chemicals.

Global Harmonized System
In 2012 OSHA revised their rule to adopt the Global Harmonized System (GHS) for labeling and classifying chemicals. This system provides a uniform approach across different countries of the world. Changes will be phased in over the next couple of years. The first few changes you may see in 2013 include:

- Different labels or symbols on containers
- Safety Data Sheet (SDS) instead of Material Safety Data Sheet (MSDS)

Hazard Communication Program

Important elements of an effective HazCom/Right-to-Know program include:

- Initial training on proper handling, use, storage, transportation, and disposal
- Annual refresher training
- Training on any new class or type of chemical
- Departmental chemical inventory
- Safety Data Sheets (SDS) for each hazardous chemical in area
- Special procedures and supplies for hazardous chemical emergencies and spill management
- Personal protective equipment (PPE) and safety measures required when using each type of chemical
- Written HazCom program, addressing specifics for each of the above elements

Refer to the Hazard Communication section of your EOC Policy and CODE ORANGE Procedures available on PeopleConnect.
Your Responsibility

Become familiar with specific chemicals used in your work area. Next, carefully read the important information on all chemical labels, SDS, and training materials provided during new employee orientation, department/job specific training and subsequent annual refresher training sessions, including this module. If you do not understand a feature of BLUE RIDGE’s HazCom/Right-To-Know program, ask your supervisor or facility safety officer.

Safety Data Sheet (SDS)

The term Safety Data Sheet (SDS) will be used with the new Global Harmonized System (GHS). The previous term Material Safety Data Sheet (MSDS) will be phased out. By June 1, 2015, manufacturers must produce the new SDS in the uniform specified format. Safety Data Sheets will accessible using the same online system currently in place.

A SDS contains detailed written information prepared by the manufacturer, importer, or distributor and is designed to help protect you from overexposure to each chemical used in the workplace.

A SDS should accompany all commercially prepared chemicals. In the event that a SDS does not come with a particular chemical product, you should alert your supervisor. He/She will then contact the manufacturer or distributor to obtain one. A SDS is good forever, as long as the following conditions exist:

- Chemical name does not change.
- Chemical composition does not change.
- Manufacturer does not change.
- Potential hazards posed by the chemical do not change.
- SDS itself remains legible. If faded, torn, or otherwise damaged, a new one must be obtained.

With the revised rule and the Global Harmonized System (GHS), all SDS will have a uniform format, including section numbers, headings, and information.

Section 1: Identification
Includes product identifier; manufacturer or distributor name, address, phone number, emergency phone number; recommended use; restrictions on use.
Section 2: Hazard(s) Identification
Includes all hazards regarding the chemical; required label elements.

Section 3: Composition/Information on Ingredients
Includes information on chemical ingredients; trade secret claims.

Section 4: First-Aid Measures
Includes important symptoms/effects, acute, delayed; required treatment.

Section 5: Fire-Fighting Measures
Lists suitable extinguishing techniques, equipment; chemical hazards from fire.

Section 6: Accidental Release Measures
Lists emergency procedures; protective equipment; proper methods of containment and cleanup.

Section 7: Handling and Storage
Lists precautions for safe handling and storage, including incompatibilities.

Section 8: Exposure Control/Personal Protection
Lists OSHA’s Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; personal protective equipment (PPE).

Section 9: Physical and Chemical Properties
Lists the chemical’s characteristics.

Section 10: Stability and Reactivity
Lists chemical stability and possibility of hazardous reactions.

Section 11: Toxicological Information
Includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

These sections of the Safety Data Sheet (SDS) will contain information regulated by other agencies, so OSHA will not be enforcing compliance with those sections.

Section 12: Ecological Information

Section 13: Disposal Considerations

Section 14: Transport Information
Section 15: Regulatory Information

Section 16: Other Information

Chemical Warning Labels

Also, you may begin seeing new and different labels on containers. Also, the labels will have a standard format that includes:

- Pictograms
- Signal word
- Hazard and precautionary statements
- Product identifier
- Supplier information

Pictograms and Hazards
Pictograms will be required on labels by June 1, 2015. Each pictogram will have a symbol on a white background framed by a red border. Each will represent a distinct hazard.

### HCS Pictograms and Hazards

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flame</th>
<th>Exclamation Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Carcinogen</td>
<td>• Flammables</td>
<td>• Irritant (skin and eye)</td>
</tr>
<tr>
<td>• Mutagenicity</td>
<td>• Pyropholics</td>
<td>• Skin Sensitizer</td>
</tr>
<tr>
<td>• Reproductive Toxicity</td>
<td>• Self-Heating</td>
<td>• Acute Toxicity (harmful)</td>
</tr>
<tr>
<td>• Respiratory Sensitizer</td>
<td>• Emits Flammable Gas</td>
<td>• Narcotic Effects</td>
</tr>
<tr>
<td>• Target Organ Toxicity</td>
<td>• Self-Reactives</td>
<td>• Respiratory Tract</td>
</tr>
<tr>
<td>• Aspiration Toxicity</td>
<td>• Organic Peroxides</td>
<td>• Irritant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hazardous to Ozone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Layer (Non-Mandatory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Gases Under Pressure</td>
<td>• Skin Corrosion/Burns</td>
<td>• Explosives</td>
</tr>
<tr>
<td></td>
<td>• Eye Damage</td>
<td>• Self-Reactives</td>
</tr>
<tr>
<td></td>
<td>• Corrosive to Metals</td>
<td>• Organic Peroxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flame Over Circle</th>
<th>Environment (Non-Mandatory)</th>
<th>Skull and Crossbones</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Oxidizers</td>
<td>• Aquatic Toxicity</td>
<td>• Acute Toxicity (fatal or toxic)</td>
</tr>
</tbody>
</table>
Required Labeling

Manufacturers must label all chemical containers leaving their facilities with the following information:

- Identity of the hazardous chemical(s)
- Name and address of the chemical manufacturer, importer, or other responsible party
- Appropriate hazard warnings

If you pour a commercially prepared chemical into another container, called a “secondary container”, you must label the second container with the following information:

- Identity of the hazardous chemical(s)
- Appropriate hazard warnings (i.e., “flammable”, “corrosive”, “causes Lung damage”)

Torn or Missing Labels

**The most dangerous chemical is one without a label.**

- Never handle a chemical unless you know what it is.
- If a label is missing, immediately tell your supervisor or their designee. He or she will identify the chemical and label it appropriately, or dispose of it, according to regulations, following analysis to determine general hazard class.

If a label is torn or damaged, it may lead to serious consequences. For example, the critical information you need to protect yourself may be torn off or illegible. Employees should replace the label immediately. **Hazardous chemical labels are available through Materials Management Department.**
Chemical Storage and Transportation

Improperly stored chemicals could react, forming hazardous products. Also, employees moving chemicals must know the precautions to take to avoid or manage spillage of a chemical.

- Monitor storage areas for proper labeling and conditions.
- Do not store expired chemicals or ones no longer needed; properly dispose of unwanted chemicals.
- Do not store chemicals above eye level.
- Do not store chemicals on bench tops or under hoods, unless temporarily for working chemicals or solutions.
- Keep chemical storage areas neat, orderly, and clearly identified.
- Use secondary containers, such as plastic bottle carriers, to transport glass containers of chemicals.
- Use a bottle carrier when transporting more than 500mL of a flammable or corrosive liquid.
- Never transport or store incompatible chemicals in the same secondary containment or in any way that might allow the chemicals to combine or react.
- Containers must be properly sealed.
- Wear appropriate PPE when handling chemicals.

Mercury

Because BLUE RIDGE has tried to become mercury-free, most locations should not have mercury items. If your department must use a mercury item, then you MUST have a mercury spill kit. These kits may be obtained from the Materials Management Department.

Since there are many types of spill kits available, review the directions for use before attempting to clean up a spill. Do not dispose of broken thermometers or spilled mercury in sharps, red bins, or regular waste containers. Do not use red bags. Instead, double-bag and securely seal the used spill kit and dispose of it as hazardous waste, per departmental procedures.

Acids and Bases

Spills involving acids and bases require special consideration when cleaning them up. Acids and bases may react violently with water; therefore…
WATER MUST NEVER BE USED TO CLEAN UP AN ACID OR BASE SPILL.

Departments using acids and bases must have neutralizing solutions available in case of spills and staff must be trained, in advance, in their use. BLUE RIDGE Safety Officer may assist with the review of department specific procedures regarding spill management.

Flammable Materials

Flammable materials must be handled carefully when a spill occurs. Ignition sources, such as Bunsen burners, must be extinguished immediately. Flammable liquids give off a vapor that will ignite if they encounter an open flame. Absorb spilled chemical with a material, such as kitty litter or commercial absorbent, to contain the spill. Place the used materials in an appropriate hazardous waste container. Label as “hazardous waste” and specify the identity of the contents. Work with your supervisor or BLUE RIDGE Safety Officer to arrange for proper disposal.

Asbestos

Asbestos is a common name given to a group of naturally occurring mineral fibers that have been incorporated into many construction products such as pipe insulation, spray applied ceilings, fireproofing, roofing materials, and floor tile. These materials pose no health risk unless they are disturbed in such a way that dust or fibers are released into the air where they can be inhaled.

Asbestos Containing Materials (ACM) may be present in some older BLUE RIDGE buildings. Buildings constructed after 1981 are less likely to contain asbestos products though surveys are required prior to any renovation activity regardless of the age of the building.

BLUE RIDGE is committed to a policy of safely and effectively managing asbestos on its campuses. The Plant Operations and Maintenance Department along with Capital Projects and Construction have procedures for managing asbestos in place. If you have specific questions related to this information please contact the BLUE RIDGE Director of facility Services for assistance at 580-5903.

Responding to a Chemical / Hazardous Material Spill

Read and understand your department spill clean up procedures BEFORE an emergency occurs!
There is always the possibility of accidentally spilling a hazardous material. If a spill occurs, the material must be cleaned up properly to ensure no harm occurs to the environment, humans, or property. One source of information for spill cleanup procedures is the SDS. It will also provide telephone numbers to call, if additional assistance is needed. If you work with a chemical, make sure you know where your departmental SDS are located (usually located in a specific notebook in your department).

For a chemical spill, notify your supervisor immediately. Clean up the spill yourself, only if you have proper training and PPE.

*General* procedures can be found in the Code Orange Section of the Emergency Operations Plan. Follow department specific procedures when available.

Personnel working with the hazardous material when a spill occurs are expected to contain and clean up the spill, as long as:

- The identity of the spilled material is known;
- Staff are familiar with the substance;
- The quantity of the spilled material is manageable;
- Staff are familiar with spill management procedures for the material; and
- Appropriate PPE and spill management supplies are available.

Find *general* procedures in the Code Orange Section of the Emergency Operations Plan. Follow department specific procedures when available.

If any of the above criteria are not met (i.e. spill is too large to manage safely, spilled material is extremely dangerous, or the identity of the spilled material is unknown), the employee must contact their supervisor or designee immediately and follow the facility’s internal disaster plan for a “Code Orange.”
Facilities do NOT have spill response teams.

Do not contact the Environmental Services Department to perform initial spill cleanup. Instead, Environmental Services should be contacted, once the spill has been cleaned up, and only general housekeeping services are required to return the area to normal, working condition.

Use of Personal Protective Equipment for Spills

Most chemical spills require the use of PPE to ensure employees are not exposed to hazardous materials. Departments must maintain appropriate PPE for both routine use and for dealing with chemical spills. The proper PPE for cleaning up hazardous materials spills include, but are not limited to, chemical goggles and chemical resistant gloves. Although they are used throughout the healthcare setting, latex exam gloves offer limited chemical protection. To determine what type of gloves should be used, consult the SDS or ask your supervisor.

Many SDS may also specify the use of respirators when cleaning up a spill, particularly a large spill. Respirators used for protection from airborne infectious diseases (TB, SARS, etc.) are NOT to be used for chemical protection. If spill response requires a chemical respirator, contact your supervisor or designee immediately and follow the facility's internal disaster plan for a "Code Orange." Also, make sure you have adequate ventilation when using chemicals or cleaning up a spill. Contact Maintenance with questions regarding ventilation before an "emergency" occurs.

Hazard Assessment

Managers must complete hazard assessments for job assignments or tasks with potential hazards. Based upon the assessment, appropriate PPE will be required. PPE Hazard Assessments and training must be documented using the PPE Hazard Assessment form found in EOC.32.01 Personal Protective Equipment policy. If you need assistance with PPE selection, or you experience problems with the performance of PPE provided, contact your supervisor or Corporate Safety.

Completing an Online Report of Occupational Injury

After a chemical spill has been properly cleaned up, employees must consult with their supervisor regarding any necessary incident or exposure documentation (i.e.
“Workplace Occurrence Report Form” or “Report of Occupational Illness or Injury” form – ROII). Employees needing medical attention should contact Employee Health If you are suffering from exposure to a material, seek assistance from the Emergency Department or an urgent care center immediately.

Disposal of Hazardous Wastes

For questions concerning the proper disposal of a hazardous material, consult the material’s SDS, your supervisor, or Facility Hazardous Materials Coordinator. You may also consult the CHS Waste Disposal Guide available on People Connect under EOC Policies.

Blue Ridge facilities produce several types of waste materials or “waste streams”:

- disposable sharps
- infectious waste
- hazardous chemical waste
- chemotherapeutic/cytotoxic waste
- radioactive waste
- multi-hazard or mixed waste
- batteries
- mercury-containing devices

These waste streams are regulated. If you are unsure of the classification of a waste (i.e. hazardous versus non-hazardous), store the waste material in an appropriate container and contact your supervisor, or BLUE RIDGE Safety Officer as soon as possible.
1 Name two hazardous materials found in your department.
   1. ________________________________
   2. ________________________________

2 Where are the SDS kept in your department?
   ________________________________

3 Locate the SDS for the two chemicals that you listed in your answer to question #1. Refer to them and describe the spill management procedures for each.
   __________________________________________
   __________________________________________

4 What is your department’s procedure for responding to a chemical spill?
   __________________________________________
   __________________________________________
   __________________________________________

5 What is your department’s procedure for cleaning up a chemical spill?
   __________________________________________
   __________________________________________
   __________________________________________

6 What is your department’s procedure for the disposal of hazardous waste?
**Material Safety Data Sheet**

**MS 52231**
Product: CIDEX® OPA Concentrate
Rev.: C
Issue date: 9/27/2010

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**

Supplier:
Advanced Sterilization Products
33 Technology Drive
Irvine, CA 92618

Customer service telephone: 1-800-755-5800
Emergency telephone number: 1-877-208-6653 - 24 hrs
Product name: CIDEX OPA Concentrate

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

The ingredients at their given percentages in this product are not considered hazardous to your health.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>ASP - OEL Data (TWA - 8 hr)</th>
<th>ASP - OEL Data (STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol, anhydrous</td>
<td>64-13-7</td>
<td>19-21</td>
<td>Not Determined</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Ortho-phthalaldehyde</td>
<td>64-3-9</td>
<td>5.5-8.2</td>
<td>19 μg/m³</td>
<td>148 μg/m³</td>
</tr>
</tbody>
</table>

**3. HAZARDS IDENTIFICATION**

Emergency overview: Flammable.

Properties affecting health:
Toxic if swallowed. Irritating to eyes, skin and respiratory tract. May cause sensitization.

Principle routes of exposure:
- **Eye contact:** Irritating to eyes causing conjunctivitis, stinging or excessive tearing.
- **Skin contact:** Non-toxic by dermal route. Severe skin irritant. Repeated contact may cause sensitization. Contact with skin may cause temporary staining.
- **Ingestion:** Not a likely route of exposure. Toxic if swallowed.
- **Inhalation:** Irritating to nose, throat and respiratory tract.

Hazard information:
- **Target organ effects:** None
- **Reproductive effects:** Unknown on product

Company: Johnson & Johnson
Product name: CIDEX OPA Concentrate
Product code: ASPCPAC
CO-1003686

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Hazard Communication

Mutagenic effects: Not mutagenic in the Ames assay.
Sensitization: May cause sensitization.

Carcinogenicity rating:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>ASP:</th>
<th>NTP:</th>
<th>IARC:</th>
<th>California Proposition 65 List:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl alcohol, denatured</td>
<td>64-17-5</td>
<td>Not Determined</td>
<td>Not Determined</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Ortho-phthalaldehyde</td>
<td>84-79-9</td>
<td>Not Determined</td>
<td>Not Determined</td>
<td>Not Determined</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Signs and symptoms: None
Medical conditions aggravated by exposure: None known

4. FIRST AID MEASURES

Eye contact: In the case of contact with eyes, rinse immediately with plenty of water for 15 minutes and seek medical attention.
Ingestion: If ingested, seek medical attention immediately and show the label.
Inhalation: Move to fresh air immediately. If experiencing difficulty breathing, seek medical attention.
Skin contact: After contact with skin, wash immediately with plenty of water for 15 minutes and seek medical attention if irritation occurs.
Protection of first-aiders: No information available.
Notes to physician: None

5. FIRE-FIGHTING MEASURES

Flash point (°F): 90
Flash point (°C): 32.2
Boiling point (°F): 190
Boiling point (°C): 87.8
Autoignition temperature: Unknown
Flammable limits in air - lower (%): Unknown
NFPA rating: Health: 1 Flammability: 3 Reactivity: 0

Suitable extinguishing media: Use any extinguishing media that is suitable for the surrounding fire.

Extinguishing media which must not be used for safety reasons: None
Specific methods: None
Special protective equipment for firefighters: Wear self-contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products: None known
Explosivity: None
Explosion limits: lower: None upper: None

Company: Johnson & Johnson
Product name: CIDEX OPA Concentrate
Product code: ASPCPAC CO-1003686
6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear eye and skin protection while handling material for clean-up. Avoid breathing vapors and/or mist.

Environmental precautions: Prevent material from entering the sewer system or waterways.

Methods for cleaning up: Wipe up with absorbent material (e.g. cloth, fleece). Dispose of in accordance with local state and federal regulations.

7. HANDLING AND STORAGE

Handling:

Technical measures/precautions: Use in well ventilated area and use with appropriate exhaust ventilation.

Safe handling advice: Wear appropriate personal protection. Avoid contact with skin, clothing and eyes. Remove contaminated clothing and launder before reuse.

Storage:

Technical measures/storage conditions: Keep away from heat, spark, and open flame. This product should be stored between 50°F (15°C) and 66°F (30°C). Keep container tightly closed.

Incompatible products: Avoid contact with strong acids and bases and oxidizing materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Ensure adequate ventilation.

Eye protection: Wear eye protection.

Hand protection: Wear chemical resistant gloves.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: None required

Other/general protection: None required

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear
Physical state: Liquid
Color: Dark blue
pH: 7.5
Odor: Alcohol
Boiling temperature (°C): 87.8
Freezing point/range (°C): Less than 0°C
Density: 0.9890 g/cc
Water solubility: Soluble in water

10. STABILITY AND REACTIVITY

Company: Johnson & Johnson
Product name: CIDEX OPA Concentrate
Product code: ASP004
CC: 1003686

WARNING: This is a controlled proprietary and confidential document. Verify revision is current prior to use.
Chemical stability: Stable under recommended storage conditions.
Hazard polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None known
Materials to avoid: Strong acids, bases and oxidizing materials.
Conditions to avoid: Extremes of temperature, direct sunlight, heat, flames and sparks.

II. TOXICOLOGICAL INFORMATION

Acute toxicity

Local effects
- Oral: Toxic at a dose of 5000 mg/kg by the oral route in rat.
- Dermal: Acute dermal toxicity is ~2000mg/kg by the dermal route.
- Eye irritation: Eye irritant.
- Skin irritation: The concentrate was found to be a severe skin irritant when conducted in a primary rabbit skin irritation study.
- Inhalation: May cause irritation of nose, throat and respiratory tract.

Chronic toxicity
- Oral: Unknown on product
- Inhalation: Unknown on product
- Dermal: Unknown on product

Subchronic toxicity
- Oral: Oral administration of o-phthalaldehyde (active ingredient) to rats for 90 days resulted in a NOEL of 5mg/kg/day.
- Dermal: Unknown on product

Specific effects
- Corrosive effects: Unknown on product
- Sensitization: May elicit an allergic reaction
- Target organ effects: None
- Mutagenic effects: Not mutagenic in Ames test.
- Reproductive effects: Unknown on product
- Developmental effects: Oral administration of o-phthalaldehyde (active ingredient) to pregnant rats indicated that at malemally non-toxic doses (less than 10mg/kg/day) there was no developmental effect.
- Carcinogenic effects: Unknown on product

III. ECOLOGICAL INFORMATION

Ecotoxicity
- Ecotoxicity effects: This product has no known eco-toxicological effects.
- Aquatic toxicity effects: The active ingredient o-phthalaldehyde is considered toxic to algae. However upon dilution the activity is reduced.

Mobility: Unknown on product
Persistence / degradability: The active ingredient, ortho-phthalaldehyde is not readily biodegradable.

Company: Johnson & Johnson
Product name: CIDEX OPA Concentrate
Product code: ASPOCAP
CC-1003685

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[3. DISPOSAL CONSIDERATIONS]

Waste from residues / unused products: Waste disposal must be in accordance with appropriate US, Federal, State, Local and International regulations.

Contaminated packaging: None

Methods for cleaning up: Wipe up with absorbent material (e.g. cloth, fleece).

[4. TRANSPORT INFORMATION]

DOT:
- DOT UN-No: Not hazardous
- DOT shipping name: Not applicable
- Hazard class: Not applicable
- Subsidiary risk (hazard class): Not applicable
- Packing group: Not applicable
- DOT reportable quantity (lbs): Not applicable

IMO/IMDG:
- See ADR/RID when shipping to EU

ADR/RID:
- Hazard class: 9
- Packing group: 3
- Item: Not applicable
- ADR/RID-labels: Not applicable
- UN/ID No.: UN 3082
- Proper shipping name: Environmentally hazardous substances, Liquid, n.o.s. (ortho-phthalaldehyde)
- TREP-card: Not applicable

IATA/ICAO:
- See ADR/RID when shipping to EU

TDG (Canada):
- Status: Not applicable
- Packing group: Not applicable

[5. REGULATORY INFORMATION]

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>ACGIH TLV (TWA - 8hr)</th>
<th>ACGIH TLV (STEL)</th>
<th>ACGIH TLV (Ceiling Limits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl alcohol, denatured</td>
<td>54-17-5</td>
<td>16-21</td>
<td>1000 ppm</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>OSHA (TWA - 8hr)</th>
<th>OSHA (STEL)</th>
<th>OSHA (Ceiling Limits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl alcohol, denatured</td>
<td>54-17-5</td>
<td>16-21</td>
<td>1900 mg/m³ 1000 ppm</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

SARA (311, 312) hazard class:
- Immediate health: None
- Delayed health: None
- Fire: None
- Sudden Release of Pressure Hazard: None
- Reactivity: None

Company: Johnson & Johnson
Product name: CIDEX OPA Concentrate
Product code: ASPOPA6
Page 5 of 6

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Hazard Communication

<table>
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</thead>
<tbody>
<tr>
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<td>64-17-6</td>
<td>18-21</td>
<td>Substance no. 0814</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
<td>Not applicable</td>
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</table>

TSCA inventory list: Listed under TSCA: Yes

WHMIS:

WHMIS trade secret: None
WHMIS hazard class: B2 Flammable Liquids

Canada DSL inventory list: Listed on DSL: Yes

Notes:
1. SARA = Superfund Amendments and the Reauthorization Act.
3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act
4. TSCA = Toxic Substance Control Act
5. WHMIS = Canadian Workplace Hazardous Materials Information System
6. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

This data sheet contains changes from the previous version in section(s):
None

Additional advice None

Literary Reference None

MSDS format North American Format - U.S. and Canada

This Material Safety Data Sheet was prepared in accordance with OSHA 29 CFR 1910.1200.

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End of Safety Data Sheet