



## Using Chemicals Wisely

Keeping objects and surfaces clean and free of disease causing germs is an important part of the daily routine in the child care environment. There are 3 terms you need to know about the cleaning process\*:

1. Cleaning physically removes all dirt and contamination from a surface. Cleaning should be done first with detergent and water.
2. Sanitizing is done to reduce germs on a surface. Sanitizing should be done on all food contact surfaces (food prep areas, tables, eating surfaces, high chair trays, utensils, dishes, cutting boards) and mouthed toys.
3. Disinfecting is done to destroy or inactivate germs. Disinfecting should be done on all door handles, drinking fountains, diapering surfaces, floors, sinks, faucets and toilets.

The Environmental Protection Agency (EPA) reports that there are over 83,000 industrial chemicals available for use and many are dangerous to children. In 2007 a statewide study by Dr. Mark Shour, ISU Extension, found more than 700 cleaning and disinfectant products in child care centers. Many of the products he found in use were toxic to children and should not be used in the child care environment. In January 2013, the San Francisco Asthma Task Force released a report that bleach should not be used in the child care setting. Bleach not only exacerbates asthma (or is an asthma trigger) it also causes new asthma and is listed as an “asthmagen”.

When choosing a chemical for cleaning, sanitizing or disinfecting, the label is your guide to using the chemical safely and effectively. The label includes information that you should read and understand before you use the product. The label includes the following information:

- ✓ **Name, Address and Telephone Number: Manufacturer information**
- ✓ **Product Identifier:** How the hazardous chemical is identified. This includes the chemical name, EPA number, and may include the manufacturer or distributor. The same product identifier must be on both the label and the “Safety Data Sheet (SDS)”.
- ✓ **Signal Word:** Indicates the relative level of severity of hazard and alert the reader to a potential hazard on the label. There are only two signal words “Danger” and “Warning”.
- ✓ **Hazard Statement:** Nature of the hazard of the chemical, including the degree of hazard.
- ✓ **Precautionary Statement:** Measures that should be taken to minimize or prevent adverse effects resulting from exposure to the chemical or improper storage or handling.

\*See Appendix K: Routine Schedule for Cleaning, Sanitizing, and Disinfecting. *Caring For Our Children: National Health and Safety Performance Standards Guidelines for Early Care and Education Programs* (3rd edition).

- ✓ **Pictogram:** Graphic symbols used to communicate specific information about the chemical. There are 9 globally recognized pictograms to identify hazards.

	<b>Health Hazard</b> Carcinogen/Mutagenicity Reproductive Toxicity Respiratory Sensitizer Target Organ Toxicity		<b>Flame</b> Flammable Pyrophorics Self-Heating Emits Flammable Gas		<b>Exclamation Mark</b> Irritant skin and eyes Acute Toxicity (harmful) Respiratory Irritant Narcotic Effects
	<b>Gas Cylinder</b> Gases Under Pressure		<b>Corrosion</b> Skin Corrosion/burns Eye Damage Corrosive to Metals		<b>Explosion Bomb</b> Explosives Self-reactives Organic Peroxides
	<b>Flame Over Circle</b> Oxidizers		<b>Environment</b> (non mandatory) Aquatic Toxicity		<b>Skull and Crossbones</b> Acute Toxicity (fatal or toxic)

- ✓ **Supplementary information:** Additional information including Personal Protective Equipment (PPE)



Safety Glasses



Gloves



Boots



Protective Apron



Face Shield



Dust Respirator

The label provides important information on the chemical. The Safety Data Sheet (formally known as MSDS) is a more complete resource for details regarding the chemical. All Safety Data Sheets (SDS) have a 16-section format that includes:

Section 1: Identification

Section 2: Hazard Identification

Section 3: Composition and Information on Ingredients

Section 4: First-Aid Measures

Section 5: Fire-Fighting Measures

Section 6: Accidental Release Measures

Section 7: Handling and Storage

Section 8: Personal Protection Equipment

Section 9: Physical and Chemical Properties

Section 10: Stability and Reactivity

Section 11: Toxicological Information

Section 12: Ecological Information (non-mandatory)

Section 13: Disposal (non-mandatory)

Section 14: Transport Information (non-mandatory)

Section 15: Regulatory Information (non-mandatory)

Section 16: Other Information

How do you determine if a chemical is the right product for use in your child care environment? Read the label and look for the following information:

### Signal

- DANGER** – Keep reading the label to determine if product is a good choice for your child care business.

### Word

- WARNING** - Keep reading the label to determine if product is a good choice for your child care business.

### Surface

#### Dwell

#### Time

- 10 Minutes or longer** – this is a poor choice for your child care business. Most child care surfaces cannot be left unused for 10 minutes or longer. Some disease outbreaks may require a long surface dwell time to kill all living disease germs.
- 5-10 Minutes** – this is still too long a time period for many surfaces to be left unused in child care.
- 2-5 Minutes** – this dwell time is more reasonable for child care businesses.
- 2 Minutes or less** – this dwell time is workable for most child care surfaces.

### Personal Protective Equipment PPE

- Read the label for the types of personal protective equipment (PPE) that is required with each use of the product.
- How many types of PPE are required?
- Do you have access to **all** of the required equipment for **every time** you use the product?
- Is the employer providing all of the PPE at no cost to you?
- Is the PPE affordable?
- Is the PPE reusable (Eye wash station is reusable for multiple users. Gloves are not reusable by multiple users)

### Health Hazards to Humans and Animals

- Does the label list any health hazards for people or animals?
- Does the label list health hazards for pregnant women or women of childbearing age?
- Does the label list health hazards for the following body organs or systems:
- Eyes, vision
  - Skin, mucous membranes
  - Nose, throat, lungs, breathing, inhalation
  - Mouth, throat, esophagus, stomach, intestines, ingestion
  - Nausea, vomiting, diarrhea
  - Headache, dizziness
- Will using the product make certain chronic health conditions (like asthma) worse?

For additional information about a chemical:

- Locate the EPA # on the label
- Go to <http://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1>
- Enter the EPA number into the box titled “EPA Registration Number” and click on the search button.
- Information about the chemical will be listed, click on the most recent date.

For additional information on cleaning, sanitizing, and disinfecting in the child care setting go to <http://www.epa.gov> and search for “Green Cleaning, Sanitizing, and Disinfecting: A Toolkit for Early Care and Education”.