

Hazard Communication





Hazard Communication Standard

1910.1200

- Often called the “Right to **Know**”
- Updated in 2012 to establish “Right to **Understand**”
- Ensures that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees.



UNCG Hazard Communication Policy

UNCG's written hazard communication policy for chemical use can be found in the UNCG Safety and Health Manual in [Section 0020](#) on the Environmental Health and Safety website (www.safety.uncg.edu)



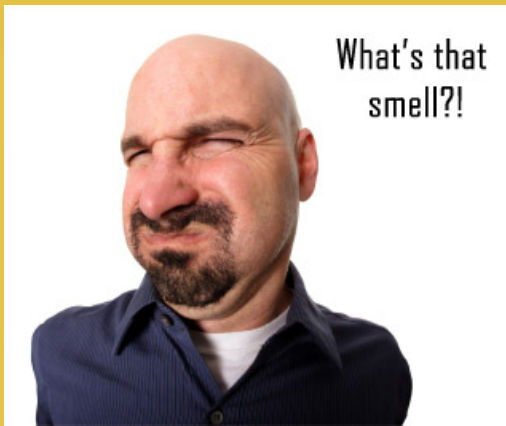
You come into contact with chemicals everyday at work when:

- Cleaning
- Performing Maintenance
- Repairing Equipment





Warning Signs that a Chemical May Harm You



- Strong odor
- Vapors, which burn the eyes, nose or throat
- Sounds of pressurized gas





Ways that Chemicals Can Enter your body:



Inhalation



Ingestion



Absorption



Injection



Chemicals: Health Hazards

- **Toxic**- causes sickness (acute or chronic)
- **Irritant**- redness or swelling to tissues
- **Corrosive**- causes damage, kills tissues
- **Sensitizer**- causes allergic reaction
- **Mutagen**- DNA damage
- **Cancer causing**-causes permanent changes or tumors to cells/tissues

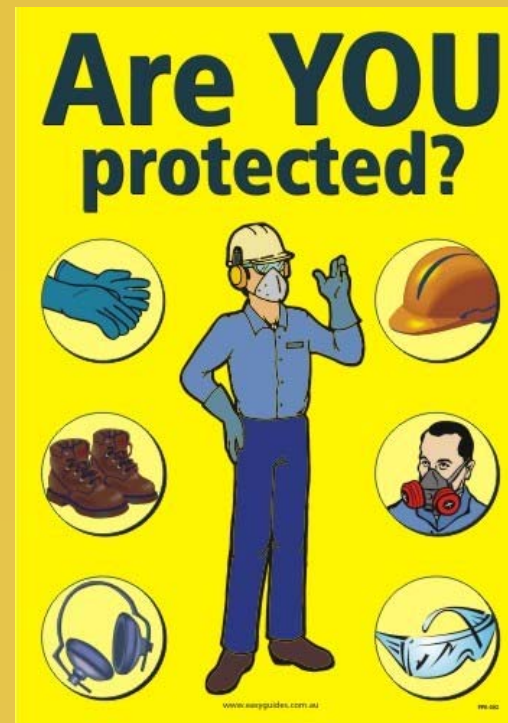


Chemicals: Physical Hazards

- **Compressed gases** under pressure, with a valve cap
- **Flammable aerosol**, gas or liquid aerosol, vapors that can ignite at less than 100 degrees
- **Water reactive** chemical that reacts with water to release a gas that is flammable or presents a health hazard

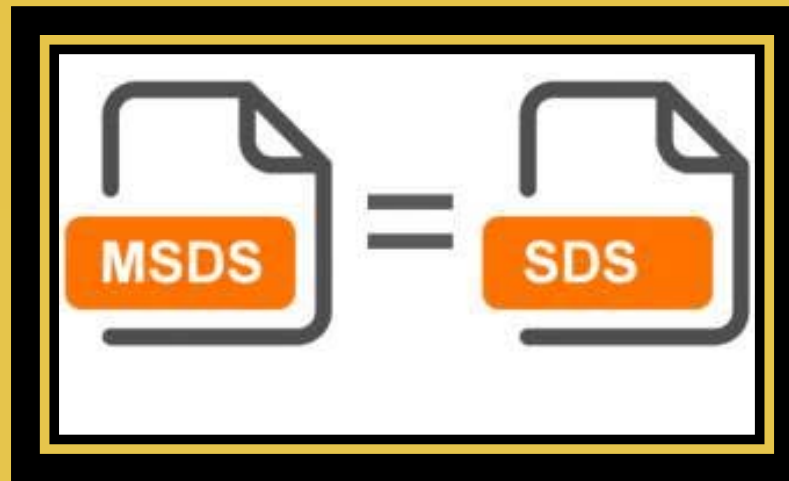
Protecting Yourself from Chemical Hazards

- Proper Use
- Proper Storage
- Proper PPE



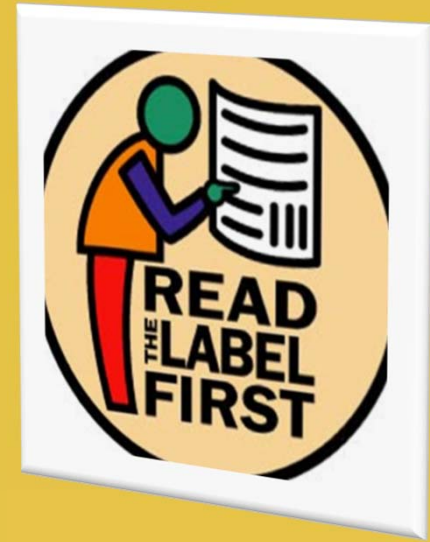
Where to Find Information on Chemical Hazards

- Product Label
- Safety Data Sheet (SDS)



Product Labels

- Symbols called “Pictograms”
- Signal Words
- Hazard Statements
- Precautionary Statements
- Product Identification
- Supplier/Manufacturer Identification





PICTOGRAM DETAILS



Flame over Circle

- Oxidizers

Ex. Hydrogen Peroxide



Flame

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

Ex. Butane



Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Ex. Gunpowder, Nitroglycerine



Skull and Crossbones

- Acute Toxicity (fatal or toxic)
Ex. Carbon Monoxide, Arsenic



Corrosion

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

Ex. Sodium Hydroxide (lye), Sulfuric Acid



Gas Cylinder

- Gases Under Pressure
Ex. Propane, Butane



Health Hazard

- Carcinogen (cancer causing)
- Mutagen (DNA/gene changes)
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Ex. Carbon Monoxide



Exclamation Mark

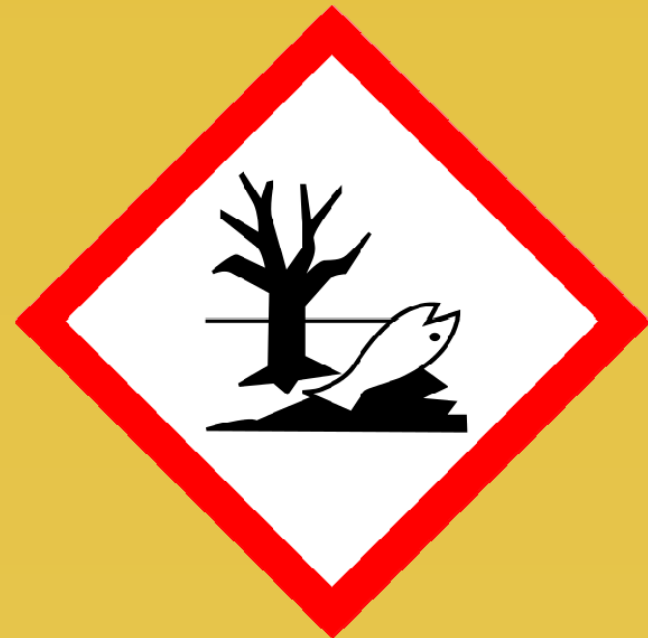
- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

Ex. Ethyl Alcohol, Acetone



Environment

- Aquatic Toxicity
 - (Non-Mandatory)



Labels: Signal Word

Words used to indicate the severity of the hazard and alert employees to the potential hazard.

Only 2 signal words will appear:

- **“DANGER”** (more severe hazard)
- **“WARNING”** (less severe hazard)

Not all labels will have a signal word. Some chemicals are not hazardous enough to require that a signal word appear on the label.





Pictograms
(Flammable and Acute Toxicity – Severe)



ToxiFlam (Contains: XYZ)

Product Identifier

Signal Word

Danger!

Toxic If Swallowed, Flammable Liquid and Vapor

Hazard Statements

Do not eat, drink or use tobacco when using this product. Wash hands thoroughly after handling. Keep container tightly closed. Keep away from heat/sparks/open flame. - No smoking. Wear protective gloves and eye/face protection. Ground container and receiving equipment. Use explosion-proof electrical equipment. Take precautionary measures against static discharge.

Use only non-sparking tools. Store in cool/well-ventilated place.

IF SWALLOWED: Immediately call a POISON CONTROL CENTER or doctor/physician. Rinse mouth.

Precautionary Statements

In case of fire, use water fog, dry chemical, CO₂, or "alcohol" foam.

Supplemental Information

See Safety Data Sheet for further details regarding safe use of this product.

MyCompany, MyStreet, MyTown NJ 00000, Tel: 444 966 6666

Supplier Identification



Labels for Secondary Containers

Labels must either contain:

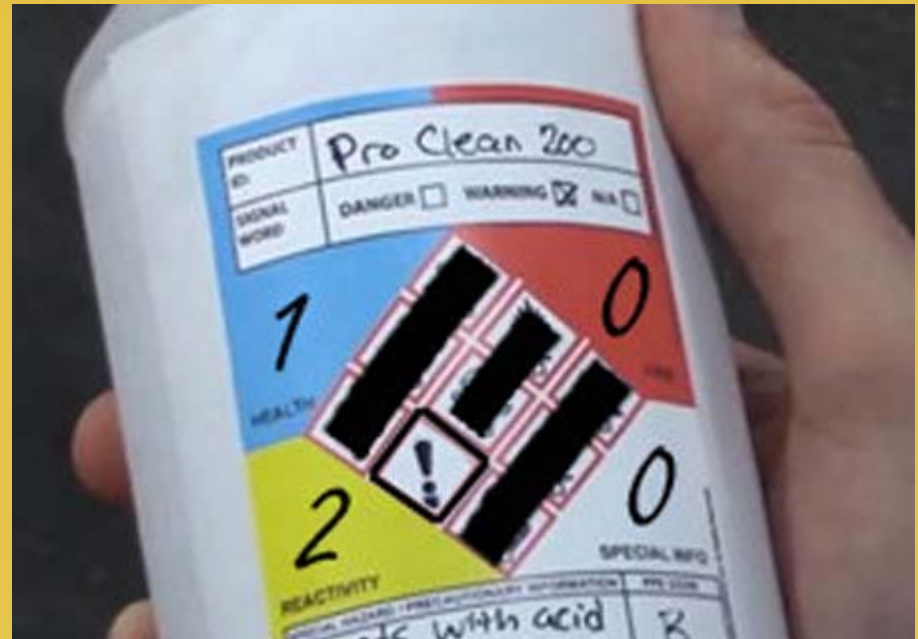
- GHS label elements (pictograms, etc.)

OR

- “Product identifier and words, pictures, symbols, or combination thereof, which, in conjunction with the other information immediately available to the employee under the HC program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.”



Wrong



Right

Safety Data Sheets (SDS)

- Material Safety Data Sheets (MSDS) are now called Safety Data Sheets (SDS).
- It is prepared by the chemical manufacturer and shipped with the product.
- Tells employees how to use the chemical safely.
- All SDSs will have a consistent 16-section format.
- Employers must ensure that SDSs are readily accessible to employees.





SDS Sections

Section 1 – Identification:

Identifies the chemical and gives recommended uses. It also provides contact information of the supplier.

Section 2 - Hazards Identification:

- Hazards of the chemical
- Appropriate warning information associated with those hazards (Danger or Warning).

SDS Sections

Section 3 – Composition / Ingredients:

Identifies the ingredient(s) contained in the product including:

- impurities and stabilizing additives.
- information on substances, mixtures, and all chemicals where a trade secret is claimed.

Section 4 - First-Aid Measures:

Describes the initial care that should

be given to an individual who has been exposed to the chemical.



SDS Sections

Section 5 – Fire-Fighting Measures:

Provides recommendations for fighting a fire caused by the chemical.

Section 6 - Accidental Release Measures:

Provides recommendations:

- Appropriate response to spills, leaks, or releases, (e.g. containment and cleanup practices)
- Response for large vs. small spills, if different.



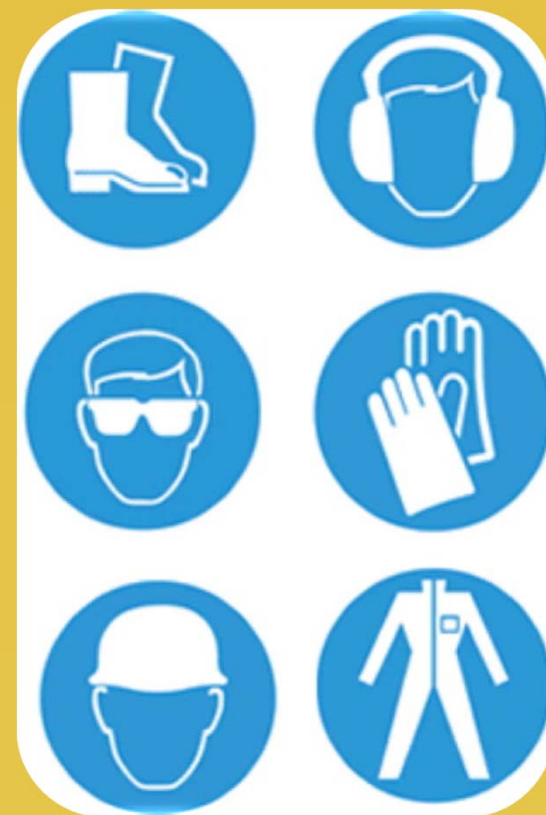
SDS Sections

Section 7 – Handling and Storage:

Provides guidance on the safe handling practices and safe storage of chemicals.

Section 8 – Exposure Controls / Personal Protection:

Indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure.





SDS Sections

Section 9 – Physical and Chemical Properties:

Identifies physical and chemical properties associated with the substance or mixture (appearance, odor, flammability, etc.)

Section 10 – Stability and Reactivity

Describes the reactivity hazards of the chemical and the chemical stability information.



SDS Sections

Section 11 - Toxicological Information:

Identifies toxicological and health effects information or indicates is data unavailable (routes of exposure, signs & symptoms, etc.)

Section 12 – Ecological Information*

Section 13 – Disposal Consideration*

Section 14 – Transport Information*

Section 15 – Regulatory Information*

***Non-mandatory**



SDS Sections

Section 16 – Other Information

Indicates when the SDS was prepared or when the last known revision was made.

The SDS may also state where the changes have been made to the previous version.



Access to Safety Data Sheets SDSs

- Each department maintains MSDSs or SDSs for the chemicals their employees use.
- All employees should have access to SDSs.
- Review each SDS for each chemical that you use.



The University subscribes to an online database that can be accessed via the EHS homepage from any computer on campus.



<https://msdsmanagement.msdsonline.com/598cf5b1-6aaa-4458-97d7-220665c04d52/msdsonline-search/>



SAFETY DATA SHEET EXAMPLES

1. Identification

Product Identifier: **Poly 74-20 Liquid Rubber Part B**
Poly 74-24 Liquid Rubber Part B
Poly 74-29 Liquid Rubber Part B
Poly 74-29 White Liquid Rubber Part B
Poly 74-30 Liquid Rubber Part B
Poly 74-30 Clear Liquid Rubber Part B
Poly 74-30 HT Liquid Rubber Part B
Poly 74-31 Liquid Rubber Part B
Poly 74-41 Liquid Rubber Part B
Poly 74-45 Liquid Rubber Part B

Product Code(s): 74-20B, 74-24B, 74-29B, 74-29WHITEB,
 74-30B, 74-30CLEARB, 74-30HTB, 74-31B,
 74-41B, 74-45B

Use: Component for Polyurethane Mold Rubber. For Industrial/Professional use only.

Manufacturer: Polytek Development Corp.
 55 Hilton St., Easton, PA 18043 USA

Phone Number: +1 610-559-8620 (9 a.m. to 5 p.m. EST)

Emergency Phone: CHEMTREC 800-424-9300 or
 +1 703-527-3887

E-mail: sds@polytek.com

2. Hazards Identification

GHS Classification:
 Specific Target Organ Toxicity - Repeated Exposure Category 2

Label Elements: Warning!



Contains Diethyltoluenediamine

Hazard Phrases

H373 May cause damage to pancreas through prolonged or repeated exposure.

Precautionary Phrases

P260 Do not breathe vapors.
 P314 Get medical advice if you feel unwell.
 P501 Dispose of contents and container to licensed, permitted incinerator, or other thermal destruction device in accordance with local and national regulations.

Supplemental Information: None known.

This is one part of a two-part system. Read and understand the hazard information on Part A before using.

3. Composition/Information on Ingredients

Chemical Name	CAS #	%
Diethyltoluenediamine	68479-98-1	1-3%

4. First-Aid Measures

Eye Contact: Rinse thoroughly with water, holding the eyelids open to be sure the material is washed out. Get medical attention if irritation persists.

Skin Contact: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation persists.

Inhalation: Remove person to fresh air. Get medical attention if symptoms persist.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

Most Important Symptoms/Effects: May cause mild eye and skin irritation. May be harmful if swallowed.

Indication of Immediate Medical Attention/Special Treatment: Immediate medical attention is not required.

5. Fire-Fighting Measures

Extinguishing Media: Use water fog, foam, carbon dioxide or dry chemical. Do not use solid water stream. Solid stream of water into hot product may cause violent steam generation or eruption.

Specific Hazards: Not classified as flammable or combustible. Product will burn under fire conditions.

Special Protective Equipment & Precautions for Fire-Fighters: Wear positive pressure, self-contained breathing apparatus and full-body protective clothing. Cool fire-exposed containers with water.

6. Accidental Release Measures
Personal Precautions, Protective Equipment and Emergency Procedures:

Remove all ignition sources. Clear non-emergency personnel from the area. Wear appropriate protective clothing to prevent eye and skin contact and avoid breathing vapors. Caution - spill area may be slippery.

Methods and Materials for Containment and Cleanup: Cover with an inert absorbent material and collect into an appropriate container for disposal. Avoid releases to the environment. Report spills and releases as required to appropriate authorities.

7. Handling and Storage

Safe Handling: Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep container closed when not in use.
Safe Storage: Store indoors at temperatures below 120°F (49°C). Store in original containers. Avoid getting moisture into containers. Keep containers tightly closed.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits: None Established

Ventilation: Use with adequate general or local exhaust ventilation to minimize exposure levels.

Respiratory Protection: If needed, an approved respirator with organic vapor cartridges may be used. Respirator selection and use should be based on contaminant type, form and concentration. For higher exposures or in an emergency, use a supplied-air respirator.

Skin Protection: Wear impervious gloves, such as butyl rubber or nitrile rubber.

Eye Protection: Wear chemical safety goggles.

Other Protective Measures: Wear impervious clothing to prevent skin contact and contamination of personal clothing. An eye wash facility and washing facility should be available in the work area. Follow applicable regulations and good Industrial Hygiene practice.

9. Physical and Chemical Properties

Appearance: Liquid of varied colors

Odor: Slightly pungent

Odor Threshold: No data available

pH: Not applicable

Melting Point: No data available

Boiling Point: No data available

Flash Point: > 350°F (>177°C)

Evaporation Rate: No data available

Upper/Lower Flammability Limits: No data available

Vapor Pressure: <0.01 mm Hg @ 25°C

Vapor Density: No data available

Date Prepared/Revised: Dec. 6, 2013; Supersedes: April 3, 2013
 X:\MSDS POP\34 POP\74-41-13-0185.docx



www.polytek.com • 610.559.8620
55 Hilton St. • Easton, PA 18042

Poly 74-20 Liquid Rubber

Part B

DIRECTIONS: Before use, read Technical Bulletin and SDS. Mix ratio by weight is 1A to 2B. Shake or stir Part B thoroughly before use. Combine proper amounts of A and B in a clean mixing container. Mix well, thoroughly scraping sides and bottom repeatedly. Pour over a properly prepared model as soon after mixing as possible. Pour time is 30 minutes. Demold after ~24 hours at room temperature. Close container tightly after use.

CONTENTS: Polyol, Diethyltoluenediamine, and trade secret ingredients

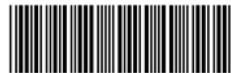
NET WEIGHT: 40 lb

FOR INDUSTRIAL/PROFESSIONAL USE ONLY.

MADE IN THE USA

DISCLAIMER: The information contained herein is considered accurate; however, Polytek® makes no warranty regarding its accuracy. The user must determine the suitability of the product for the intended use and accepts all risk and liability associated with that use.

1234567



7420B40



WARNING: MAY CAUSE DAMAGE TO ORGANS (PANCREAS) THROUGH PROLONGED OR REPEATED EXPOSURE.

Do not breathe vapors. Get medical advice if you feel unwell. Dispose of contents and container to licensed, permitted incinerator, or other thermal destruction device in accordance with local and national regulations.

SUPPLEMENTAL INFORMATION: This is one part of a two-part system. Read and understand the hazard information on Part A before using.



Updated Polytek® Product Label [Poly 74-20 Liquid Rubber: Part B]



Personal Protective Equipment (PPE)

- Wearing PPE such as safety glasses, as advised by the chemical's SDS can prevent accidental exposure.
- In the event that you are exposed to a chemical, follow the first aid measures listed on the label and/or SDS.

Chemical Use Re-Cap

Don't use chemicals until you know its:

- Proper Use
- Potential hazards
- Required PPE

Review & revise chemical inventory at least annually or as new chemicals are added





Questions

- If you have any question contact the Department of Environmental Health and Safety:
 - Phone: 334-4357
 - Email: safety@uncg.edu
 - Web: www.safety.uncg.edu