LAKESHORE
SCHOOL DIVISION

What Is WHMIS?
What Is WHHR?



Workplace Hazardous Materials Information System

"Adapted with the permission of: Seven Oaks General Hospital
2300 McPhillips Street
Winnipeg, Manitoba
R2V 3M3

EMPLOYEE RESPONSIBILITIES FOR WHMIS AND WHHR

Your responsibilites as a staff member are to:

1. Attend the general orientation to WHMIS and WHHR;
2. Attend the department-specific WHMIS sessions, and sign the attendance sheets;
3. Learn the hazardous/controlled products that are used in your area;
4. Identify the hazard symbols and relate them to safety information.
5. Follow the proper reporting channels, when you have a concern about a particular product or handling procedure;
6. Use the labels and MSDS's to learn how to respond correctly to an emergency spill or leak of a hazardous product;
7. Locate the Safety Data Information Station in your area, and learn how to use it;
8. Review yearly the department-specific WHMIS/WHHR training manual and record your review.

If you have a specific concern about a product, discuss it with your supervisor. More information about a product may be obtained through Protective Services & Environmental Safety, where Seven Oaks General Hospital has established a computer hookup with the Canadian Centre for Occupational Health & Safety (CCOSH) in Hamilton, Ontario.

WHMIS HELPS YOU TO BECOME AN INFORMED EMPLOYEE THROUGH:

KNOWING ABOUT CONTROLLED PRODUCTS IN THE WORKPLACE

KNOWING HOW TO AVOID DANGERS THROUGH SAFE HANDLING TECHNIQUES

KNOWING WHAT TO DO IN AN EMERGENCY

IT'S FOR YOUR OWN HEALTH AND SAFETY

NOTHING COULD BE MORE IMPORTANT

LAKESHORE SCHOOL DIVISION

WHMIS/WHHR EMPLOYEE MANUAL

Developed by Educational Services, Seven Oaks General Hospital

Approved by the Workplace Safety and Health Committee

January 30, 1989

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Educational Services, Seven Oaks General Hospital
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WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

WHMIS

WHAT IS IT?

The Workplace Hazardous Materials Information System (WHMIS) is new federal legislation that is intended to protect employee health and safety by identifying and addressing risks associated with hazardous/controlled materials.

HOW DOES IT WORK?

WHMIS requires the employer to provide information to the employee about products that could be dangerous.

The supplier and/or the employer makes sure controlled products come with special labels and information sheets (MSDS). These inform the employee about the specific hazards and the safe handling methods of the product.

The employer must make sure that the employee knows:

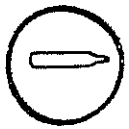
- what the information means and where to find it;
- how to safely handle, store, use, and discard the product;
- what to do in case of a product spill or leak.

WHAT DO YOU WATCH FOR?

Products that could be a health and/or safety risk are categorized into specific classes. Each class has a symbol that alerts the employee to possible dangers. The symbol is a warning: It is important to be able to recognize each symbol, and to know what it means.

HAZARDOUS SYMBOLS TO WATCH FOR

CLASS - A- Compressed Gas:



A gas under pressure;
Could explode if dropped, heated or overpressurized.

** Keep cylinder secure at all times;
** Do not use oil/grease on fittings;
** Do not store near a heat source.

An example is an oxygen cylinder.

CLASS - B - Flammable & Combustible Materials:



A gas, liquid, or solid that easily ignites, and burns vigorously.

** Keep away from flame or heat;
** Keep stored in Flammable Storage cabinets (found in OT, Lab, Psychiatry, and Physical Plant).

Acetone is a flammable liquid; and Formalin is a combustible liquid.

WORKPLACE HEALTH HAZARDS REGULATIONS — WHHR

WHAT IS IT?

WHHR ensures that exposure to controlled/hazardous products in the workplace is kept at a safe level. It also makes sure that hazardous wastes are disposed of safely, and that any fumes or leaks that could be hazardous to health are monitored. WHHR also outlines ways to lessen the risks and protect workers.

HOW DOES IT WORK?

WHHR has five parts. Most are already being addressed at the facility.

1. INVENTORY: the facility has made a list of all products in use that could be hazardous
2. EVALUATION: a decision is made about whether a product should be considered hazardous/controlled according to the legislation, given its usage in the facility.
3. MONITORING: exposure levels of airborne emissions from controlled products will be monitored if there is a health hazard.
4. CONTROLS: special protective equipment and procedures may be used to protect staff from overexposure. The facility has control procedures in place for products that have been determined to be especially hazardous. Control procedures for other products will be carried out, should there appear to be a need.
5. WORKER TRAINING: instructions about control measures are found on MSDS's. Use of protective measures, although sometimes bothersome, are there for your safety. They are only as good as they are used. The training for WHMIS and WHHR go hand-in-hand, to help you be alert to the presence of controlled products and to know how to handle them.

There are WHMIS Safety Data Information Stations located throughout the facility. They are large box-like wooden shelves that hang on the wall. Once in use, they will contain:

- a copy of the WHMIS and WHHR Regulations;
- an inventory of the hazardous products
- a file containing the MSDS sheets for the products;
- a copy of the Contingency Plans for spills;
- Spill Kits, where applicable;
- training aids/videos where applicable.

SECTION VIII: tells you the emergency first aid actions needed. The example also provides special instructions for the physician in order to better treat the victim.

SECTION VIII FIRST AID MEASURES
Call a physician. *Ingestion = Give large amounts of water. Induce vomiting (if conscious).* *Inhalation = Remove to fresh air. Give artificial respiration if not breathing. Give oxygen if breathing is difficult.* *Eyes/Skin Contact = Immediately flush with plenty of water for at least 15 minutes.*
Additional Information

SECTION IX: gives you the name of the person preparing the MSDS. This is a further resource, if more information is needed.

SECTION IX - PREPARATION DATE OF M.S.D.S.		
Prepared by (Group, Department, etc.) *Chemtrect # (800) 424-9300* *J.T. Baker - Nat'l. Response Centre # (800) 424-8802*	Phone Number *24 Hr. Emergency* *(201) 859-2151*	Date *12/17/87*
		PRINTED IN CANADA

CLASS - C -



Oxidizing Material:
A substance that increases the chance of something else burning/exploding by providing oxygen.
•• Do not mix with or store near anything that could burn.
Sodium hydroxide, and potassium permanganate are oxidizers.

CLASS - D -



Poisonous & Infectious Material:
There are three divisions of materials in this class:
1. Causes immediate and serious effect on the body. Could kill if overexposed.
   A large dose of methanol is acutely toxic.
2. Causes other toxic effects. Prolonged exposure can cause allergies, chronic disease, and changes in body cells.
   Overexposure to mercury and chloroform may produce chronic toxic effects.
3. An organism or its toxin that is known to cause disease in humans. Specimens of blood, urine or body fluids are biohazardous products.





For products in all three Divisions of Class D;
•• Do not allow to enter the body;
•• Do not taste, or breathe in the fumes unnecessarily;
•• If in contact with skin or eyes, wash affected area immediately with water for 15 to 30 minutes
•• Wear protective equipment as directed, when handling products.

CLASS - E -



Corrosive Material:
A material that is corrosive to the skin causing sores, rashes and ulcers.
•• Do not taste, smell, breathe in the fumes, or leave on skin or in eyes.
•• Wash skin or eyes with water immediately after contact. Apply a recommended antidote, if possible.
•• If swallowed, drink a lot of water or milk. Do not induce vomiting
Sulfuric and hydrochloric acids are corrosives.

CLASS - F -



Dangerously Reactive Material:
Reacts alone or with water/air to form dangerous/ explosive gases.
Could explode if heated. Wear safety gear.
•• Do not breathe in fumes.
•• Do not expose unnecessarily to air.
Sodium azide is a dangerously reactive product in specific situations.

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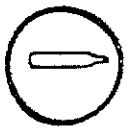
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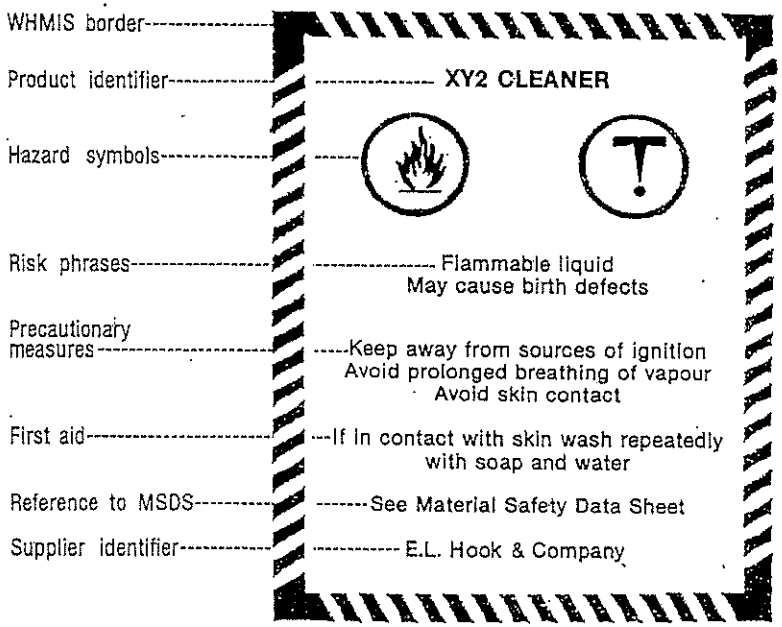
WHMIS — LABELS

Supplier Labels

The label alerts you to the dangers of the product. It tells you how to handle it safely, and what to do if a spill or leak happens.

All WHMIS supplier labels have a specific "hash" border design, and are in a colour contrasting to that of the container. They also have seven specific pieces of information.

1. **PRODUCT NAME:** gives you the name of the material. It should be the usual sales name.
2. **HAZARD SYMBOL:** alerts you to the specific danger in the product.
3. **RISK PHRASES:** tells you more about the health/safety concerns from the product.
4. **PRECAUTIONARY MEASURES:** tells you how to safely handle and store the product.
5. **FIRST AID MEASURES:** tells you what to do if a spill or leak occurs. It also tells you how the product can enter the body. This helps you to know what special precautions to take.
6. **REFERENCE TO MSDS:** tells you where to get more information about the product.
7. **SUPPLIER IDENTIFICATION:** gives the supplier name, address and phone number, for emergency use/information.



SECTION VI: tells you the effects of acute (short-term) and chronic (long-term) exposure to the product. It also may tell you how the product enters the body.

Material Name / Identifier	*ACETONE*						
SECTION VI - TOXICOLOGICAL PROPERTIES OF MATERIAL							
Route of Entry							
Skin Contact	Skin Absorption	Eye Contact ✓	Inhalation Acute ✓	Inhalation Chronic	Ingestion ✓		
Effects of Acute Exposure to Material	*Vapours = Irritating to skin, eyes, nose, throat — Inhalation causes headaches, nausea, vomiting, dizziness, suffocation, lower blood pressure, CNS depression*						
Effects of Chronic Exposure to Material	*Skin = Dermatitis* *Eyes = Temporary corneal damage*		*Ingestion = CNS depression* *Overexposure = kidney and/or liver damage*				
LD$_{50}$ of material (Specify Species and Route)	*see Sect. II*	LC$_{50}$ of material (Specify Species of Route)	*N/A*	Exposure limit(s)	*TLV-TWA 750 ppm*	Irritancy of material	*Vapours irritating*
Sensitization of material	*N/A*	Carcinogenicity, Reproductive effects, Teratogenicity, Mutagenicity		*NIL*		Synergistic Materials	*N/A*

SECTION VII: tells you important actions to take when handling the product. It tells you how to safely clean up after a spill, and how to get rid of the waste.

SECTION VII - PREVENTIVE MEASURES				
Personal Protective Equipment	*Wash thoroughly after handling*			
Gloves (Specify)	Respiratory (Specify)	Eye (Specify)	Footwear (Specify)	
Butyl rubber gloves	*Local or General exhaust (To TLV)*	*Safety glasses with Sideshields*		
Clothing (Special)	Other (Special)			
Engineering Controls (e.g. ventilation, enclosed process, specify)	*Above 5000 ppm, self-cont. breathing apparatus with full faceshield Local/General to TLV, gas mask with ORG. VAP. CAN. @ 5000 ppm.*			
Leak and Spill Procedure	*Wear protective clothing, shut off ignition sources; no flares, smoking, or flames in area, use water spray to reduce vapours. Take-up with sand or other non-combustible absorbent material and place in container. Flush area with water.*			
Waste Disposal	*Soak up with sand or earth (if spilled)* *Dispose in accordance with regulations - toxic waste.*			
Handling Procedures and Equipment	*Isolate from incompatible materials.*			
Storage Requirements	*Keep container tightly closed. Store in cool, dry, well-ventilated, flammable liquid storage area.*			
Special Shipping Information	*Bond and Ground containers when transferring.*			

SECTION IV: tells you if there is a fire or explosion risk. It also tells you how to fight a fire, if one occurs.

SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL			
Flammability Yes / No — If yes, under which conditions: *Vapours may flow along surfaces to distant ignition sources and flashback. Contact with strong oxidizers may cause fire.*			
Means of Extinction: *Alcohol foam, dry chemical, CO_2*			
Special Procedures: *Wear protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers from fire area, use water to keep containers cool.*			
Flashpoint (°C) and Method: *-- 18°C*	Upper explosion limit (% by volume): *13.0%*		Lower explosion limit (% by volume): *2.6%*
Auto Ignition Temperature (°C): *N/A*	TDG Flammability Classification: *FLAMMABLE LIQUID*		Hazardous Combustion Products: *CO, Co_2*
Explosion Data Sensitivity to Chemical Impact: *N/A*	Rate of Burning: *EXTREMELY FLAMMABLE*	Explosive Power: *Container may explode if heated.*	Sensitivity to Static Discharge: *N/A*

SECTION V: tells you of the risk of a reaction occurring, either alone or with another product. An unstable product can react by exploding, or by producing a harmful gas.

SECTION V - REACTIVITY DATA	
Chemical Stability ✓ Yes / No — If no, under which conditions?	*Hazardous Polymerization will not occur.*
Incompatibility to other substances ✓ Yes / No — If so, which ones?	*Strong oxidizing agents, strong bases, halogen acids/compound, ammonia, chlorine, nitric acid, hydrochloric acid, sulfuric acid.*
Reactivity and under what conditions	*Avoid heat, flame, other sources of ignition*
Hazardous Decomposition Products	*Carbon monoxide, carbon dioxide*

Workplace Labels

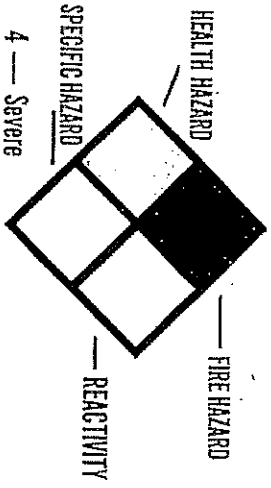
Workplace labels will be used when there is no supplier label available. Workplace labels must contain three pieces of information:

1. PRODUCT IDENTIFIER
2. SAFE HANDLING INFORMATION
3. REFERENCE TO MSDS

The following diagram shows the workplace label design that has been adopted by the Lakeshore School Division.

INSTRUCTIONS FOR USE

1. Fill in the product identity with the same name that appears on the Supplier Label or relevant MSDS;
2. Consult Supplier Label or MSDS for appropriate hazard symbols. Black-out the NON-APPLICABLE symbols;
3. Consult Supplier Label or MSDS for appropriate handling concerns. Black-out the NON-APPLICABLE symbols;
4. Fill in any additional information needed for safe handling of the product in the OTHER box; and
5. Consult the MSDS for the exact type of protective measures to use in order to control workplace exposures.



CONSULT CORRESPONDING MSDS FOR FURTHER HAZARDOUS INFORMATION AND INSTRUCTIONS

W.H. BRADY CO. STOCK NO. 58460

MATERIAL SAFETY DATA SHEETS – MSDS

The MSDS provides more complete information about a product. MSDS sheets are located in the Safety Data Information Stations throughout the facility, accessible to the employee for information when and where it is needed.

The following pages show and explain each section of an MSDS.

While all MSDS sheets have the same classes of information, they may have different formats.

SECTION: I gives addresses and phone numbers of the Supplier or manufacturer. This is necessary for emergency advice.

MATERIAL SAFETY DATA SHEET

SECTION 1 - MATERIAL IDENTIFICATION AND USE

Material Name / Identifier: ACETONE				Affix Wish Label
Manufacturer's Name: J.T. BAKER INC.		Supplier's Name: J.T. BAKER INC.		
Street Address: 222 RED SCHOOL LANE		Street Address: 222 RED SCHOOL LANE		
City: PHILIPSBURG	Province: NEW JERSEY, USA	City: PHILIPSBURG	Province: NEW JERSEY	
Postal Code: ACETONE	Emergency Telephone No: (201) 859-2151	Postal Code: 08865	Emergency Telephone No.: (201) 859-2151	
Chemical Name: ACETONE	Chemical Family		Chemical Formula: $(CH_3)_2$ CO	
Molecular Weight: 58.08	Trade Name and Synonyms: DI-METHYL KETONE; 2-PROPANONE		Material Use: SOLVENT	

SECTION II: lists the hazardous ingredients in a product, with their registration numbers. It shows the level of exposure that is toxic. The LD50 or LC50 values are those concentrations needed to cause the death of 50% of the test animals exposed.

SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	Approximate Concentration %	CAS N.A or UN Numbers	$L D_{50}$ (Specify Species and Route)	$L C_{50}$ (Specify Species and Route)
ACETONE	90 - 100%	67 - 64 - 1	(ORAL - RAT) 9750 mg/kg (ORAL - MOUSE) 3000 mg/kg (SKIN - RABBIT) 20 gm/kg	

SECTION III: describes the product's physical characteristics, colour, odour and appearance. The information should provide reasons for needed handling procedures.

SECTION III - PHYSICAL DATA FOR MATERIAL

Physical State: Gas / Liquid / Solid	Odour and Appearance: COLOURLESS, CLEAR, - SWEET ODOUR		Odour Threshold(p.p.m.): N/A	Specific Gravity: 0.79	
Vapour Pressure (mm): 181	Vapour Density (Air = 1): 2.0	Evaporation Rate (Butyl Acetate = 1): ~ 10	Boiling Point (°C): 56°C	Freezing Point (°C): – 95°C	
Solubility in Water (20°C): 100%	% Volatile (by volume): 100%	pH: N/A	Density (g/ml): N/A	Coefficient of water / oil distribution: N/A	