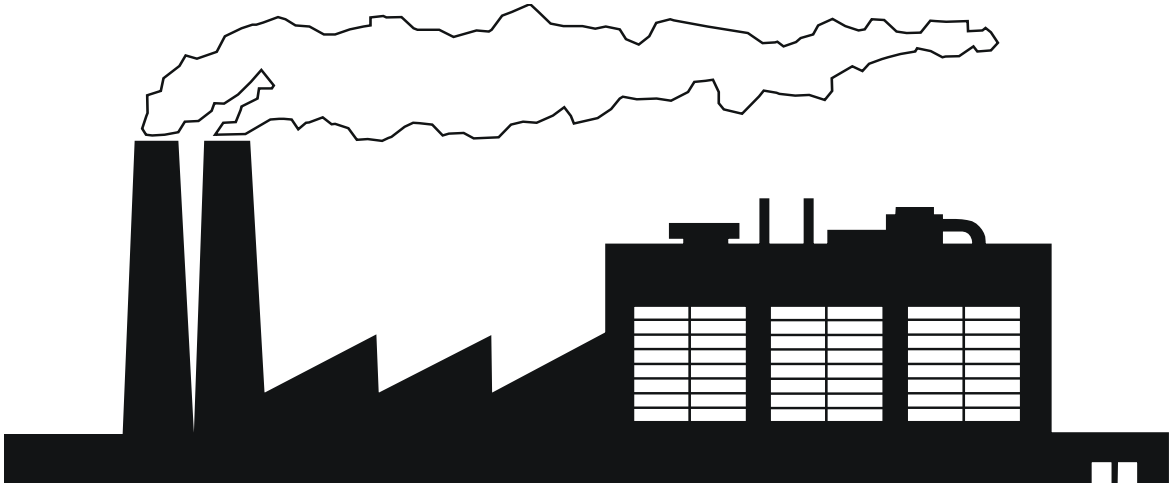
District of Parry Sound
Social Services
Administration Board

WHMIS

Workplace Hazardous Materials Information System

WHMIS



is a WORKPLACE legislation ONLY

This training material has been prepared in accordance with Federal Hazardous Products Act

For ALL personnel who work with, are in proximity to or perform work involving the manufacture of a Controlled Product.

WHMIS is a Federal Legislation for working safely with Controlled Products in the workplace, in Canada.

ALL provinces have identical requirements for training

'in proximity to' means, the area in which a worker's (*including contract Workers and administrative personnel*) health & safety could be at risk during the use, handling, storage or disposal of a Controlled Product, or emergencies such as 'accidental release'.

-- WHMIS --

Workplace Hazardous Materials Information System

- **is a nationwide information system ensuring information regarding Controlled Products produced, sold in, imported or used in the workplace; is made available to the employer for:**

  - **the safe use, handling, storage and disposal of Controlled Products** through appropriate employee training, covering:
    - Material Safety Data Sheets
    - Controlled Products Supplier & Workplace labelling, and
    - Site-specific Worker Education
  - reducing injuries, illness, death, medical costs & lost production

-- WHMIS --

Workplace Hazardous Materials Information System

- **requires manufacturer's, suppliers and importers of Controlled Products *to provide information* in four very important areas:**

  - Proper classification of the Controlled Product(s)
  - Affixing of the appropriate Supplier labels to properly packaged containers of Controlled Products
  - Development of a WHMIS Material Safety Data Sheet (MSDS) for the Controlled Product(s)
  - Providing the above information to their workplace customers

-- WHMIS --

Workplace Hazardous Materials Information System

- **is not a legislation in itself (i.e. you cannot buy the WHMIS Regulations). WHMIS is an acronym, and as such includes the following Federal and Provincial/Territorial legislations:**

Federal Hazardous Products Act	Covering the sale and importation of Controlled Products
Canada Labour Code	Covering Hazardous Materials (Controlled Products) usage in the workplace
Provincial & Territorial Occupational Health & Safety Regulations	Covering the implementation and enforcement (if necessary) of the WHMIS requirements

-- WHMIS --

- **the following four (4) groups are responsible for:**

Suppliers: - providing hazard information by labels and an MSDS on all Controlled Products/containers of Controlled Products

Employers: - ensuring containers of Controlled Products, in the workplace, have WHMIS labels, identifiers & MSDS
- keeping MSDSs readily available to employees
- providing effective worker education

Workers: - handling Controlled products in a safe manner
- informing employer about damaged or missing labels

Regulators: (Federal & Provincial OH&S representatives)
- developing & administering WHMIS legislation
- providing employers with general information on WHMIS
- ensuring compliance with WHMIS-related regulations

-- WHMIS --

- **the employer is responsible to:**

Evaluate the workplace:

- conduct an inventory of the Controlled Products produced/used in the workplace
- *conduct an inventory of partially exempted (i.e. consumer products) used and stored in the workplace*
- identify what is required for labels, identifiers and MSDS, and
- identify employees who work with or are *"in proximity to "*Controlled products in the workplace

Assess the needs:

- for worker education
- for control measures including engineering controls, work and hygiene practices and Personal Protective Equipment (PPE)
- for labels, identifiers (i.e. signage) and MSDSs, and
- emergency procedures

-- WHMIS --

- **the employer is responsible (cont'd):**

Develop Guidelines:

- for the development, regular follow-up and review of ALL the components of WHMIS in the workplace, including:
  - the tracking, maintenance and availability for ALL MSDS documentation (including electronic retrieval)
  - the worker education program
  - the adequacy of existing labels, hazard identifiers and MSDS, and
  - as a recommendation, *an annual review* of the worker education program

-- WHMIS Worker Education --

- **this course training material has been prepared in accordance with Federal Hazardous Products Act and various Provincial and/or Territorial Health and Safety Chemical Hazard Regulations, for appropriate WORKER EDUCATION.**

An EMPLOYER SHALL ENSURE that a worker who works with, is *"in proximity to"*, or performs work involving the manufacture of a Controlled product receives instruction with respect to:

(a) hazard information received from the supplier, and

(b) any further hazard information of which the employer is aware, concerning the Controlled product

-- WHMIS Worker Education --

- **Worker Education** (cont'd):

(c) the content required on a Supplier label and Workplace label and the purpose and significance of the information contained on them

(d) the content required on a Material Safety Data Sheet and the purpose and significance of the information contained in it

(e) procedures for the safe use, storage, handling or manufacture of that Controlled product

(f) where applicable, the modes of identification of Controlled products in piping systems and vessels

(g) procedures to be followed where fugitive emissions are present, and

(h) procedures to be followed in case of an emergency involving a/the Controlled Product

-- WHMIS Worker Education --

- **Worker Education** (cont'd):

An EMPLOYER SHALL ENSURE that the previously mentioned required instruction:

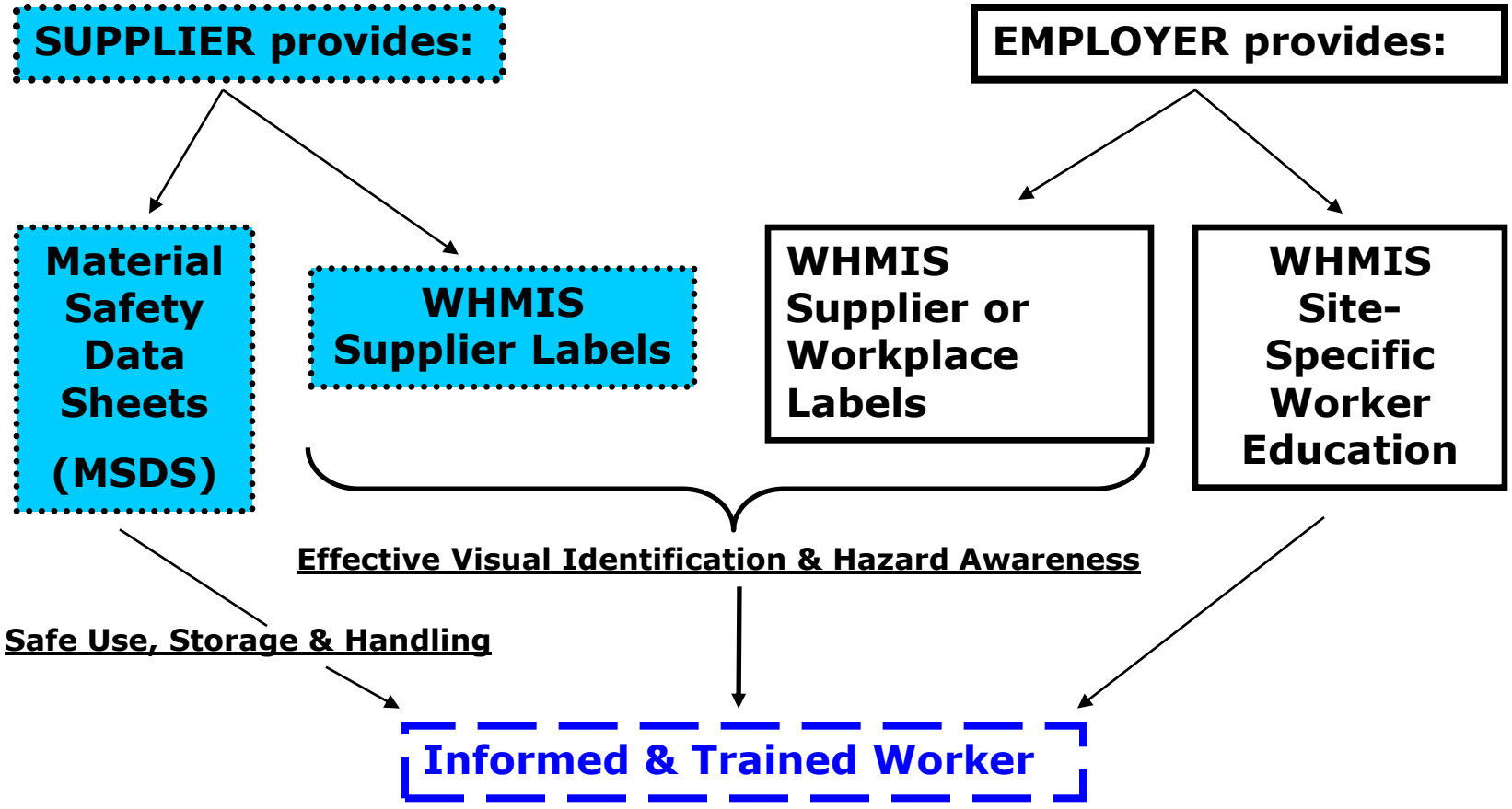
(i) is developed and implemented for the employer's workplace

(j) is developed and implemented in consultation with the joint workplace health and safety committee

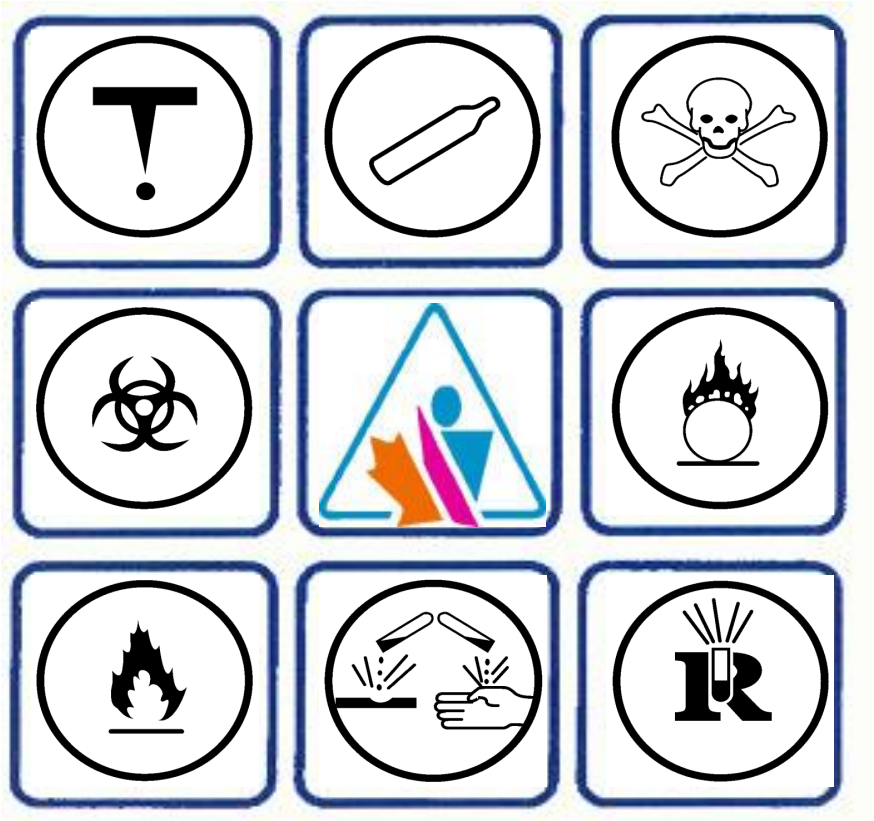
An EMPLOYER SHALL ENSURE, so far as is practical, that the required instruction results in the worker's being able to apply the information to protect the worker's health and safety

A worker SHALL participate in the required instruction

"HOW WHMIS WORKS"

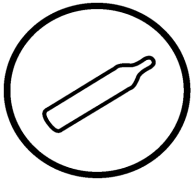


WHMIS CLASSIFICATION



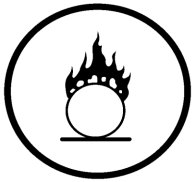
A Canadian Legislation for SAFETY in the WORKPLACE

WHMIS CLASSIFICATION



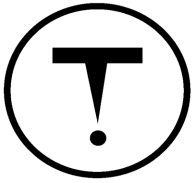
CLASS A
Compressed Gas

CLASS B
Flammable



CLASS C
Oxidizer

CLASS D1
Poisonous
(**acute** toxicity)



CLASS D2
Poisonous
(**chronic** toxicity)

CLASS D3
Biohazardous
Infectious

CLASS E
Corrosive

CLASS F
Dangerously
Reactive

WHMIS CLASSIFICATION

Through the Federal Hazardous Products Act and the Controlled Products Regulations, Controlled Products have been divided into six (6) Classes according to the type of danger presented or the material from which they are made.

There are **6 classes** of Controlled Products representing a type of danger presented or the material from which they are made.

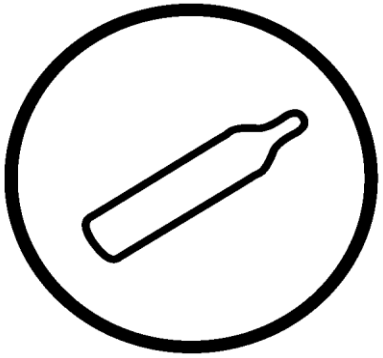
Two of the six classes (Classes B & D) have been further divided into "**Divisions**":

Divisions are represented as follows:

EG: Class B, Division 3 or B3 [Combustible Liquids], or

EG: Class D, Division 1A or D1A [Poisonous Substance – Acute Toxicity]

WHMIS CLASSIFICATION



CLASS A

Compressed Gas

- Poses an explosion danger because the gas is held in a cylinder under pressure
- container may explode if dropped or heated in a fire
- handle with care, store away from sources of ignition

Examples:	Propane, Acetylene, Oxygen, Nitrogen, etc.

WHMIS CLASSIFICATION

CLASS B

Flammable and Combustible Materials

- may burn at relatively low temperatures flammable materials catch fire at lower temperatures than combustible materials
- may burst into flame spontaneously in air or release a flammable gas on contact with water
- may cause fire when exposed to heat, sparks, flames or as a result of friction

Examples: Methanol, Gasoline, Varsol, Diesel, Sulphur, Lithium, etc.

See next for Divisions within Class B

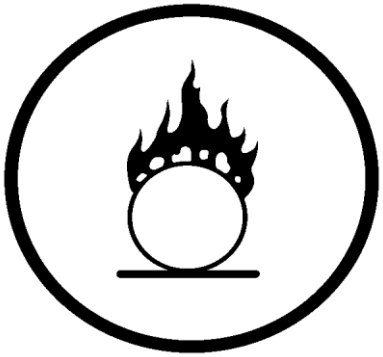
WHMIS CLASSIFICATION

CLASS B **Flammable and Combustible Materials**

Has 6 divisions, as follows:

Division 1	**--**	Flammable Gases (propane, butane)
Division 2	**--**	Flammable Liquids (methanol, gasoline)
Division 3	**--**	Combustible Liquids (varsol, diesel)
Division 4	**--**	Flammable Solids (sulfur)
Division 5	**--**	Flammable Aerosols (engine starting fluid)
Division 6	**--**	Reactive Flammable Materials (lithium)

WHMIS CLASSIFICATION



CLASS C

Oxidizing Material

- causes or contributes to the combustion of another material by yielding oxygen or another oxidizing substance; whether or not the product itself is combustible
- may cause fire, react violently or cause an explosion when in contact with combustible materials
- it is an organic peroxide

Examples: Ammonium Nitrate, Hydrogen Peroxide, etc.

WHMIS CLASSIFICATION

CLASS D **Poisonous and Infectious Materials have 3 divisions , as follows:**

Poisonous Material		
Division 1A	-	Toxic materials causing immediate, serious **acute** effects
Division 1B	-	Toxic materials causing other **acute** effects
Poisonous Material		
Division 2A	-	Very toxic materials causing **chronic** effects
Division 2B	-	Toxic materials causing other **chronic** effects
Infectious Material		
Division 3	-	Biohazardous Infectious Materials

WHMIS CLASSIFICATION

ACUTE Toxicity

CLASS D1A & D1B

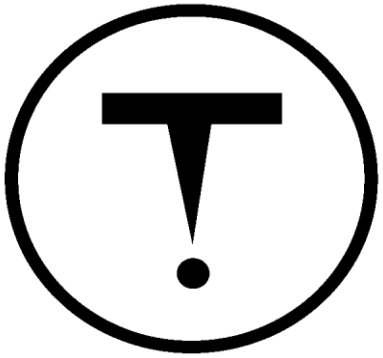
Poisonous Substances

- is a potentially fatal poisonous substance causing permanent damage if it is inhaled or swallowed or enters the body through skin contact

- causes immediate and serious toxic effects **(acute)**

Examples: Hydrogen Sulphide (H_2S), Chlorine Gas etc.

WHMIS CLASSIFICATION



CHRONIC
Toxicity

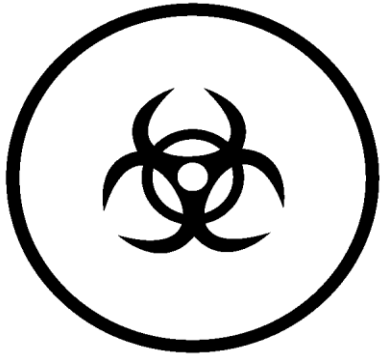
CLASS D2A & D2B
Poisonous Substances

- is a poisonous substance that is not immediately dangerous to health; however, it may cause death or permanent damage as a result of over exposure

- causes other toxic effects **(chronic)**

Examples:	Asbestos Fibre, Mercury, Lead, etc.

WHMIS CLASSIFICATION

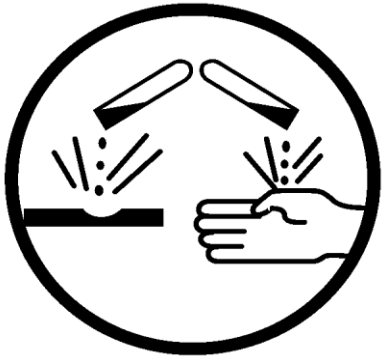


CLASS D3 - may cause a disease resulting in illness or death

Biohazardous Infectious Material

Examples:	Blood samples/body fluids (tuberculosis, hepatitis, HIV, etc.)

WHMIS CLASSIFICATION



CLASS E

Corrosive Material

- causes severe eye & skin irritation on contact
- causes severe tissue damage with prolonged contact
- gases harmful if inhaled

Examples: Battery Fluid Acid,
Sulphuric Acid,
many cleaning supplies

WHMIS CLASSIFICATION

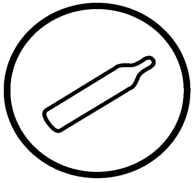
CLASS F

Dangerously Reactive

- is very unstable – undergoes vigorous polymerization (i.e.changes its chemical properties)
- may react with water to form a toxic or flammable gas
- may explode as a result of shock, friction or increase in temperature; or if heated when in a closed container

Examples: Magnesium Powder,
Picric Acid,
Epoxy Resins

WHMIS CLASSIFICATION



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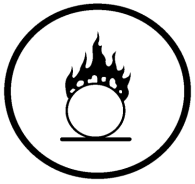
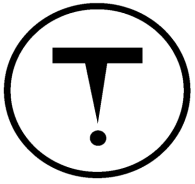


CLASS C
Oxidizer

CLASS D1
Poisonous
(acute toxicity)



CLASS D2
Poisonous
(chronic toxicity)

CLASS D3
Biohazardous
Infectious

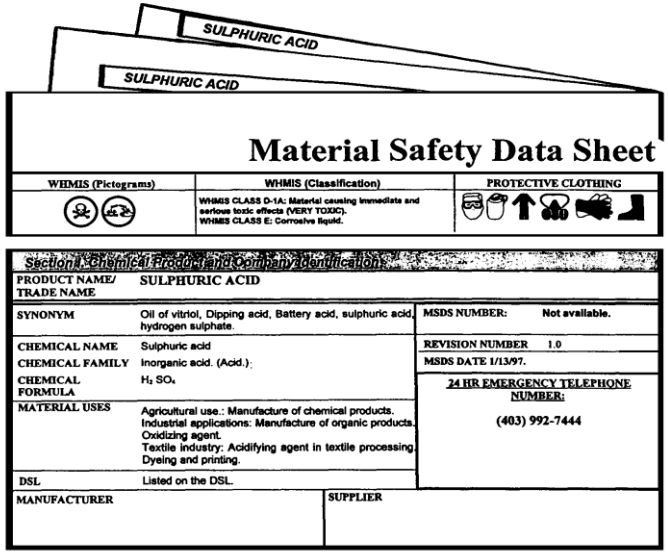
CLASS E
Corrosive

CLASS F
Dangerously
Reactive

-- MATERIAL SAFETY DATA SHEET --

A Material Safety Data Sheet is like a USER Manual you would get when you purchase an appliance, electronic product, new car, etc..

(i.e. - thank you for buying our product, here is how you install, hook up and use our product. If you have any problems or need further information, please give us a call)


SULPHURIC ACID

SULPHURIC ACID

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	PROTECTIVE CLOTHING
	WHMIS CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). WHMIS CLASS E: Corrosive liquid.	

Section 1 Chemical Product and Company Identification

PRODUCT NAME/ TRADE NAME	SULPHURIC ACID		
SYNONYM	Oil of vitriol, Dipping acid, Battery acid, sulphuric acid, hydrogen sulphate.	MSDS NUMBER:	Not available.
CHEMICAL NAME	Sulphuric acid	REVISION NUMBER	1.0
CHEMICAL FAMILY	Inorganic acid. (Acid.);	MSDS DATE	1/13/97.
CHEMICAL FORMULA	H_2SO_4	24 HR EMERGENCY TELEPHONE NUMBER:	(403) 992-7444
MATERIAL USES	Agricultural use.: Manufacture of chemical products. Industrial applications: Manufacture of organic products. Oxidizing agent. Textile industry: Acidifying agent in textile processing. Dyeing and printing.		
DSL	Listed on the DSL.		
MANUFACTURER		SUPPLIER	

-- MATERIAL SAFETY DATA SHEET --

The Supplier of the Controlled Product MUST provide an MSDS with or prior to the first shipment to the customer;

or MUST provide an updated MSDS to the customer, *when the Supplier has made a change to the MSDS*

This updated MSDS MUST be sent with the next shipment to the customer, or sooner if the change made effects safe handling procedures

The customer MUST ensure that ALL MSDSs are current (i.e. NOT over three (3) years old from the date of preparation/revision)

It is the customer's responsibility to obtain a revised MSDS

-- MATERIAL SAFETY DATA SHEET --

Materials Safety Data Sheets (MSDS) contain information that is more comprehensive than the information on WHMIS Supplier & Workplace labels

The MSDS is the most comprehensive source of detailed information on a Controlled Product's properties, its major hazards and the basic measures to be taken to protect yourself against those hazards

The MSDS MUST be available in English or French

The requirements for the WHMIS MSDS development, include:

(1) content, (2) format, (3) language and (4) revision

-- MATERIAL SAFETY DATA SHEET --

The following shows a 9 Section MSDS you will see in the workplace

9 Section -- WHMIS MSDS Headings	
Section	**Heading**
1. -	Product Identifier or *Product Information*
2. -	Ingredients Section or *Regulated Components*
3. -	Physical Properties or *Chemical Properties*
4. -	Fire and Explosion Hazard
5. -	Reactivity Data
6. -	Toxicological Properties or *Health Hazard Information*
7. -	Precaution Measures or *Preventive Measures*
8. -	First Aid Measures
9. -	Preparation

The next frame shows a 16 Section MSDS you will see in the workplace

-- MATERIAL SAFETY DATA SHEET --

16 Section -- ANSI/ILO MSDS Headings

Section	Heading
1. -	Product Identifier or *Product Information*
2. -	Ingredients Section or *Regulated Components*
3. -	Physical Properties or *Chemical Properties*
4. -	First Aid Measures
5. -	Fire and Explosion Hazard
6. -	Accidental Release Measures
7. -	Handling and Storage
8. -	Exposure Controls, Personal Protection & Exposure limits
9. -	Physical and Chemical Properties
10. -	Stability and Reactivity
11. -	Toxicological Information or *Health Hazard Information*
12. -	Ecological Information
13. -	Disposal Considerations
14. -	Transport Information
15. -	Regulatory Information
16. -	Other Information

ANSI means,
American
National
Standards
Institute

ILO means,
International
Labor
Organization

-- MATERIAL SAFETY DATA SHEET --

The following 11 frames cover the Material Safety Data Sheet for the Controlled Product "VARSOL"

-- Sample MSDS - VARSOL --

SECTION 1 -- PRODUCT IDENTIFIER/INFORMATION

Product Identifier: VARSOL SOLVENT

Application and Use: Solvent or Fuel

Product Description: Aliphatic hydrocarbon

Regulatory Classification: WHMIS Class B, Division 3

Manufacturer/Supplier: Imperial Oil – Products Division

111 St. Clair Avenue W.

Toronto, ON M5W 1K3 (416) 968-4111

Emergency telephone number: (519) 339-2145 [24 hour service]

What is the product? Who is the supplier? How do I contact them?

-- Sample MSDS - VARSOL --

SECTION 2 -- INGREDIENTS SECTION

The following component data is defined in accordance with the Federal Hazardous Products Act.

NAME	%(v/v)	CAS Number
Stoddard Solvent	100	8052-41-3

This Section informs you as to what the main ingredient(s) are and the percentages by volume of each ingredient(s).

The "CAS Number", shown above, represents a number assigned by the American Society of Chemists to a hazardous substance.

-- Sample MSDS - VARSOL --

SECTION 3 -- PHYSICAL/Chemical PROPERTIES

Physical State: Liquid	**Specific Gravity:** 0.79 at 15.5°C
Vapour Pressure: < 0.3kPa at 20°C	**Solubility in Water:** <0.01% at 25°C
Boiling Point: 158°C to 197°C	**Freezing/Melting Point:** -58°C
Viscosity: 1.14 cST at 25°C	**Vapour Density (air = 1):** 4.8
Evaporation Rate: 0.1 approximately	**% Volatile:**
Odour: Mild Petroleum Odour	**Appearance:** **Clear, colourless liquid**

If the Supplier was to change the colour of the product (VARSOL) from a "clear, colourless liquid" to a "BLUE coloured liquid"; then, the Supplier would have to send an updated MSDS to the client with the next shipment

If you ONLY 'work with' the Controlled Product; then, you might ONLY want/need to know if it is a solid, liquid or gas; what does it look like and what does it smell like (odour).

-- Sample MSDS - VARSOL --

SECTION 4 -- FIRE and EXPLOSION HAZARD

Flash Point & Method: 43°C TCC [closed-cup test in laboratory]

Auto-Ignition Temperature: 229°C [approximately]

Flammable Limits (lower & upper): 1 to 13.3% by volume [approximately]

GENERAL HAZARDS: Combustible liquid; may form combustible mixtures at or above the flash point.

Toxic gases will form on combustion.

-- Sample MSDS - VARSOL --

SECTION 4 -- FIRE and EXPLOSION HAZARD (continued)

HAZARDOUS COMBUSTION PRODUCTS:

Fumes, smoke & ***carbon monoxide***

('Carbon Monoxide' is a highly toxic gas that prevents oxygen from being carried to blood tissue; thus, resulting in breathing difficulties, headaches, dizziness, nausea and possible death.)

FIRE FIGHTING: Cool exposed surfaces. Wear respiratory and eye protection. **A Self-contained Breathing Apparatus (SCBA) is recommended for indoor fires** and significant outdoor fires. Either the liquid or vapour may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

-- Sample MSDS - VARSOL --

SECTION 5 -- REACTIVITY DATA

This product is stable and hazardous polymerization (i.e. the properties of the chemical change) will not occur.

INCOMPATIBLE MATERIALS & CONDITIONS TO AVOID:

Strong **OXIDIZING** agents

('Oxidizing Agents' are substances or materials which cause or contribute to combustion of another material by yielding oxygen or an oxidizing substance; whether or not the substance itself is combustible)

HAZARDOUS DECOMPOSITION: not applicable

This section tells you what other substances this product will react with.

Many times you will see this information used again in the Preventive Measures/ Precautionary Measures section to identify appropriate storage considerations

-- Sample MSDS - VARSOL --

SECTION 6 -- HEALTH HAZARD INFORMATION

EFFECTS ON YOUR HEALTH: (how this product can harm you)

INHALATION: High vapour concentrations (greater than 100 parts per million [ppm]) are irritating to the eyes, respiratory tract, may cause headaches, dizziness, drowsiness and other central nervous system [CNS] effects; including death

EYE CONTACT: Slightly irritating, will not injure the eye tissue

SKIN CONTACT: Frequent and prolonged contact may irritate the skin and cause a skin rash (dermatitis)

INGESTION: Small amount aspirated (ingested into the lungs) into the respiratory system during ingestion or from vomiting may cause mild to severe pulmonary (pertaining to the lungs) injury and possible death.

-- Sample MSDS - VARSOL --

SECTION 6 -- HEALTH HAZARD INFORMATION

There are four (4) routes of entry, of a Controlled product, into the body:

INHALATION	INGESTION	EYES	SKIN
			

-- Sample MSDS - VARSOL --

SECTION 7 -- PREVENTIVE/PRECAUTIONARY MEASURES

PERSONAL PROTECTION:

The selection of personal protective equipment [PPE] varies depending upon conditions of use.

Where prolonged and/or repeated skin and eye contact is likely to occur, wear safety glasses with side shields (or chemical splash goggles), long sleeves (coveralls) and chemical resistant gloves.

Where concentrations in air may exceed occupational exposure limits given in Section 6 (of this MSDS) and where engineering, work practices or other means of exposure reduction are not adequate, approved respirators may be necessary to prevent overexposure by inhalation.

-- Sample MSDS - VARSOL --

SECTION 7 -- PREVENTIVE/PRECAUTIONARY MEASURES (cont'd)

HANDLING and STORAGE:

Keep containers closed. Handle and open containers with care.

Store in cool well ventilated area away from *incompatible materials*.

('Incompatible Materials' are materials that cause dangerous reactions and the release of energy from direct contact with another material or substance.) (Refer to REACTIVITY DATA section to be certain.)

DO NOT handle or store near open flame, heat or other sources of ignition. Protect material from direct sunlight. Materials may accumulate static charges which will cause electrical spark (ignition source) – use proper grounding procedures.

DO NOT pressurize, cut, heat or weld containers. Empty product containers may contain product residue – **DO NOT** reuse empty containers without commercial cleaning (purging) or reconditioning.

-- Sample MSDS - VARSOL --

SECTION 7 -- PREVENTIVE/PRECAUTIONARY MEASURES (cont'd)

ENGINEERING CONTROLS:

The use of local exhaust ventilation is recommended to control emissions near the source. Provide mechanical ventilation of confined spaces.

SPILL CONTROL and DISPOSAL:

Consult an expert on the disposal of recovered material. Ensure disposal in compliance with government r and ensure conformity to local disposal regulati

LAND and WATER SPILL:

Eliminate sources of ignition. Keep public away. Prevent additional discharge of product. Conduct product containment and cleanup as per specified procedures or seek professional assistance.

-- Sample MSDS - VARSOL --

SECTION 8 -- FIRST AID MEASURES

INHALATION: In emergency situations, use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.

EYE CONTACT: Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT: Immediately flush with large amounts of water. Use soap if available. Remove contaminated clothing, including shoes, after flushing has begun.

INGESTION: If swallowed, **DO NOT INDUCE** vomiting. Keep at rest and get prompt medical attention..

-- Sample MSDS - VARSOL --

SECTION 9 -- PREPARATION

DATE PREPARED: January 3, 2004

DATE REVISED: December 3, 2004

PREPARED BY: **Lubricants and Specialties**
Imperial Oil Products Division
111 St. Clair Avenue W.
Toronto, ON M5W 1K3 1-800-268-3183

This MSDS is no longer valid as it is 3 years older than the latest revision date.

-- MATERIAL SAFETY DATA SHEET --

REMEMBER 

Material Safety Data Sheets MUST BE UPDATED, when:

- **they are MORE THAN 3 YEARS OLD, or**
- **when the Supplier has MADE A CHANGE to the MSDS**

- **MUST be available to workers, on ALL shifts**
- **MUST be in customer's choice of English or French**

Your Safety is Your Responsibility

WHMIS LABELS

Labelling (Supplier, Workplace and Pipes & Piping Systems) is required under the Federal Hazardous Products Act, and subsequently various Provincial/Territorial Health & Safety Chemical Hazards Regulations – FOR THE SAFE USE, STORAGE, HANDLING AND DISPOSAL of Controlled Products in the workplace

Labelling will give you an indication of the hazard(s) associated with the Controlled Product you are using.

The hazard symbol on a WHMIS Supplier or Workplace label gives a quick reference as to the hazard(s) of the Controlled Product

							
Class A	**Class B**	**Class C**	**Class D1**	**Class D2**	**Class D3**	**Class E**	**Class F**
Compressed Gas	**Flammable**	**Oxidizer**	**Poisonous/ Toxic (Acute)**	**Poisonous/ Toxic (Chronic)**	**Biohazardous Infectious**	**Corrosive**	**Dangerously Reactive**

WHMIS SUPPLIER LABELS

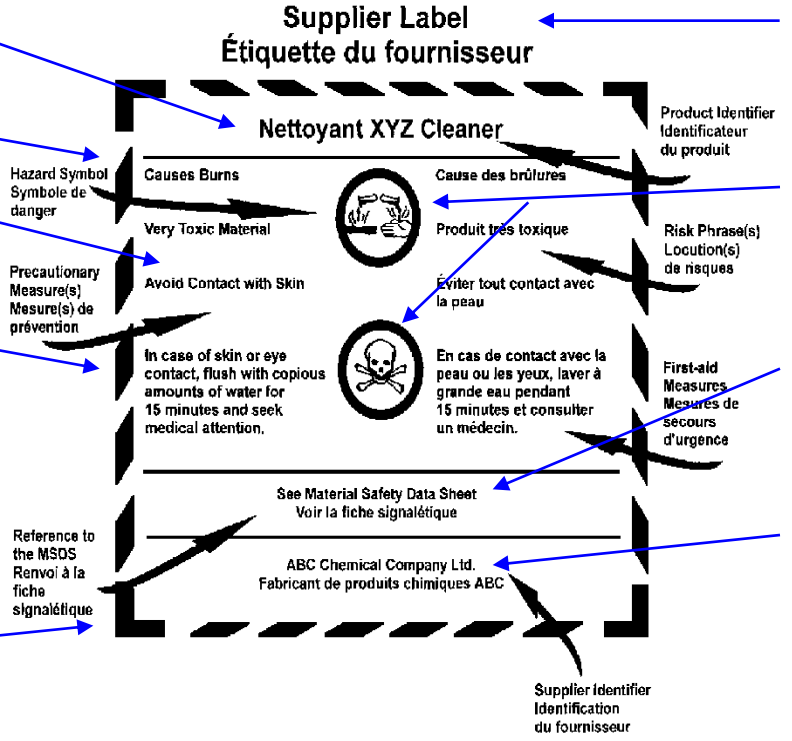
PRODUCT IDENTIFIER
(same as on MSDS)

RISK PHRASES
(alert handler to hazards)

PRECAUTION MEASURES
(safe use, handling information)

FIRST AID MEASURES
(what to do in case of a medical emergency)

ALL Information contained within a **Cross-Hatched Border**



ENGLISH & FRENCH
(both languages required on label)

WHMIS HAZARD SYMBOLS
(Corrosive & Acute Toxicity)

REFERENCE TO MSDS
(most comprehensive information about the product)

SUPPLIER IDENTIFICATION
(ONLY the name is required)

Hazard Symbols normally show the MOST serious symbol first, followed by the next next hazard, etc.

(i.e. – left to right or top to bottom – above: Corrosive is the main hazard; then, Poisonous [acute toxicity])

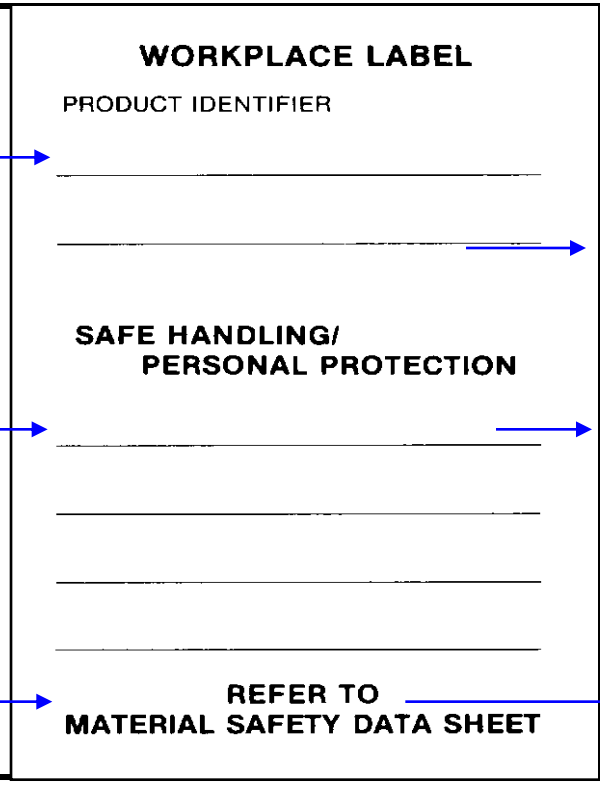
WHMIS WORKPLACE LABELS

Note: The workplace label ONLY requires the Product Identifier, Safe Use & Handling statement and Reference to the Material Safety Data Sheet

PRODUCT IDENTIFIER
(same as on Supplier label and Material Safety Data Sheet)

PRECAUTION MEASURES/ PREVENTIVE MEASURES
(safe use, handling information)

Reference to the MATERIAL SAFETY DATA SHEET



There is NO requirement for French or borders on a WHMIS Workplace label

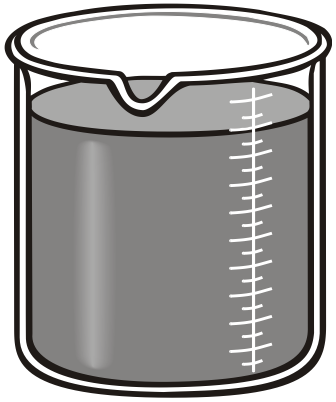
Same name as the Supplier Label and MSDS (or the name the employees are MOST accustom to)

Examples:
'Avoid contact with skin & eyes'
'Goggles and Gloves required'

The MOST comprehensive information about the hazards of the product and how to protect yourself

See sample workplace containers on next slide

WHMIS Sample Workplace Containers



WHMIS Sample 'PACE' WORKPLACE LABEL

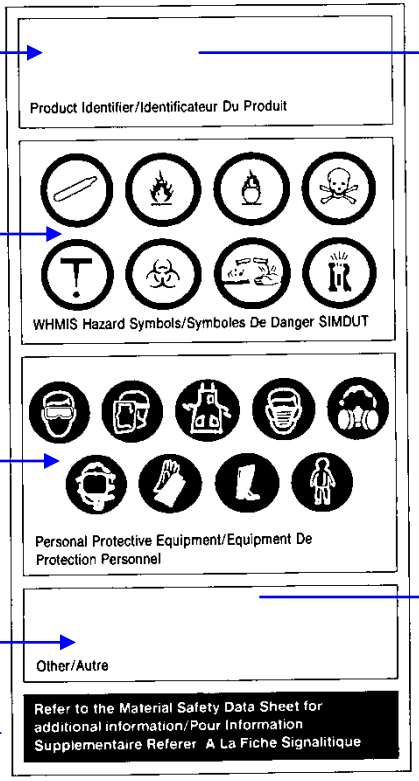
PRODUCT IDENTIFIER
(same as on Supplier label and Material Safety Data Sheet)

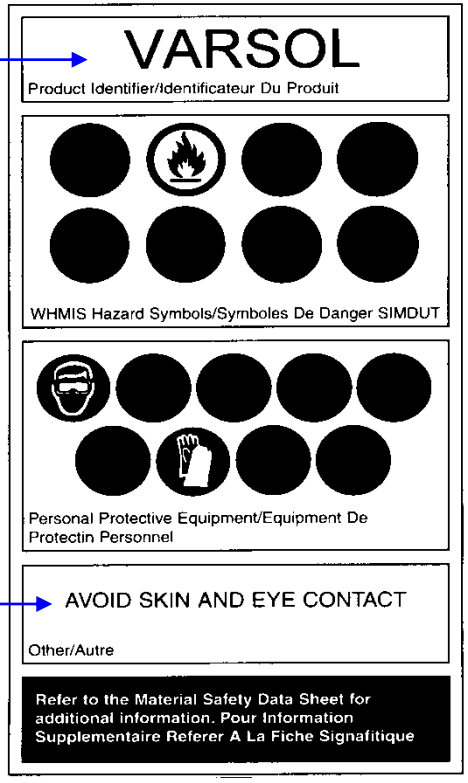
WHMIS Hazard Symbols

Personal Protective Equipment Pictograms

Safe Use/Handling Statement

Reference to the MSDS





Black out the Hazard Symbol(s) which are not applicable to the appropriate hazard

Black out the Hazard Symbol(s) which are not applicable to the appropriate PPE

See sample workplace labels on next slide

WHMIS Sample Workplace Labels

KEROSENE

SAFE HANDLING INFORMATION

Store in cool ventilated area
Avoid sparks and flame
Avoid contact with skin & eyes
- If contact with skin & eyes flush thoroughly with water
If ingested, **DO NOT INDUCE** vomiting
- call Physician, immediately

PERSONAL PROTECTIVE EQUIPMENT

GOGGLES

GLOVES vitron or nitrile

REFER TO MATERIAL SAFETY DATA SHEET

PRODUCED WATER

RISK PHRASES:
DANGER: MAY CONTAIN H_2S.
AVOID CONTACT WITH SKIN AND EYES.

PRECAUTIONARY PHRASES:
KEEP AWAY FROM HEAT, SPARKS AND FLAMES.
WEAR PROTECTIVE EQUIPMENT DURING HANDLING.

PERSONAL PROTECTIVE EQUIPMENT:

PLEASE REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER INFORMATION

PRODUCT IDENTIFIER

PAINT

HEALTH	*	1
FLAMMABILITY		2
REACTIVITY		0
PERSONAL PROTECTION		L

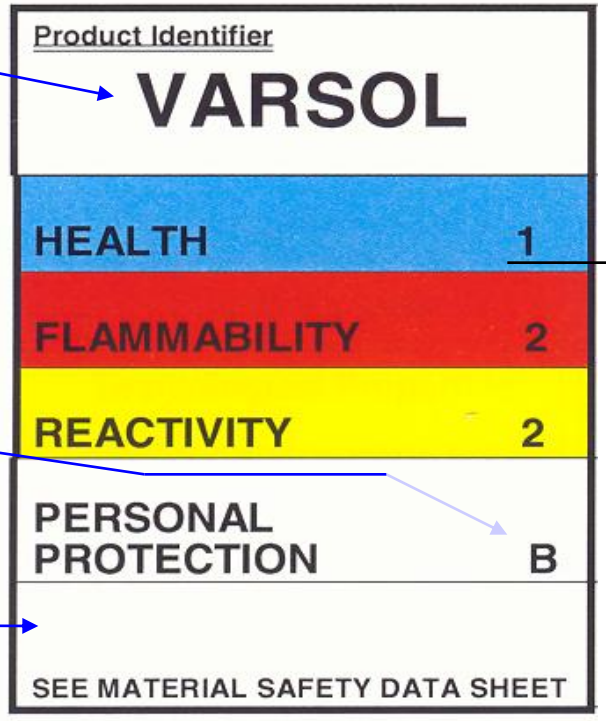
SEE MATERIAL SAFETY DATA SHEET

WHMIS Sample 'HMIS' Workplace LABEL

PRODUCT IDENTIFIER
(same as on Supplier label and Material Safety Data Sheet)

PRECAUTION MEASURES
PERSONAL PROTECTIVE EQUIPMENT
(alphabetic designation)

Reference to the MATERIAL SAFETY DATA SHEET



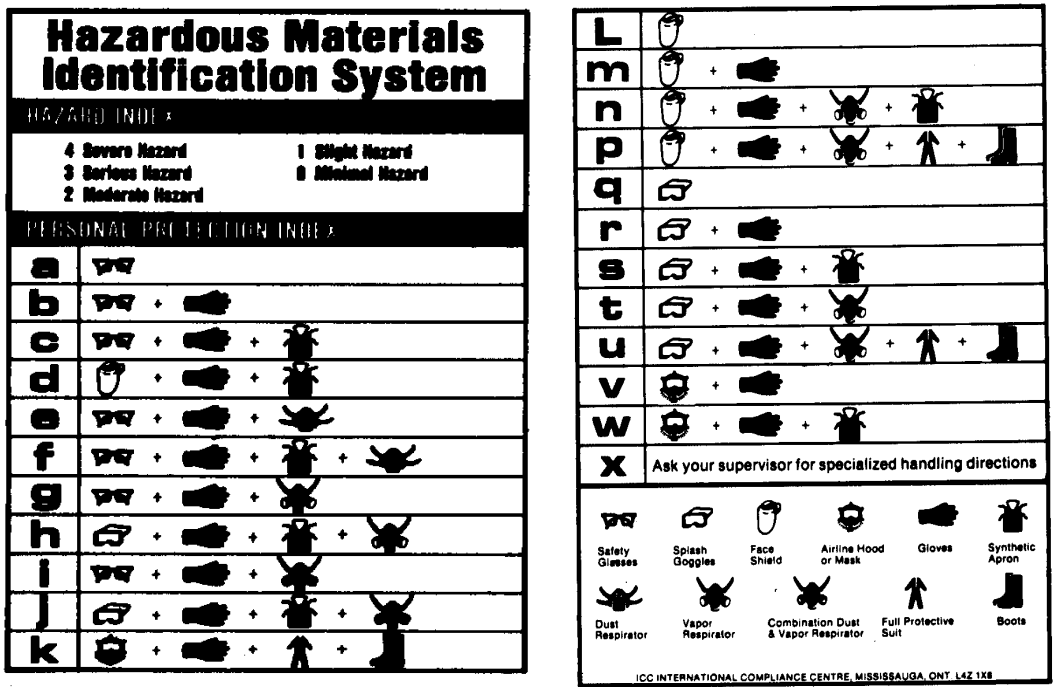
Same name as the Supplier Label and MSDS (or the name the employees are MOST accustom to)

Numeric Hazard Code:

- **0 – MINIMAL**
- **1 – SLIGHT**
- **2 – MODERATE**
- **3 – SERIOUS**
- **4 – EXTREME**

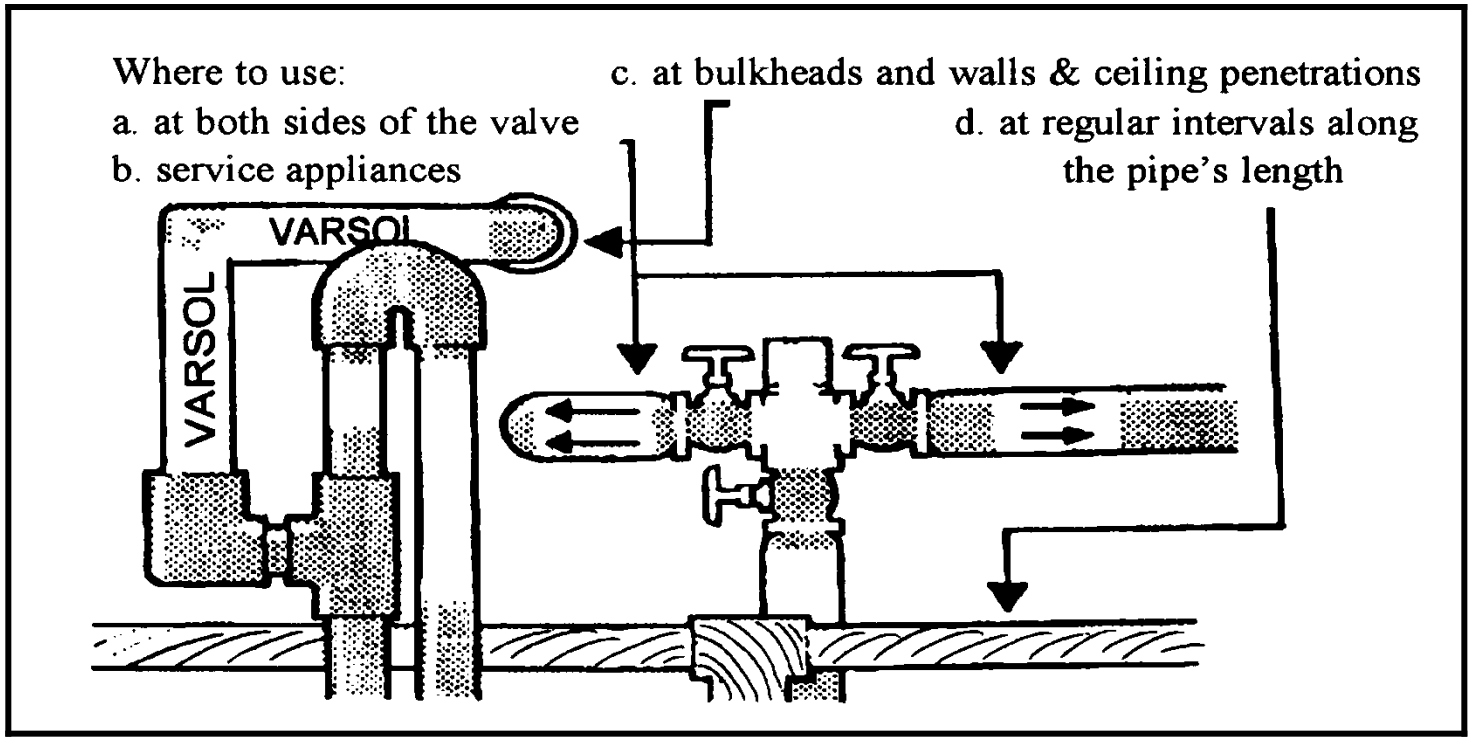
Alphabetic Person Protective Equipment designation (requiring an employee card showing the different PPE required for the different Alphabetic designations – see next)

Sample 'HMIS' Employee PPE Card



NOTE: If the employee does not have this card, it would be extremely difficult to determine the proper PPE to wear when handling a Controlled Product at the work site.

WHMIS Pipemarking LABELS



Pipes or piping systems, can be identified by labels, stencils, colour coding, placards or any mode of identification; so long as everyone understands the hazard identification system.

WHMIS Information Flow

MSDS	Supplier Label	Workplace Label
Product ID ➤➤➤➤➤➤➤➤➤➤➤➤	**Product ID** ➤➤➤➤➤➤➤➤➤➤➤	**Product ID**
Manuf./Supplier Information➤	Manuf./Supplier Information	
Hazardous Ingredients		
Physical Data		
Fire & Explosion Data		
Reactivity Data		
Protective Measures ➤➤➤➤➤➤	**Protective Measures** ➤➤➤➤➤	**Protective Measures**
First Aid Measures ➤➤➤➤➤➤➤	First Aid Measures	
Preparation Data		
	Risk Phrases	
	WHMIS Hazard Symbols	*Hazard symbols not required, but can be used*
	English & French	
	Cross-hatched Border	
	Refer to MSDS ➤➤➤➤➤➤➤➤	**Refer to MSDS**

You are going from 4 to 8 pages of MSDS information to a Supplier label that, on average, is 8" x 10" [english portion of label is approximately 8" x 5"]; where instead of a page of information, you now have a paragraph of information

Then, you are required to put a 'safe use handling' statement on a workplace label [that on average is 3" x 6"]. Most likely this will be a phrase or a couple of words.

See WHMIS Labelling Requirements SUMMARY Chart on next 2 slides

WHMIS Labelling Requirements -- SUMMARY

Requirements	Supplier Label: (>100mL)	Supplier Label: (<100mL)	Laboratory Label: *Supply House* (<10kg)	Laboratory Label: *Sample* (<10kg)	Workplace Label or Placard
1. Product ID	✓	✓	✓	✓	✓
2. Hazardous Ingredients				✓	
3. Hazard Symbols	✓	✓			
4. Risk Phrase(s)	✓		✓		
5. Precautionary Measures	✓		✓		
6. Safe Handling					✓
7. First Aid Measures	✓		✓		

continued on next slide

WHMIS Labelling Requirements -- SUMMARY

Requirements	Supplier Label: (>100mL)	Supplier Label: (<100mL)	Laboratory Label: *Supply House* (<10kg)	Laboratory Label: *Sample* (<10kg)	Workplace Label or Placard
8. Supplier Information	✓	✓		✓	
9. Reference to MSDS	✓	✓	✓		✓
10. Emergency Telephone Number				✓	
11. Cross-hatched Border	✓	✓		✓	
12. English	✓	✓	✓	✓	
13. French	✓	✓	✓	✓	
14. Other Language					✓

WHMIS TOTAL EXEMPTIONS

The following are products that are excluded from **ALL aspects** of the WHMIS legislation:

- **Wood and products made from wood** (lumber, plywood, particle board, etc.)
- **Tobacco and products made from tobacco** (cigarettes, cigars, etc.)
- **Dangerous goods while in transport** (under the TDG Clear Language Regulations)
- **Manufactures articles** (garbage bags, etc.)
- **Hazardous wastes** (controlled products that are intended for disposal or that are sold for recycling or recovery)

WHMIS PARTIAL EXEMPTIONS

The following are exempt from the criteria for WHMIS Material Safety Data Sheets and Supplier Labels (i.e. supplier aspects):

- an **explosive** within the meaning of the *Explosives Act* (Canada)
- a **cosmetic, device, drug or food** within the meaning of the *Food and Drug Act* (Canada)
- a **controlled product (pesticides & herbicides)** within the meaning of the *Pest Control Products Act* (Canada)
- A **prescribed substance (radioactive materials)** within the meaning of the *Atomic Energy Control Act* (Canada)
- **A product, material or substance *packed as a Consumer Product* and in quantities normally used by the consuming public**

  (examples: paints, bleaches and cleansers containing chlorine)

WHMIS Employee Responsibilities

In summary, a worker shall:

1. **understand** the content, purpose and significance of **the MSDS** information
2. **understand** the content, purpose and significance of **the information contained on a Supplier and Workplace label**
3. **understand** safe use, handling, storage and disposal procedures for **the controlled products they are working with**
4. **understand** the specific **information** requirements **for controlled products in pipes, vessels and tank car/truck**
5. **understand emergency procedures** related to the controlled products

6 if work conditions or hazard information changes, **receive updated training**

7. **inform the employer** of circumstances where the employee does not have adequate information to ensure employee safety, and
8. **work with the employer** to develop, implement and review training programs

Consumer Products Labelling

It is important to know the Consumer Products you are using, handling, storing and/or disposing of.

Consumer Products (i.e. products that are packaged and distributed in a quantity and concentration intended or suitable for sale through retail agencies for consumption by individuals for the purposes of personal care or household use) are exempt from the WHMIS Supplier Label and MSDS requirements; however, NOT from the employer's responsibilities regarding worker education and workplace labelling.

The employer is required to ensure employees are familiar with all aspects of safe use and handling of Consumer Products (i.e. WD40) that are brought into the workplace.

Should a Consumer Product label (panel) become marred or illegible; then, a proper WHMIS Workplace label MUST be applied.

Consumer Products Labelling

Consumer Products that are classified as 'Regulated Products', are required to disclose certain mandatory information on a panel (label), as per the *'Consumer Chemicals and Containers Regulations'* (Canada); as follows:

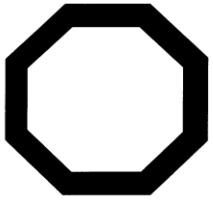
- **hazard symbols** (see next slide)
- **signal words** (DANGER, WARNING, ATTENTION, ETC), and
- **primary hazard statements**

The following required information, shall be disclosed anywhere (except the bottom) on a/the panel (label) of the 'Regulated Product:

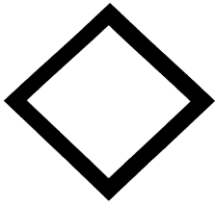
- **additional hazard statements**, and
- **first aid statements**

Consumer Products Labelling

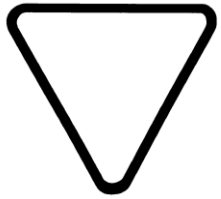
CONSUMER PRODUCT HAZARD SYMBOLS



DANGER



WARNING



CAUTION

for **COMPRESSED GASES**

for **FLAMMABLE** Substances

for **POISONOUS** Substances

for **CORROSIVE** Substances

Consumer Products Labelling

Workers MUST be educated on the safe use, handling, storing and disposal of the Controlled Products in their workplace

Example: WD-40 - is a Consumer Product

If you read a WD-40 aerosol can, you will read the following:

"Keep away from flame or sparks. Contents under pressure. DO NOT place in hot water or near radiators, stoves or other sources of heat. DO NOT puncture or incinerate or store at temperatures above 50°C."

First Aid Treatment: - Contains mineral spirits. **If swallowed DO NOT induce vomiting.** Call a physician immediately.

RISK Statements: - Direct inhalation of spray may be harmful.
- Container may explode if heated.
- EXTREMELY flammable.

Consumer Products Labelling

CONSUMER PRODUCT HAZARD SYMBOLS for WD-40

DANGER
POISONOUS

DANGER
FLAMMABLE

CAUTION
EXPLOSIVE

Personal Protective Equipment Pictograms

GOGGLES

will protect your eyes from chemical splashes and flying objects.

GLOVES

will protect your hands from coming in contact with chemicals sharp objects

BOOTS

will protect your feet from chemical spills, falling objects and sharp projections

APRON

will help protect you and your clothing from chemical splashes and spills

FACE SHIELD

will protect the entire face area from chemical splashes and flying objects

BODY SUIT

will provide full body protection where required

DUST MASK

will protect you from inhaling airborne dust particles, fibres or mechanically generated particles

CARTRIDGE RESPIRATOR

will protect you from airborne contaminants or toxic gases

SELF-CONTAINED BREATHING APPARATUS

will protect you when you require oxygen, depending on the hazard assessment

Thank You

for taking this WHMIS training program

on final completion, of your test, with a score of 80% or greater

you will receive your WHMIS Student Training Certificate