

***Paint Department:
Health and Safety
Guidelines***

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WORK AREAS

There are many work place issues that can affect potential exposure to hazardous materials used by Painters. By considering the main issues and taking some action, employers and workers can more effectively reduce workers' exposure to the hazardous products.

Scheduling

Certain work that may release hazardous vapours, mists or dusts in the air should be carried out when less people are in the area (e.g. after regular working hours). This would reduce the number of people that could be potentially exposed to the hazardous substances. Furthermore, Production Designers, Production Coordinators, Construction Coordinators, Paint Coordinators and Heads of Departments should ensure that adequate time and space is provided for conducting safe work practices.

Ventilation

Production Coordinators, Production Designers, Construction Coordinators and Paint Coordinators and Heads of Department should plan ahead to find studios with good ventilation systems. These studios should ideally have local exhaust ventilation set-up for work that releases hazardous materials into the air (e.g. welding, carpentry, spray painting, sanding etc.). For more details about ventilation, see the guideline on Ventilation.

Air Quality

The air quality in studio work areas can be significantly reduced due to various activities taking place at the same time. For example, you may have the presence of welding fumes (from nearby welding operations), wood dust (from nearby carpentry operations), aerosols (from spray painting) and vapours (from use of clear coats and thinners) in the air. If employers, Paint Department members and the Union are concerned about air quality, trained health and safety professionals, using various industrial hygiene techniques, can measure for specific substances in the air to ensure the concentration of certain contaminants are within acceptable WCB exposure limits. Unless direct reading monitors are available, these measurements techniques can be quite involved and usually require laboratory analysis.

Studio layout

Studio layout is an important consideration when attempting to reduce exposures to hazardous substances. Ideally, each department (welding, carpentry, paint etc.) should be



isolated from the other with its own shop. If complete isolation is not possible, then each department should have its own work area and all of its operations should be carried out in that area following safe work practices. Paint Department members should be kept as isolated from welding and carpentry operations as possible so that they are not being exposed to hazards from those operations and workers from those operations are not being exposed to hazards from the Paint Department. Furthermore, when the Paint Department is using flammable materials, they should be clear of any ignition sources from welding or hot work operations.

Housekeeping

Paint Department work areas should be kept clean and tidy. Any spills involving hazardous materials should be cleaned immediately according to procedures outlined on the MSDS for that product.

Paints within the shop and on sets should be covered to limit exposure to vapours. Decanted product should be labeled or returned to original containers at the end of the day. Do not smell the product to determine what is in a container.

Paint and construction work areas should be cleaned with HEPA (P100) filter equipped vacuums daily and more often under very dusty conditions. This helps to limit exposures to hazardous substances tied up in the dust. Sweeping should be limited as sweeping releases dust into the air, increasing exposures of individuals to the dust. Use dust suppressing material, or wet mop areas, or vacuum to minimize airborne dust generation.

Some materials used by painters are flammable and combustible liquids and the flammable paint residues and vapours can accumulate in the work area. Therefore, fire safety and proper electrical wiring must also be addressed. Appropriate fire extinguishing equipment should be readily available and workers trained in its use. Under certain instances, there is the potential for spontaneous combustion when residues from two or more types of coatings are permitted to accumulate on top of each other in the spray booth and filters. An example of a dangerous combination is a lacquer containing nitrocellulose with a finish containing drying oils (varnishes, oil-based stains, air-drying enamels and primers). When spraying different coating material, which might combine to ignite spontaneously, all residue of the first material must be removed with non-spark tools from the spray area and filters prior to using the second material.



HAZARDOUS MATERIALS

There are many hazardous substances contained within products that Painters and Heads of Department should be aware of so that adequate precautions against exposure to these substances can be taken. A brief summary on the more hazardous components of some paint materials are discussed below:

Silica

Silica is widely used in concrete and masonry products, such as the fillers and stuccos (e.g., Dyna Patch, Glazing Putty, Dry Wall Joint Compounds) used by the Paint Department. Although, the silica is bound within the product, when the product is sanded, grinded, or mixed, the dust containing silica may become airborne.

When silica particles are inhaled, especially the crystalline silica, it can become trapped in the lung tissue. The lung tissue then reacts by developing fibrous tissue around the trapped silica particles. This condition, which is known as silicosis, is a chronic condition that takes many years to develop.

Review the Material Safety Data Sheet to see if silica is contained in the product being used. If so, find out if there are similar products available without the silica content.

Chromium

Chromium is a metal that exists in three different forms: divalent, trivalent and hexavalent. Of the three, hexavalent chromium poses the most serious health hazard, as it is the only one to be recognized as a carcinogen.

Hexavalent chromium can be found in a variety of products. Those that may be used in and around the Paint Department include: pigments for inks, paints, paper and stainless steel welding or torching. For the latter, exposure would occur to Paint Department employees if welding of stainless steel products was occurring nearby. Exposure from inks, paints and paper would occur from ingestion of the products or inhalation of dusts from these products. Ventilation and personal protection equipment must be used during spraying or sanding products known to contain chromium. Pigments in paints containing zinc chromate and lead chromate (chrome yellow, chrome green) can contain hexavalent chromium so consult the MSDS.

Hexavalent chromium can irritate the eyes, skin nose, throat and lungs. Repeated exposure can lead to ulceration of the skin and mucous membranes of the nose. Direct eye contact can cause permanent eye damage. The major health effect of hexavalent



chromium exposure is lung cancer. The risk of developing lung cancer depends on the amount of chromium in the air, duration of exposure and the use of personal protective equipment.

Lead

Lead exposure occurs when lead laden dust and fumes are inhaled while painting with lead-based paint, grinding/sanding old lead-based paint, or hot work on metals containing lead. Lead can also enter the body when it is accidentally ingested from contaminated hands, food, water, cigarettes and clothing. Lead is released into the blood and distributed throughout the body. Most of it accumulates in the bones where it can be stored and then released into the blood decades later, causing exposure to organs. The primary source of exposure in the Paint Department would be inhalation or ingestion of dust or chips from lead based paints.

Workers with low level lead exposures may experience fatigue, irritability, insomnia, headaches and mental and intellectual decline. Low level exposures to lead may result in adverse pregnancy outcomes such as shorter gestation periods and decreased fetal mental development. Low-level lead exposures have also been shown to lower sperm count and result in abnormal sperm morphology in males. Modest increases in blood pressure have also been observed in workers exposed to low levels of lead.

Propylene glycol

Propylene glycol monomethyl ether is a common solvent for coatings, cellulose, acrylics, dyes, inks and stains. It is commonly present in most paints, particularly water-based products. Propylene glycol is not very volatile, but spraying of any paint material should be conducted in areas with good ventilation.

Propylene glycol is not known to cause serious human health effects. It may cause minor eye, skin and respiratory irritation and if swallowed, may cause gastrointestinal irritation with nausea, vomiting and diarrhea. It may also cause central nervous system effects if ingest a large amount (over 100 ml).

Iron oxides

Iron oxides may be encountered as dust from paints, dyes and colorants used by the Paint Department as it is used as a pigment in these products. Employees may also be exposed to iron oxide as a fume from welding operations occurring nearby.

After 6 to 10 years of continuous iron oxide exposure, a benign condition where densities form in the lung may begin to form. This condition is called siderosis and does not result in any significant clinical changes.



Isocyanates

For employees of the Paint Department, the major route of exposure for isocyanates is through inhalation of aerosols and vapours during the spraying of polyurethane paints and varnishes. Applying these substances with rollers and brushes does not pose as serious a hazard as when spraying but control measures such as ventilation and personal protective equipment must be in place.

Serious risk of exposure occurs when spraying isocyanate products in the studio. Workers not involved in such work must be away from the area during and after spraying until the product has been cured completely and the studio has been ventilated. Ensure curing times suggested by the manufacturer are followed.

There is the potential for isocyanate exposure during two-part foam work, if these products are exposed to heat or is burned. Once cured, foam products should not give off isocyanate vapour. However, carving and sanding foam products will create a potential dust concern.

Isocyanates are strong irritants to skin, causing inflammation and dermatitis, and to the mucous membranes of the eyes, gastrointestinal and respiratory tracts, causing tearing, dry throat, dry cough, chest pains and difficulty in breathing. Isocyanates are known sensitizers that can cause asthma attacks if exposed again. Cases of hypersensitivity pneumonitis have also been observed in workers exposed to isocyanates. Symptoms include fever, muscle aches, headaches, dry cough, chest tightness and difficulty breathing. Isocyanates have also been observed to cause cancer in animals and have been listed as potential human carcinogens.

Review the Material Safety Data Sheets for the product being used. Similar products that do not contain isocyanates should replace products containing isocyanates. The uses of product with isocyanates should be minimized as much as possible.

Solvents

Solvents can be found in paints, inks, varnishes, shellacs, lacquers, waxes and fixatives and may be used to thin and clean up materials. Solvents commonly used in these products include turpentine, paint thinner, mineral spirits, methyl alcohol, ethyl alcohol, acetone, toluene, xylene, ethyl and other acetates and petroleum distillates.

Solvents are some of the most common hazardous products used in painting. Acute (high level, short-term exposure) neurotoxic effects of organic solvent exposure in workers include drowsiness, headache, dizziness, nausea, narcosis, anesthesia, central nervous



system depression, respiratory arrest, unconsciousness and death. Chronic (low level, long-term exposure) effects include fatigue, irritability, memory impairment, emotional instability, diminished impulse control, diminished motivation, decreased concentration, decreased memory and decreased learning ability.

Review the Material Safety Data Sheet for the paint material being used and use products with the least amount of solvent content as much as possible. Water-based paint products are better substitutes, but keep in mind that they are not hazard free. These products will require ventilation and other controls to reduce worker exposure to other chemicals contained within them.



PAINT APPLICATIONS

Mixing

When preparing various paint material using dry pigments, powders (aniline dyes), and metallic powders, minimize the generation of airborne powder by mixing inside “powder rooms”, paint booths, down draft tables, or other places with local exhaust ventilation. Wear NIOSH-approved air-purifying respirator with a dust filter if ventilation is not available.

Brushing, Rolling, and Dipping

Minimize the chances of inhalation exposure to contaminants by brushing, rolling and dipping, instead of spraying paint and other material. Ensure that work surfaces can be cleaned easily around the area where brushing, rolling and dipping is being conducted. A buildup of paint residue can be a fire hazard.

Spraying

Exposures to airborne contaminants can be the greatest during spraying of products since the material is being atomized (broken up into smaller particles) and there is usually overspray of material. For spray paint operations, the potential health hazards exist from exposures to solid and liquid airborne contaminant, as well as solvent vapours. The potential routes of exposures are by inhalation, eye contact, skin absorption and through ingestion.

When spraying, the greatest exposure will be to the worker performing the spray activity, and others working close by. Therefore, a ventilated spray booth or other enclosure designed to control worker exposure must be used during spraying of paint material, especially products containing a sensitizer such as an isocyanate compound. Without effective local exhaust ventilation, others working in the studio could also be exposed.

Spray booths can effectively control vapours and mists, generated during spraying paint when designed properly. However, in some situations downdraft booths may be better when large objects are painted. In air atomization applications for paints, it is important to use the minimum air pressure needed to accomplish the task. Excess air pressure can result in increased dispersion of the paint and overspray as well as poor work quality.



A useful guide is a manual published by the American Conference of Governmental Industrial Hygienists called *Industrial Ventilation – A Manual of Recommended Practice*. The manual mentions a number of paint booth designs and the recommended airflows.

The work practice is also very important in controlling exposure to paint aerosols and solvent vapours. The worker should not stand downstream of the piece being sprayed. A turntable can make it easier for the painter to access all sides of the object. Extension arms can be used on spray guns for hard to reach areas to be painted.

When spraying paint and other coating material, it is strongly advised that appropriate respiratory protection be worn. For spraying products containing sensitizers such as an isocyanate compound or other toxic material, supplied air respiratory protection is mandatory.

When using a spray gun, it must be handled with care to avoid injuring yourself or other workers. Never point an airless gun at any part of your body or at anyone else. Ensure that there is a trigger guard to prevent accidental discharge if the gun is dropped and a safety lock for when the gun is not in use.



VENTILATION GUIDELINES

Remember...

Engineering controls must be used as a first line of defense against workplace hazards.

Ventilation is an example of an engineering control method in which workplace hazard can be eliminated or reduced to acceptable levels. The use of personal protective equipment should not be the primary means to control exposure to paint and other material, unless substitution, engineering or administrative controls are not feasible.

Ventilation is one of the most effective methods for controlling solvent vapours and dusts generated by paint activities by either supplying or exhausting air. There are two main types of ventilation methods: general ventilation (or dilution ventilation) and local exhaust ventilation.

General Ventilation

The term *general ventilation* is used to describe a ventilation system that supplies and exhausts large volumes of air from work areas. This method is effective when you want to dilute low concentrations of vapour or dust from painting activities to acceptable levels. Examples of general ventilation systems are the use of natural drafts through open windows and doors, roof ventilators, or mechanical fans or blowers mounted in roofs, walls or windows.

General ventilation should only be considered in the following situations to control for air contaminants generated during painting activities:

- When small quantities of air contaminants are being released into the work environment at fairly uniform rates;
- When there is sufficient distance between worker and the contaminant source to allow sufficient air movement to dilute the contaminant to safe levels;
- When only contaminants of low toxicity are being used;
- When there is no need to collect or filter the contaminants before the exhaust air is discharged to the outside;
- When there is no possibility of corrosion or other damage to equipment from the diluted contaminants in the work environment air.



One disadvantage of general ventilation is that it is very difficult to provide sufficient dilution where the worker is performing the work. For this reason, local exhaust ventilation is the better choice for controlling exposure to toxic substances. General ventilation should not be used to control major painting activities that generate toxic dusts, vapours or fumes.

Designing general ventilation for a work area will require careful planning and assistance from a ventilation engineer or a health and safety professional.

Local Exhaust Ventilation

The term *local exhaust ventilation* refers to a ventilation method that contains or “captures” contaminants at their source of generation before they escape into the work environment and to the worker. A typical local exhaust ventilation system consists of a hood (captures the contaminant), ducts (transports the contaminant away from the work area), an air cleaner if required (cleans the contaminants from the air) and a fan (moves the air with the contaminant away from the work area to outside). Paint spray booths and dust collection systems are good examples of local exhaust ventilation.

However, keep in mind that this method of controlling contaminants is not perfect, therefore should be considered only after methods such as substitution or modified work procedure are not feasible.

In order for local exhaust ventilation systems to be effective, the work activity must be enclosed as much as possible and the airflow is sufficient to direct the contaminant into the hood. Designing a local exhaust ventilation system is difficult and complex with many factors to consider, such as how fast the contaminant is being generated, the physical properties of the contaminant, the direction and speed of the contaminant being generated and its toxicity. Local exhaust ventilation system used to control hazardous substances in paint materials must be designed and installed in accordance with established engineering principles.

A useful guide is a manual published by the American Conference of Governmental Industrial Hygienists called *Industrial Ventilation – A Manual of Recommended Practice*. The manual mentions a number of paint booth designs and the recommended airflows.

Spray booths will require proper maintenance to keep its optimum efficiency in controlling airborne contaminants. For example, the particulate filters must be changed regularly. The location of the spray booth is also important in ensuring that the booth is located away from turbulent airflow, and not in corners of rooms.

Mixing tables should be equipped with local exhaust ventilation since mixing and drying with heat guns may release harmful contaminants.



Keep in mind that even with local exhaust ventilation, the use of personal protective equipment, such as a respirator, may still be required when the ventilation is not adequately controlling the exposure.



PROTECTIVE EQUIPMENT AND CLOTHING

Paint Department members are faced with a variety of potential exposures from substances that they use and from the substances used and activities performed by other departments in the same studio space. Also, the nature of the work requires the use of a variety of potentially hazardous materials on a daily basis, often for extended shift hours. Therefore, when engineering controls are not feasible to eliminate potential exposures, it is important that protective equipment and clothing be used.

Respiratory Protection

There are a variety of respiratory hazards that Paint Department members are exposed to. These include hazards from substances used by the paint department, such as vapours from paints and solvents, but also include hazards from the activities of other departments such as metal fumes from welding and wood dust from carpentry. To protect oneself from these respiratory hazards when no other means of control are feasible, it may be appropriate to wear a respiratory protective device. These devices should be selected in accordance with type of hazard. For members of the Paint Department, respirators should be regularly worn since many solvent-based products are used throughout the typical work day without adequate ventilation. See Part 8 of the *Workers' Compensation Board (WCB) Occupational Health and Safety Regulation (BC Regulation 296/97 as amended by BC regulation 185/99)* for more details.

In general, there are two types of respiratory protective devices: air-purified respirators and air-supplied respirators. Air-purified respirators remove contaminants from breathing air by filtering or chemical absorption, while air-supplied respirators provide clean air from an outside source or a tank.

Certain cartridges or filters must be used with air-purified respirators to remove the particular type of contaminant that one is being exposed to. It is important to remember that not one type of filter or cartridge protects you against all contaminants.

If one is seeking protection from thinner and solvent vapours, organic vapour cartridges should be used. All chemical absorbing cartridges have limited periods of use depending on the concentration of contaminant in the air (i.e. The cartridges will no longer absorb any contaminant from the air, therefore offering no protection to the wearer.) Particulate cartridges, on the other hand, offer more protection as period of use increases; as more dust collects in the filters, less and less particles get through. However, because of this, the resistance to breathing also increases. When breathing becomes difficult with particulate cartridges, they should be replaced with new ones.



To provide optimum protection, respirators must form a proper seal with the face of the user. Therefore it is important that each employee have her or his own respirator that fits comfortably and properly. To determine if a proper seal exists, the wearer must receive a fit test. When first getting a respirator and on an annual basis after that, a thorough qualitative fit test should be performed by a qualified individual. This would involve using amyl acetate (banana oil) for organic vapour cartridges or irritant smoke for particulate filters, to determine if contaminants are able to penetrate the mask. Before each use of a respirator, negative and positive pressure tests should be performed. In a negative pressure test, while wearing the mask, one blocks the air inlets of the mask and takes a deep breath for 10 seconds. If the mask slightly collapses, and remains that way then a good facial seal is indicated. In a positive pressure test, one blocks the air outlet of the mask and forces a breath out. If the mask slightly expands and remains that way for 10 seconds, a good seal is indicated.

All employees wearing respirators should be trained in their proper use and care by qualified individuals. The respirators should be cleaned regularly and should be kept in plastic bags and in clean and dry locations. Before each use, the respirators should be checked for any signs of damage.

Eye Protection

Painters could be exposed to a variety of eye irritants. The products, as vapours (e.g. thinners and solvents), dusts (e.g. dyes, fillers and stuccos), liquids (e.g. strippers and degreasers) or sprays (e.g. paints and primers), can cause itching, tearing, redness, swelling, blurred vision and even blindness. Some of the products can even cause permanent eye tissue damage. Contaminants from other departments, such as wood dust from carpentry, can also cause eye irritation. It is, therefore, very important to consider CSA approved eye protection to prevent harm from these hazards.

Eye protection includes safety glasses, chemical goggles and face shields. The correct type of protection is based on the hazard. Safety glasses provide protection from large particles released from cutting, sawing or grinding operations. They do not provide protection from splashes or sprays. Face shields, like safety glasses, do not provide complete eye protection. They do, however, prevent direct splash exposures. Goggles form a tight seal with the face and prevent exposure due to splashes and sprays. Depending on the type of goggles, they may also prevent vapour exposure. Goggles are best for complete eye protection. Eye protection should be selected in accordance with Part 8 of the *WCB Occupational Health and Safety Regulation (BC Regulation 296/97 as amended by BC regulation 185/99)*.



Hearing Protection

Construction activities occurring around Paint Shop employees may expose them to high noise levels. This noise could be from air compressors and power tools for cutting, sawing, drilling and hammering and metal work. According to Part 7 of the *WCB Occupational Health and Safety Regulation (BC Regulation 296/97, as amended by BC regulation 185/99)*, employees cannot be exposed to greater than 85 dBA of sound for an 8-hour work day. As the exposure duration lengthens, however, the maximum permissible sound level decreases according to the following table:

Sound Level (dBA)	Duration (hrs)
82	16
83.5	12
85	8
86.5	6

Workers may not be exposed to an instantaneous sound level of 135 dBA or greater without wearing adequate hearing protection.

If no other means of controlling noise are feasible, hearing protective devices must be considered to prevent hearing damage from excess noise. These devices should be considered in accordance with Part 7 of the WCB Regulation. Noise hazard areas must be posted and workers must be told to wear protective equipment in these areas.

In general there are two types of hearing protectors: ear insert and earmuffs. Ear insert types seal against the ear canal walls, while earmuffs seal against the head around the ear. The anatomical characteristics of the wearer, the noise levels and the work activity should all be considered when selecting hearing protectors. Ensure that the hearing protection selected has the adequate Noise Reduction Rating (NRR). The NRR for the hearing protection should be greater than the attenuation needed to reduce the noise to below 85 dBA. Usually a 50% safety margin is used when calculating the attenuated noise level using the hearing protection. For example, for an ear insert with an NRR of 32, you can safely assume that it will reduce noise level to the ear by 16 dBA (32 divided by 2), if worn correctly by the employee. Only CSA approved hearing protectors should be used.

Skin Protection

As with the eyes and the respiratory system, there are a variety of chemical substances used by the Paint Department that are considered skin hazards. These products (such as thinners, solvents, primers, paints, fillers and stuccos) can irritate the skin (cause reddening, itching, scaling, drying), some can cause permanent skin damage (burning



etc.) and some chemicals can be absorbed through the skin. Therefore, appropriate skin protection should be considered when working with or around these substances. All skin protection should be selected in accordance with Part 8 of the WCB Regulation.

Gloves, boots, aprons and coveralls made out of a number of different materials (e.g. butyl rubber, natural rubber, neoprene, nitrile rubber, polyvinyl alcohol, polyvinyl chloride, Teflon, Viton) are available to provide skin protection against specific substances. Choosing the appropriate clothing, again, depends on the types of hazards present and the tasks to be performed. Different materials protect against different substances; no material protects against all chemicals. Select the material based on the hazard in question (acids, solvents, oils etc.). For mixtures of chemicals, select materials having the broadest chemical resistance. The physical strength and flexibility of the materials should also be considered when selecting protective clothing. Thicker materials usually offer more protection, but can result in the loss of dexterity.

Reusable clothing must be cleaned/decontaminated on a regular basis to minimize employee exposure to hazardous chemicals. Disposable clothing is available when decontamination procedures prove too difficult, but these garments do not provide high levels of protection.



STORING PAINT MATERIALS

The products used by the Paint Department require special storage protocols so that they do not become a danger to those working with them, to those working near them or to the general public.

Flammability

Many of the substances used by the Paint Department are flammable; therefore, the following general precautions should be taken when storing these products:

- Store products in a cool environment
- Store products away from ignition sources
- Do not store incompatible products side by side
- Mark storage locations with signs/warnings
- Have easy access to fire extinguishers
- Fire extinguishers should be appropriate for the products being stored (see MSDS)
- Stored products should not block isles or exits

Thinners and solvents are flammable products with low flash points. Therefore, they should be stored in cool environments away from ignition sources. Dry chemical, carbon dioxide, foam and water fog are appropriate extinguishing media for most thinners and solvents.

Furthermore, these products are incompatible with oxidizing agents; oxidizing agents increase the risk of fire if they come into contact with flammable materials. Therefore, thinners and solvents should be stored away from agents such as peroxides.

Also, care should also be taken when storing spray cans. The contents of these cans are under pressure, and present an explosive hazard if heated.

Special flammable cabinet is required to store flammable liquid products if quantity exceeds 600 litres of liquids having a flash point below 93.3 °C of which not more than 100 litres may be liquids having a flash point below 22.8 °C. (See Part 5.33 of the WCB Occupational Health and Safety Regulation 185/99)

Minimizing Vapour Release

The products used by the Paint Department may also release vapours into the air. Therefore, the following precautions should be taken to ensure that the release of these vapours are minimized and do not accumulate while the products are in storage:



- Keep product containers tightly closed when not in use.
- Keep product containers upright.
- Prevent product containers from being damaged (i.e. piercing).
- When transferring products to new containers, make sure the container material is compatible with the product and clearly labeled.
- Keep product containers in a well ventilated area.
- Keep product containers in a dry location.

Thinners and solvents contained in paint have high volatility and easily release vapours into the air. Therefore, when these products are not in use, the containers should be tightly sealed, kept upright and free of punctures.



EDUCATION AND TRAINING

WHMIS

All workers that handle hazardous substances, must receive Workplace Hazardous Materials Information System (WHMIS) training as outlined by WCB in Part 5 of the *Occupational Health and Safety Regulation (BC Regulation 296/97 as amended by BC regulation 185/99)*. Because Paint Department employees handle a variety of hazardous substances on a daily basis, this regulation applies to them.

WHMIS provides specific health and safety information about workplace hazardous materials. Employers must use this information to educate and train workers to work safely with and near hazardous substances.

There are three main elements of WHMIS: labeling of product containers, Material Safety Data Sheets (MSDS) and education and training. For the latter, employers must ensure that workers understand WHMIS and the hazards of the products that they work with or near. For the Paint Department, this would not only include the products that they work with (Thinners, Paints, Adhesives etc.), but products being used by other departments working in their vicinity. Education programs about WHMIS must be followed up with job-specific training in safe work procedures for handling, storage and disposal of hazardous products. Education and training should be carried out by qualified individuals and/or organizations.



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