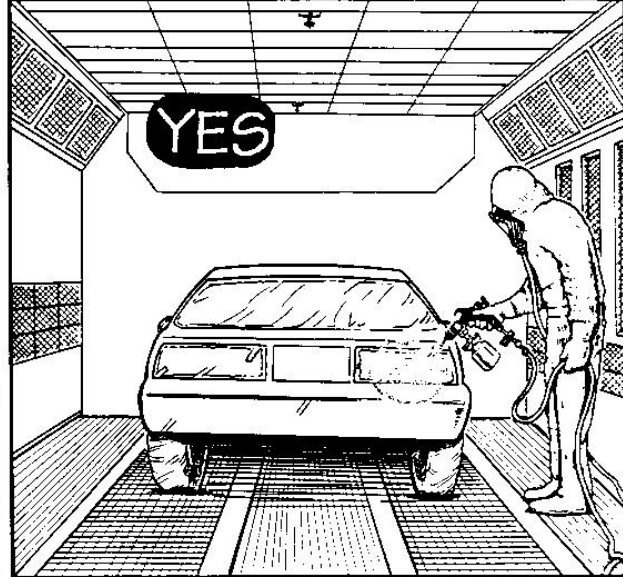


work **Safe!** Bulletin

SPRAY COATING

Bulletin No.: 158



Workers in Manitoba may be exposed to an imminent risk of serious physical or health injury when spraying flammable/combustible liquids or materials near any source of ignition, or in the presence of a source of ignition.

- ◆ The primary objective of an approved spray coating facility is to prevent fire and explosion hazards.
- ◆ All spray coating operations, including spray priming, must be carried out in a properly designed, and approved spray coating facility. The volume of contaminated air exhausted, make-up air, and the ventilation maintenance program, must all be properly determined to ensure control of hazards both inside and outside the spray coating facility.
- ◆ No spray coating facility system will prevent overexposure of a worker applying the hazardous controlled products. Therefore, **NIOSH APPROVED RESPIRATORY PROTECTION MUST BE WORN.**

ONLY SUPPLIED-AIR RESPIRATORS ARE ACCEPTABLE FOR EXPOSURE TO DI-ISOCYANATE CONTAINING PAINTS (see Worksafe Bulletin # 143).

Within the City of Winnipeg, the Winnipeg Planning Department, Plan Examination Branch, 30 Fort St. phone 986-5210, will assist Employers with their responsibility to submit approved building or ventilation improvement plans.

Outside the City of Winnipeg, contact the Manitoba Department of Labour, Office of the Fire Commissioner, 501- 401 York Ave. Winnipeg, 945-3328, for assistance in complying with the Manitoba Fire Code. (See below for some acceptable and unacceptable requirements when constructing a spray coating facility).

Contact your local Workplace Safety and Health Branch or the Office of the Fire Commissioner for a copy of the "Guide for Spray Coating Operations".

The Workplace Safety and Health Branch can also provide further information on respiratory protection and assistance in establishing respiratory protection programs.

SPRAY COATING FACILITIES: CONSTRUCTION & OPERATION

Unacceptable	Acceptable
WALLS AND CEILINGS <ul style="list-style-type: none"> - Combustible - 2 x 4 wood construction with Gyproc board finish - corrugated steel finish and wood fabricated doors 	<ul style="list-style-type: none"> - Noncombustible i.e. metal - Steel studs, sheet metal cover minimum 1.14 mm thick (.045 in.) - Concrete block with smooth and continuous finish
FLOOR <ul style="list-style-type: none"> - Non-grounded concrete floor - Wooden floor 	<ul style="list-style-type: none"> - Floor to be non combustible i.e. grounded concrete floor
FILTERS <ul style="list-style-type: none"> - Glass fibre furnace filters 	<ul style="list-style-type: none"> - Combustibility no greater than Class II filters conforming to the Underwriters' Laboratories of Canada standard "Fire Tests for Air Filter Units" ULC-S111-1995)
VENTILATION <ul style="list-style-type: none"> - Fans mounted directly at the face of the exhaust duct - "Bathroom" or "barn" exhaust fans - Steel exhaust fan blades 	<ul style="list-style-type: none"> - Air velocity at the face of the spray booth shall be not less than 0.5 M/S (100 linear feet per minute) - Electrostatic spraying not less than 0.3 M/S at the face of the spray booth - Fan blades and casings in exhaust blowers for spray booths shall be non ferrous
EXHAUST DUCTS <ul style="list-style-type: none"> - Exhaust ducts constructed of combustible products i.e. wood or Gyproc 	<ul style="list-style-type: none"> - Securely supported and constructed of steel as per Table 5.14.4.A Manitoba Fire Code - Maintain clearances of 450 mm (18 inches) between duct venting and unprotected combustible material - Passing through a combustible room a metal collar not less than 100mm (4 inches) with non combustible insulating material - Exhaust ducts must have access doors for cleaning - Exhaust duct must discharge outside 1.8 m (6 feet) from combustible exterior walls - Air must not discharge toward any combustible surface or unprotected opening within 7.5 m (25 feet)
ELECTRICAL <ul style="list-style-type: none"> - Electrical motors mounted in spray booths or ducts - Extension cords or other electrical plug in cords to energize the exhaust fan 	<ul style="list-style-type: none"> - All electric equipment including lights, fan motors, plug ins and switches must conform to CSA C22.1 Canadian Electrical Code Part I - All metal parts of the spray area including ducts to be electrically bonded and grounded
COMBUSTIBLE/FLAMMABLE MATERIAL STORAGE	<ul style="list-style-type: none"> - Quantities of combustible/Flammable materials are not to exceed 1 days supply in the spray booth area - See "Storage and Handling" section of the Guide and the Manitoba Fire Code
FIRE PROTECTION	<ul style="list-style-type: none"> - Fire separation and fire suppression systems i.e., sprinklers, to be installed as per the Manitoba Fire Code - Portable fire extinguishers installed 20 BC within 9 m of spray booth - Vehicles equipped with a pressure tank are not permitted in a drying oven or exposed to any heat source or ambient temperature conditions that could cause over pressurization of the container