

GENERAL

Where combustible dusts produce an explosion or fire hazard, a dust collection system shall be provided.

ELECTRICAL

■ Classification

The Winnipeg Electrical By-law classifies woodworking shops as Class III Division 1 electrically hazardous locations. The following relaxations to Class III requirements will be permitted where:

- (a) Adequate dust control equipment is installed, or
- (b) The accumulation of dust and flyings will be minimal.

■ Wiring Methods

- (a) Surface wiring may be rigid PVC conduit. Boxes and fittings shall comply with Rule 18-302(2).
- (b) Concealed wiring may be type AC or NM cable. Concealed boxes and fittings may be ordinary type.

■ Covers for Switches and Receptacles

Switch and receptacle covers may be of the weatherproof type. Where duplex receptacles are used, a separate self-closing cover will be required for each section of the receptacle.

■ Lighting

General purpose fluorescent lighting fixtures may be installed:

- (a) if mounted directly on the ceiling; or
- (b) if suspended, and provided with adequate dust shields to prevent the accumulation of dust.

Note: Industrial-type fluorescent fixtures with solid reflectors are not considered to have adequate dust shields as required in (b) above. The dust shields must prevent dust from accumulating on the ballast compartment.

■ Heating

Unit electric air heaters “other than those approved for the location” will be permitted provided the following requirements are met:

- (a) motors are of the totally enclosed type;
- (b) the unit is designed to minimize the accumulation of dust and other debris;
- (c) the enclosures for electrical parts of the heater shall prevent the entrance of dust; and
- (d) the exposed* surface temperature shall not exceed 165°C under normal conditions and 218°C under abnormal conditions such as fan failure.

* *Exposed surface means a surface exposed to the air, e.g. motor enclosure, heater sheath, etc. A “GX” rated heater will generally meet these requirements.*

The bonding requirements of Rule 18-074 need not apply.

Notes

1. Wiring methods and equipment not specified in the preceding items shall comply with Class III Division 1 requirements.
2. The preceding requirements are applicable to both new and existing electrical equipment within the proposed woodworking shop.
3. All interior doors serving the woodworking shop shall be weather-stripped and equipped with self-closing devices, or otherwise designed to prevent the passage of dust.

MECHANICAL

- 1) An approved dust collection system shall be provided for the woodworking (dust producing) area (Manitoba Fire Code Section 5.3.).
- 2) Two copies of the engineered dust collection drawings shall be submitted for review. The dust collection system shall comply with the Manitoba Fire Code and all referenced documents.
- 3) Smoking, open flame and spark producing equipment or devices are not permitted in a combustible dust producing shop/area (Manitoba Fire Code).
- 4) Painting and special processes operations are not permitted in a woodworking area.
- 5) The storage of any and/or all flammable/combustible materials, substances, and liquids shall comply with the requirements of the Manitoba Building Code and the Manitoba Fire Code.
- 6) Mechanical ventilation shall be provided in this occupancy in accordance with good Engineering Practice (Manitoba Building Code Subsection 6.2.2.). Systems designed in accordance with ANSI/ASHRAE 62, “Ventilation for Acceptable Indoor Air Quality” or the Industrial Ventilation Manual published by ACGIH are considered to be “Good Engineering Practice”.
- 7) The integrity of any and/or all fire separations shall be maintained and shall comply with the requirements of the Manitoba Building Code.
- 8) Specialized knowledge is required for the design of the woodwork facility and/or the dust collection system, such facilities and or systems shall be designed and sealed by a Professional Engineer, entitled to practice in the Province of Manitoba. A “letter of intent” shall be submitted, clearly indicating the area(s) of the project for which the Engineer is responsible.

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City of Winnipeg
Planning, Property and Development Department
Unit 83 - 30 Fort Street
Winnipeg, Manitoba
R3C 4X7

www.winnipeg.ca/ppd

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Woodworking Shops

*Information on the
electrical and mechanical
requirements for
woodworking shops*

*Every effort has been made to ensure the accuracy
of information contained in this publication. However,
in the event of a discrepancy between this publication
and the governing City of Winnipeg By-law,
the By-law will take precedence.*