



## **INSULATOR (HEAT AND FROST)**

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### **Occupation Description**

Insulators (Heat and Frost) work with different kinds of insulating material to prevent or reduce the passage of heat, cold, vapour, moisture, sound or fire. They read and interpret drawings and specifications to determine insulation requirements, select the amount and type of insulation to be installed, and measure and cut insulating material to the required dimensions. They then apply, install, repair and maintain insulating material on mechanical systems, such as piping, tanks, vessels, and HVAC systems. Insulated surfaces may be finished with materials such as plastics, aluminum, galvanized steel and coated steel, stainless steel, canvas, mastics or finishing cement. Insulators (Heat and Frost) also lay out and fabricate components on-site, or remove and/or encapsulate old insulation. Removing material such as asbestos, ceramic fibers and lead is also part of the trade. Insulators (Heat and Frost) also spray insulating materials and install fireproofing and fire stop systems. Insulators (Heat and Frost) work in commercial and industrial settings, such as gas plants, refineries, hospitals, schools, and convention centres.

For detailed information on the scope of knowledge and skills taught and assessed in this program refer to the Program Outline, available on the SkilledTradesBC website.

### **Pathways to Certification**

In BC, an individual can become certified as an Insulator (Heat and Frost) by completing the Insulator (Heat and Frost) program or by challenging the certification. Apprenticeship programs are for individuals who have an employer to sponsor them and challenge programs are for individuals who have extensive experience working in the occupation and wish to challenge the certification.

Youth can begin apprenticeship in high school through either the Youth Train in Trades or Youth Work in Trades programs. The Youth Work in Trades program is available for any trade if an employer is willing to sponsor the student. Trades offered through the Youth Train in Trades vary by region; contact your local school district to find out which technical training programs are being offered through the Youth Train in Trades program in your region.

### **Recommended Education**

The following education is **recommended** for apprentices entering this occupation. These are not prerequisites, but rather a desired level of skill or knowledge that will contribute to success in the industry.

- Grade 10 or equivalent including English 10, Mathematics 10, and Science 10
- Preferred: Grade 12

### **SkilledTradesBC Registration**

Individuals who wish to begin an apprenticeship in this program must register with SkilledTradesBC along with their sponsor. Application forms for all programs are available from the SkilledTradesBC website. Online registration is also available for most programs through the SkilledTradesBC website.

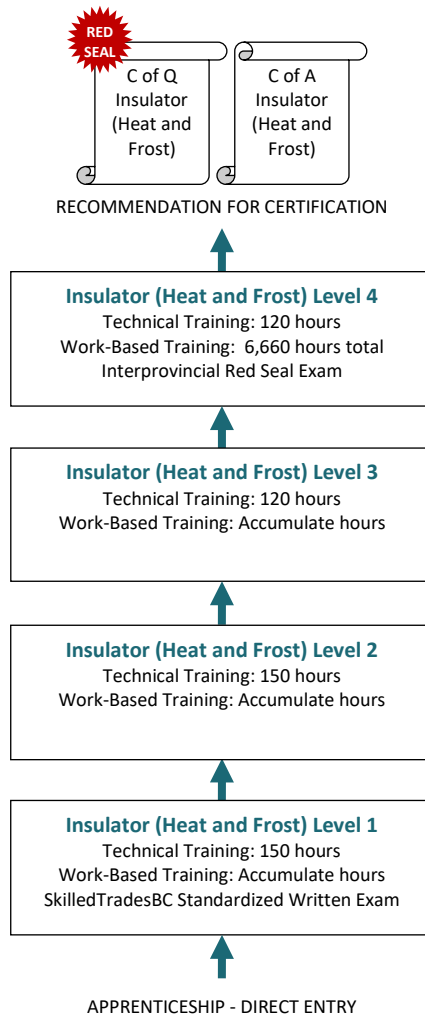
Those who wish to challenge the Insulator (Heat and Frost) certification must complete the Insulator (Heat and Frost) Challenge Application and submit it to SkilledTradesBC. Challenge applications are assessed for proof of workplace hours and scope of experience prior to acceptance of the individual into the challenge pathway.

### **Apprenticeship Pathway**

This graphic provides an overview of the Insulator (Heat and Frost) apprenticeship pathway.



C of Q = Certificate of Qualification  
 C of A = Certificate of Apprenticeship  
 WBT = Work-Based Training



**CROSS-PROGRAM CREDITS**

*Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program*

None



**Apprenticeship Program Standards**

<b>Credentials Awarded</b>	<ul style="list-style-type: none"> <li>▪ Insulator (Heat and Frost) – Certificate of Qualification with Interprovincial Red Seal endorsement</li> <li>▪ Insulator (Heat and Frost) – Certificate of Apprenticeship</li> </ul>
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<b>SkilledTradesBC Registration Prerequisites</b>	<ul style="list-style-type: none"> <li>▪ Agreement signed by the employer to sponsor the apprentice</li> </ul>
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**Completion Requirements** Certification as an Insulator (Heat and Frost) is awarded upon successful completion of:

<b>Requirement</b>	<b>Level of Achievement Required</b>
Technical Training	Minimum 70% in each level of technical training: <ul style="list-style-type: none"> <li>▪ Level 1: 150 hours and SkilledTradesBC standardized written exam</li> <li>▪ Level 2: 150 hours</li> <li>▪ Level 3: 120 hours</li> <li>▪ Level 4: 120 hours</li> </ul>
Interprovincial Red Seal Exam	<ul style="list-style-type: none"> <li>▪ Minimum 70%</li> </ul>
Work-Based Training	<ul style="list-style-type: none"> <li>▪ 6,660 hours</li> </ul>
Recommendation for Certification	<ul style="list-style-type: none"> <li>▪ Recommendation for certification signed by the Sponsor and an individual holding credentials eligible for sign-off authority</li> </ul>

**Program Duration** Duration varies depending on how training is delivered, but the program generally takes 4 years to complete.  
The technical training requirement is typically met through block-release training (full-time, at school) delivered by a SkilledTradesBC-approved training provider. It can also be met through approved alternative training models (e.g., distance education, online, part-time) and/or level challenge where these options are available.

**Sign-off Authority** Credentials eligible to sign-off on the Recommendation for Certification:

- Insulator (Heat and Frost) – Certificate of Qualification
- Insulator (Heat and Frost) – Interprovincial Red Seal endorsement
- Heat and Frost Insulator – Certificate of Qualification
- SkilledTradesBC-issued letter authorizing supervision and sign-off of apprentices in this occupation

**Challenging a Level** The following levels of technical training can be challenged for advanced placement in this program:

- Level**
- Level 1
  - Level 2

**Cross-Program Credits** Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program

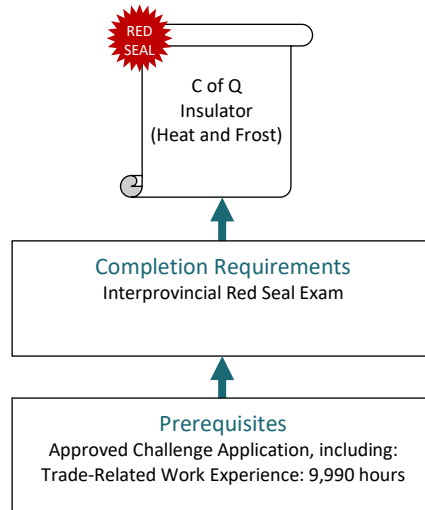
<b>Credential</b>	<b>Credit(s) Granted</b>
<ul style="list-style-type: none"> <li>▪ None</li> </ul>	<ul style="list-style-type: none"> <li>▪ N/A</li> </ul>



**Challenge Pathway**

This graphic provides an overview of the Insulator (Heat and Frost) challenge pathway.

*C of Q = Certificate of Qualification*



**CREDIT FOR PRIOR LEARNING**

*Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program*

None

**Challenge Program Standards**

**Credentials Awarded**

Insulator (Heat and Frost) – Certificate of Qualification with Interprovincial Red Seal endorsement

**SkilledTradesBC**

**Registration Prerequisites**

An approved Challenge Application, which includes:

- 9,990 documented hours of directly related experience working in the occupation

**Credit for Prior Learning**

Individuals who hold the credentials listed below are considered to have met, or partially met, the prerequisites for challenging this program:

Credential	Credit(s) Granted
None	▪ None

**Completion Requirements**

Certification as an Insulator (Heat and Frost) is awarded upon successful completion of:

Requirement	Level of Achievement Required
Interprovincial Red Seal Exam	▪ Minimum 70%



## Supporting Documents

Insulator (Heat and Frost) Program Outline (2018) – Defines the full scope of knowledge and skills required to competently perform the occupation in BC. Available from the SkilledTradesBC website.

Insulator (Heat and Frost) Red Seal Occupational Analysis (2017) – Prepared by industry experts, under the guidance of the federal government, for Red Seal trades to define the national standard of competence for the trade. Available from the Red Seal website: [www.red-seal.ca](http://www.red-seal.ca).

## Contacts

SkilledTradesBC manages B.C.'s industry training and apprenticeship programs. Contact SkilledTradesBC Customer service if you have any questions regarding registration, examinations or certification for this program.

Telephone:	778-328-8700	Fax:	778-328-8701
Toll Free (within BC):	1-866-660-6011	Email:	<a href="mailto:customerservice@skilledtradesbc.ca">customerservice@skilledtradesbc.ca</a>
Website:	<a href="http://www.skilledtradesbc.ca">www.skilledtradesbc.ca</a>		

## Revision History

The standards for this program were reviewed and/or updated on the dates below.

Program Standards Approved:	March 2002
Updated:	January 2006
Updated:	December 2011
Updated:	September 2018

Program Profiles are updated regularly. Visit [www.skilledtradesbc.ca](http://www.skilledtradesbc.ca) for the most current version.