

STATE OF MICHIGAN

INSULATION

Business and Law examination specifications and suggested study materials are contained in the Candidate Information Bulletin.

TOPIC INFORMATION	# OF ITEMS
1. GENERAL KNOWLEDGE AND THEORY a. Survey Existing Structure for Thermal Improvement and Moisture Protection b. Evaluate Influence of Heat Source on Insulation Selection c. Perform Energy Calculations d. Evaluate Intake Air Supply and Quality	8
2. PLAN READING, MATERIALS, ESTIMATING, AND TAKE-OFFS a. Read and Interpret Construction Prints to Ensure All Relevant Material has been Provided to the Insulation Contractor b. Estimate Material Needs and Costs c. Identify Any Special Concerns Related to the Construction Techniques Shown in the Prints d. Resolve Conflicts or Issues Regarding Insulation with Builder as Needed	5
3. SPRAY-ON APPLICATION a. Ensure Adequate Backing is Present Behind Studded Wall Areas to be Insulated b. Perform Surface Preparation for Spray Insulation as Needed c. Apply Spray-On Cellulose, Fiberglass, Foam, or Rockwool Insulation d. Perform Needed Scraping or Cutting Once Application is Complete e. Ensure Wall Covering Fits Correctly	4
4. BATT/ROLL INSULATION a. Measure and Cut Insulation as Needed b. Ensure Wiring is Accessible c. Install Faced Insulation as Needed d. Hang or Fasten Unfaced Insulation as Needed	4
5. BLOWN OR LOOSE-FILL INSULATION (INCLUDES DENSE-PACKING) a. Ensure Cavities and Openings are Plugged b. Ensure All Heat-Producing Devices and Appliances are Covered or Barrired as Needed c. Set Up Machine for Specific Application d. Verify Depth Consistency of Insulation Application	4

	e. Dense-Pack Cavities as Appropriate	
6. RIGID-BOARD AND REFLECTIVE INSULATION	a. Select, Cut, Fit, and Secure Boards for Specific Installations b. Select and Apply Reflective Insulation	2
7. VENTILATION	a. Ensure Adequate Ventilation is Available (intake or exhaust) at the Start of an Insulation Project b. Ensure Adequate Ventilation is Available (intake or exhaust) Upon Completion of the Project c. Communicate and Work with Other Trades on Improving Air Supply and Quality	5
8. VAPOR BARRIERS AND RETARDERS	a. Evaluate the Vapor Barrier and Retarder Needs of a Structure Including Particular Room Use and Location b. Install Barrier or Retarder	4
9. SAFETY AND EMPLOYEE PROTECTION	a. Understand Responsibility for Providing Personal Protective Equipment (Contractor's Responsibilities) b. Prepare Emergency Action Plans c. Ensure Safety Training is Conducted when Needed d. Ensure Adequate Ventilation is Available for Employees e. Ensure First Aid Kit is Available per MIOSHA Requirements f. Ensure Personal Protective Equipment is Used Correctly g. Use All Tools and Equipment in Accordance with MIOSHA Requirements h. Utilize Ladders in Accordance with MIOSHA Requirements i. Assemble and Utilize Scaffolds in Accordance with MIOSHA Requirements j. Follow MIOSHA Requirements for Work Around Toxic Materials k. Perform Appropriate Material Cleanup and Disposal l. Maintain Material Safety Data Sheets (MSDS)	8



10.	OTHER INSULATION APPLICATIONS (POURED INSULATION, PIPING INSULATION, SOUND INSULATION, CAULKING, AND SEALING) <ol style="list-style-type: none"> a. Evaluate Sound Insulation Needs and How to Address Them b. Apply Sound Insulation Material c. Locate All Fenestrations/Penetrations or Other Openings that Might Require Caulking or Sealing d. Apply Caulk or Sealant e. Clean Excess Caulk or Sealant f. Insulate Piping and Ducts to Ensure they are Located within Conditioned Space g. Install Insulation for Other Specialized Applications h. Ensure Cavities and Openings are Plugged i. Ensure Poured Insulation Meets Requirements for Specific Applications (e.g., filling block) j. Apply Insulation 	6
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Suggested Study Materials

The study materials listed here should be helpful to candidates preparing for the **M&A Contractor** examination.

Except for the Michigan Laws, Rules, Codes and Standards, neither the Department nor PSI endorses any of the materials listed. However, we try to ensure that the references are currently available and consist of recognized industry standards.

If the answer to a specific examination question could differ because of conflicting information contained in the suggested study materials, the legal requirement, such as a law, regulation, board or commission rule, or building code, takes precedence over (overrides) any other reference. If two legal requirements appear to conflict, the Michigan specific law, regulation, board or commission rule, or building code, takes precedence over the national one. Information from the suggested study materials listed here takes precedence over information from all other sources or persons.

This is only a sample of the available reference materials that contain information about the professions. These materials contain neither all of the general trade knowledge required to be competent in any specific area nor all of the information on which you will be tested. Also, please be aware that reference materials may go out of print or be otherwise unavailable.

Please contact a library, community college, currently practicing builder or contractor, Code enforcement agency, or other specialists in the profession for additional information or reference material.

These examinations are **CLOSED BOOK**, so the following reference materials suggested as study resources are not allowed in the examination center.

- Michigan Residential Code, 2009, Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes and Fire Safety, Office of Management Services, PO Box 30255, Lansing, MI 48909, (517) 241-9313, www.michigan.gov/bccfs
- *Michigan Occupational Safety and Health Act 154 of 1974 as amended, and Administrative Rules for All Industries*, Michigan Department of Licensing and Regulatory Affairs, MIOSHA Standards Division, P.O. Box 30643, Lansing, MI 48909, (517) 322-1845. Price: Free. *All MIOSHA standards may be printed from the MIOSHA web site: www.michigan.gov/mioshastandards*
- *Insulation Handbook*, 2001, Richard T. Bynum, Jr., ISBN: 0-07-134872-7, McGraw-Hill, PO Box 543, Blacklick, OH 43004, (800) 334-7344, www.books.mcgraw-hill.com
- *Carpentry and Building Construction*, Sixth Edition, 2004, John L. Feirer and Mark D. Feirer, ISBN: 0-07-822702-X, Glencoe/McGraw-Hill, PO Box 543, Blacklick, OH 43004, (800) 334-7344, www.glencoe.com

