PRODUCT SPECIFICATION

1. PRODUCT NAME

ICYNENE MD-R-200™

ICYNENE MD-R-200™ is a trademark for medium density, all water blown polyurethane spray foam manufactured by Icynene. ICYNENE MD-R-200™ is a 2.0 lb/ft³ (32 kg/m³) density, free rise insulation and air barrier material.

2. MANUFACTURER

ICYNENE MD-R-200™ is made on site from liquid components manufactured by Icynene Inc. Installation and on-site manufacturing are supplied by independent Icynene Licensed Dealers.

3. PRODUCT DESCRIPTION

ICYNENE MD-R-200™ is a 2.0 lb/ft³ (32 kg/m³), 100% water-blown foam insulation and air barrier material. It insulates and air seals at the same time. Convective air movement inside cavities is virtually eliminated, providing more uniform temperatures throughout the building.

The result is superior quality construction, with higher comfort levels and lower heating and cooling costs. Energy savings vary depending on building design, location, etc.

ICYNENE MD-R-200™ expands to full fill cavities within the building envelope. It doesn't have to be cut or fitted into the space.

ICYNENE MD-R-200™ is applied by spraying the foam into an open wall, crawl space, ceiling surface or cathedral ceiling cavities. There it expands 30 to 40:1 in a matter of seconds to provide a foam blanket of millions of tiny air cells, filling building cavities and sealing cracks and crevices in the process.

4. TECHNICAL DATA

(Based on Core Samples)

Recycled Content
Yes

Thermal Performance

Thermal Resistance R/in. @ 75 °F
ASTM C518: R5.1 (hr.ft^2 -°F)/BTU

Average insulation contribution in stud wall:
2" x 4 in. = R18
2" x 6 in. = R28

ICYNENE MD-R-200™ provides improved performance over traditional air permeable insulations at equivalent R-values. ICYNENE MD-R-200™ is not subject to loss of R-value due to aging, windy conditions, settling, convection or air infiltration; nor is it prone to traditional moisture intrusion via convective air flow.

Air Permeance/Air Barrier /Air Seal

Icynene MD-R-200™ fills any shaped cavity, and adheres to most construction materials, creating assemblies with very low air-permeance. Additional interior or exterior air infiltration protection is subject to applicable codes.

Air permeability of core foam:

ASTM E283 data
0.0016 L/S-m^2 @ 75 Pa for 2 in.

ASTM E2178 data
0.0015 L/S-m^2 @ 75 Pa for 2 in.

In all buildings insulated and air sealed with Icynene MD-R-200™, adequate mechanical ventilation/air supply should be provided for optimum IAQ (Indoor Air Quality). See ASHRAE Guidelines.

Water Vapor Permeance

ICYNENE MD-R-200™ has low water vapor permeability which reduces the amount of moisture that can diffuse through the insulation.

Water vapor transmission properties:
ASTM E96: 1.3 Perms @ 3 in. (Desiccant Method)

Water Absorption Properties

Water Absorption, % by volume
ASTM D2842: 1.70%

Burn Characteristics

ICYNENE MD-R-200™ is a combustible product and is therefore, consumed by flame, but will not sustain flame upon removal of the flame source. It leaves a charcoal residue. It will not melt or drip. It should be applied in accordance with applicable building codes.

US Specifications

Surface Burning Characteristics
ASTM E84*:

Flame Spread	≤25
Smoke Development	≤450

*Flame spread rating not intended to reflect hazards under actual fire conditions.

NFPA 286:

Wall Cavity:
MD-R-200™ can be applied in walls in occupied space with thicknesses up to 7.5 in. It must be covered with ½ in. of gypsum board.

Vented Attic:
MD-R-200™ can be applied in the floor of the attic with thicknesses up to 9 in. Can be left uncovered.

Unvented Attic:
MD-R-200™ can be applied to the underside of the roof deck in thicknesses up to 11 in. Can be left bare.

MD-R-200™ can be applied in walls in thicknesses up to 5.5 in. It must be covered with "SafeCoat Fire Break" ignition barrier paint.

Environmental / Health / Safety

Icynene MD-R-200™ contains no HFC's or PBDE's.

Not to be installed within (3 in.) of heat emitting devices, where the temperature is in excess of 180 °F, in accordance with applicable codes.

5. INSTALLATIONS

ICYNENE MD-R-200™ is installed by a network of independent Icynene Licensed Dealers.

Installation is generally independent of environmental conditions. Icynene MD-R-200™ can be installed in hot, humid or freezing conditions. Surface preparation is generally not necessary. Within seconds, the foaming process is complete.

6. AVAILABILITY

Check regional Yellow Pages™ or contact Icynene Inc. at 800-758-7325 or visit our website at www.Icynene.com.

7. WARRANTY

WHEN INSTALLED PROPERLY IN ACCORDANCE WITH INSTRUCTIONS, THE COMPANY WARRANTS THAT THE PROPERTIES OF THE PRODUCT MEET PRODUCT SPECIFICATIONS AS OUTLINED IN THIS PRODUCT SPECIFICATION SHEET. SAVE AND EXCEPT ANY EXCLUSIONS REFERENCED IN THE WARRANTY.

8. TECHNICAL

Icynene Licensed Dealers and Icynene Inc. provide support on both technical and regulatory issues.

9. REGULATORY

ICYNENE MD-R-200™ has been tested as per the requirements of the International Code Council – Evaluation Service's AC377 Acceptance Criteria.

For regulatory issues concerning ICYNENE MD-R-200™, contact Icynene at 800.758.7325.

10. RELATED REFERENCES

All physical properties were determined through testing by accredited third party agencies.

Icynene Inc. reserves the right to change specifications in its effort of continuous improvement. Please confirm that technical data literature is current.

11. PACKAGING AND STORAGE

Packaging

Package - 55 US gallon, open top steel drums

Component 'A' –550 lb. per drum
Base Seal® - Polyisocyanate MDI

Component 'B' – 500 lb. per drum
ICYNENE MD-R-200™ - Resin

Storage

Base Seal® (Component A) and ICYNENE MD-R-200™ Resin (Component B) ideally should be stored between 60 ºF and 90 ºF.

Base Seal® (Component A) should be protected from freezing and ICYNENE MD-R-200™ Resin (Component B) should be mixed prior to use.

12. INSTALLATION SPECIFICATIONS

Refer to the ICYNENE MD-R-200™ Technical Data Sheet.

ICYNENE™
HEALTHIER, QUIETER, MORE ENERGY EFFICIENT®

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