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ICYNENE MD-R-200™

ICYNENE MD-R-200™ is a revolutionary 2.0 lb. spray applied polyurethane foam insulation and air barrier product. This product was developed in response to the market demand for a medium density rigid spray foam insulation and air barrier product with a lower environmental impact. The development of the MD-R-200™ product also took into consideration installers long standing desire for a 2.0 lb product with better yield, easier application at low environment temperatures, easier application at higher humidity levels, more aggressive adhesion with various substrates, lower odor at time of installation, and could be applied at greater thicknesses per pass.

PHYSICAL PROPERTIES

Characteristic	Test Method		Result	AC 377 Requirement
Core Density	ASTM D 1622		2.0 lb/ft ³ (32 kg/m ³)	Test value
Initial Thermal Resistance	ASTM C-518		5.1	Test value
Max. Thickness per Pass			4 inches	
Color of final foam			platinum	
100% water blown technology			Yes	
-Ozone Depleting			No	
-Global Warming Potential Factor			1	
Recycled Content			Yes	
PBDE's			No	
Fire Rating	ASTM E-84	FSI	≤ 25	≤ 75
	ASTM E-84	SDI	≤ 450	≤ 450
	NFPA 286	Walls in occupied space:	Up to 7.5 inches. Must be covered with 1/2 inch of gypsum board.	
		Vented Attic	Floor: Up to 9 inches. Can be left uncovered.	
	NFPA 286M	Unvented Attic	Roof deck: up to 11 inches. Can be left bare. Walls: Up to 5.5 inches must be covered with "SafeCoat Fire Break" ignition barrier paint.	
Air Permeance	ASTM E 2178	@ 75 PA	0.0015 L/s/m ² @ 2"	< 0.02
	ASTM E 283	@ 75 PA	0.0016 L/s/m ² @ 2"	< 0.02
Tensile Strength	ASTM D 1623		26 psi	> 15 psi
Compressive Strength	ASTM D 1621		16 psi	> 15 psi
Water Absorption	ASTM D 2842		1.70%	
Dimensional Stability (volume change)	ASTM D 2126	@ 100°C and ambient R.H.	<1%	+/- 15.0%
		@ -20°C and ambient R.H.	<1%	
		@ 70°C and 97% humidity	<1%	
Water Vapor Permeance	ASTM E 96		1.3 perm @ 3"	N/A

Disclaimer: Data presented in this document is based on tests and information, which we believe to be reliable. This document is provided for information purposes only and does not constitute a warranty, expressed or implied, including any warranty of merchantability or fitness. This data is relied upon at the sole discretion and judgement of user/reviewer.

It is the installers responsibility to ensure that the use and installation of this product complies with all applicable national and local building codes.



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LIQUID COMPONENTS PROPERTIES

Property	Isocyanate	Resin
Color	Brown	Purple
Viscosity @ 25° C	350 cps	350 cps
Shelf Life*	12 months	3 months
Mixing ratio (volume)	100	100

(*) Resin and Isocyanate should be stored at 60°- 90° F (15-32° C). Never exceed 100° F (38° C)
See MSDS for more information

RECOMMENDED PROCESSING CONDITIONS

Requires only an initial mix prior to each use to make sure the colorant and components are well mixed.

The resin does not require constant agitation since it is a solution and not an emulsion so after the initial mix, constant agitation is not required.

When the MD-R-200 has been charged into the system, check all screens before spraying

Pre-heat drum temperatures: 50 - 80° F (10 - 27° C)

Spray temperatures, primary heaters and hose heat: 115 - 125° F (45 - 55° C)

Chamber size: 01 round

Pressure setting: 900 - 1100 Psi, depending on type of machine and hose length

Distance from substrate: 12" - 24" (30 - 60 cm)

Can be sprayed in either a horizontal or vertical motion, but need to overlap and build material to get desired thickness

Distance from substrate and spray motion will vary between cavity or flat open surface spray application

REACTIVITY PROFILE

Cream time	3 sec.
Gel Time	9 sec.

Tack Free Time	14 sec.
End of Rise	8 sec.

HEALTH & SAFETY CONSIDERATIONS

Handling Recommendations

Use personal protective equipment (see MSDS)

Avoid all contact with skin and eyes

Do not inhale the vapors

Do not store in conditions outside of the recommended parameters

In case of a spill / leak, see MSDS.

For more information, please consult the MSDS

Application Safety

While spraying, always work with adequate ventilation.

Protective gloves, overalls, eye protection, safety shoes, hard hats and a properly fitting breathing apparatus supplying fresh air must be worn by the installers (and others working within 15 feet of the installers) at all times while spraying.

Persons with known respiratory allergies must avoid exposure to the Isocyanate component.

If inhalation of the vapors occurs, remove the person from the working area to breathe fresh air and if breathing is still difficult, call a physician.

Avoid contact with eyes, skin and clothing.

In case of eye contact, immediately flush with large amounts of water for at least 15 minutes and call a physician immediately.

In case of skin contact, wash area with soap and water.

Wash any clothing that has come into contact with the Iso or resin before reuse.

Wait until 1st layer cools before applying a second layer / lift over an initial layer / lift

Fire hazard

Fires involving either component may be extinguished with carbon dioxide, dry chemical or an inert gas. Application of large quantities of chemical spray is recommended for spill fires.

Personnel fighting the fire must be equipped with self-contained breathing apparatus.