



Between the World  
and The Weather  
Since 1928

# Ram-Tough 250 Rubberized Asphalt Membrane Waterproofing

## PRODUCT DESCRIPTION

A thermoplastic material, Ram-Tough 250 Bitumen is a fluid-applied rubberized asphalt bitumen which forms a completely monolithic, waterproof barrier without seams or joints. It exhibits excellent adhesion characteristics to almost any sound horizontal or vertical surface. Water cannot get under or through it. Ram-Tough 250 Bitumen is a hot-applied SBS rubber compound that seals difficult flashing conditions and remains flexible for its lifetime.

Ram-Tough 250 Bitumen can also be special ordered with an odor masking agent.

## USES

- Plaza deck waterproofing systems
- Protected membrane roofs (IRMA®)\*
- Greenroof-Roofscapes®
- Vertical waterproofing applications
- Parking decks, bridges, water treatment plants
- Between slab waterproofing membrane systems

## FEATURES

- Dynamic physical properties engineered with SBS modification
- Consistent premium quality
- Superior elongation and cold -temp flexibility properties
- Self-healing properties above 60°F
- Installation at temperatures to 0°F
- Monolithic application, no seams, no curing
- Conforms to irregular surfaces
- Tenacious adhesion properties
- Unrivaled history of successful applications

## BENEFITS

- Quality assurance with every batch documented
- Simple to install
- Superior traffic, abrasion and puncture resistance
- Total adhesion stops water migration below membrane
- Tolerates adverse weather conditions immediately
- Ready for other trades after installation
- Out performs other types of waterproofing systems with unequalled, time-proven performance

\* IRMA® is a registered trademark of Dow Chemical

## TYPICAL PHYSICAL PROPERTIES (Meets or exceeds CGSB-37.50 M89 Standards)

Properties	Test Method	Test Requirement	Test Results	Comments
Color	NA	NONE	N.A.	Black
Softening Point	ASTM-D-36		83°C (181°)	Pass
Solids Content	CGSB-37-GP-50	100%	100%	Pass
Ratio of toughness to peak load	CGSB-37-GP-50	Min.0.040	0.059	Pass
Low temperature crack bridging capacity	CGSB-37-GP-50	No Cracking No Adhesion Loss No Splitting	No Cracking No Adhesion Loss No Splitting	Pass
Toughness, J	CGSB-37-GP-50	Min. 5.5	11.7	Pass
Penetration 0.1 mm	CGSB-37-GP-50	Max 110 @ 25°C (77°F) Max 200 @ 50° C (122°F)	80 @ 25° C 155 @ 50° C	Pass
Flow, MM	CGSB-37-GP-50	Max 3 @ 60°C (140°)	0.50 @ 60° C	Pass
Flash Point	CGSB-37-GP-50 ASTM-D-92	Min 260° C (500° F)	327°C (620°F)	Pass
Water Resistance 50° C (122°F) for 4 days	CGSB-37-GP-50 ASTM-D-92	No delamination No blistering No Emulsification No deterioration No pinholes	No delamination No blistering No Emulsification No deterioration No pinholes	Pass
Adhesion	CGSB-37-GP-50	Min. 1	1.2	Pass
Viscosity	CGSB-37-GP-50	Min 2, Max 15	4 Sec.	Pass
Water Vapor Permeability	CGSB-37-GP-50	Max 1.7 0.35 g max gain	0.18 ng/Pa.m2.s	Pass
Water absorption	CGSB-37-GP-50	Min 0.18 0.18 g max loss	0.22 g gain	Pass
Low Temperature flexibility & adhesion	CGSB-37-GP-50	No Cracking No delamination No adhesion lose	No Cracking No delamination No adhesion loss	Pass
Heat stability	CGSB-37-GP-50	Aged Samples, No change in viscosity, penetration flow or low temp	Aged Samples, No change in viscosity, penetration flow or low temp	Pass

**APPROVALS:** Underwriters Laboratories  
Miami-Dade  
New York City (MEA)  
British Board of Agrément

## LIMITATIONS

Ram-Tough 250 should not be left exposed or subjected to unprotected construction traffic. Do not install this product over lightweight structural concrete of less than 3000 PSI strength without prior written notice from the Barrett Company.

Lightweight insulating concrete is not an acceptable substrate.

## HEATING EQUIPMENT AND GUIDELINES

Use double-jacketed, hot-air or oil bath melter with mechanical agitation, specifically designed for applying rubberized asphalt materials. Maintain oil-bath at approximately 500°F and material temperature at 375°F to 400°F, with constant agitation. Do not overheat Ram-Tough 250. Overheating will cause Ram-Tough 250 to cross-link and line the walls of the melter, adversely affecting the equipment and the material performance properties.

It is also important not to hold Ram-Tough 250 material at elevated temperatures for prolonged periods of time as this will also cause some polymer degradation. A target of not exceeding four hours at 400°F under heat should be adhered to.

## APPLICATION RECOMMENDATIONS

Concrete deck preparation shall comply with ASTM D-5295 and be dry. Prime concrete substrates with Ram Primer & Surface Conditioner and allow to dry.

Draw material from melter in 5 gallon pails or mop cart type container. On low-slope horizontal surfaces, use a straight (unnotched) squeegee to apply the material. On vertical surfaces a roller mop is recommended. Several passes may be required with a roller to achieve a more uniform thickness. This material has a rapid thermoplastic "set". With the correct equipment, this material can also be sprayed or screeded on.

Apply the Ram-Tough 250 at the rate specified in the project specifications. If a reinforcement is specified, apply it to the base coat of Ram-Tough while still hot, pressing it into place without wrinkles, buckles or fishmouths. Apply the top coat as specified. Application shall be made in strict accordance with the specifications and recommendations of the manufacturer.

Although Ram 250 bitumen can be applied at ambient temperatures down to 0°F, cold weather application procedures must be implemented to assure that proper adhesion and recommended application rate is achieved.

Perform an adhesion and thickness test once every hour. Do not proceed if inadequate adhesion is evident. If inadequate thickness is a problem, reduce melter temperature and use a chalk line grid to as a guide to achieving the proper coverage. As an example, 1.7 lbs. of Ram-Tough 250 bitumen, evenly spread over a smooth 1 sq. ft. surface will provide a film thickness of approximately 215 mils. One gallon of Ram-Tough 250 weighs approximately 10 lbs.

## PACKAGING

35 lbs./carton (approx.)  
72 cartons per pallet  
Approx. 2500 lbs./pallet  
18 pallets/truckload

## CLEAN-UP

Use citrus or water based hand cleaner for worker clean-up.

Tools may be cleaned with mineral spirits. Take all necessary precautions when handling solvents and combustible materials.

## APPLICATION PRECAUTIONS

- Do not apply over curing agents not approved in writing by the Barrett Company
- Do not apply to dusty, dirty, wet or damp surfaces
- Follow recommended heating and application temperatures
- Provide positive drainage of membrane, where possible
- To reduce the potential for odors entering the building, cover fresh air intakes, close windows, doors and other openings which would allow odors to enter during application. Interior negative air pressure can impact the potential for odor entering the building.
- Not for use with potable water collection systems.
- **READ MATERIAL SAFETY DATA SHEET BEFORE USING**
- **FOR PROFESSIONAL ROOFING CONTRACTOR USE ONLY**

## PRODUCT SAFETY INFORMATION

RAM-Tough 250 roofing bitumen offers no unusual health or safety risks for a product of this nature. As with any roofing process, proper ventilation, clothing and eye protection is important.

For specific information, contact the Barrett Company for a current Material Safety Data Sheet on this product.

The user should not assume that all safety measures are indicated or that other measures may not be required.

### Note

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