



## CRUMB RUBBER MODIFIED BITUMEN CONFORMING TO IRC SP 53 - 2002

Flexible pavements tend to become soft in summer & brittle in winter due to high temperature variation. Also early development of distress symptoms occurs due to heavy traffic loads on such roads. In these circumstances ordinary bitumen is not sufficient to overcome these symptoms.

CRMB is a special type of bitumen whose properties have been improved by the addition of crumb rubber & special types of additives like hydrocarbon materials, resins etc. Thus altering the physical properties of bitumen making it more resistant to temperature variations, weather & high traffic loads, leading to enhanced pavement life, reduced maintenance costs and excellent driving comfort.

### Types of CRMB & Recommendation for specific use:

**CRMB 60:** recommended for hot climate areas.

**CRMB 55:** recommended for moderate climate areas.

**CRMB 50:** recommended for cold climate areas.

Mixing / Coating	170 – 185 °C
Laying	150 – 170 °C
Beginning of compaction	Over 140 °C
End of compaction	110 – 120 °C

### Advantages of CRMB

- Lower susceptibility to daily & seasonal temperature variations.
- Higher resistance to deformation at elevated pavement temperature
- Better edge resistance properties
- Better adhesion between aggregate & binder ensures longer life, strength & stability
- Higher fatigue life of mixes due to high elastic recovery
- Delay of cracking & reflective cracking
- Overall improved performance in extreme climatic conditions & under heavy



- traffic conditions
- Better water resistance
- Prevents rutting
- Resistance to creep & higher indirect tensile strength

## Applications

CRMB can be used for wearing courses at heavy trafficked roads, busy intersections, bridge decks and roundabouts for increased life of the surfacing.

- Bus lane
- Heavy trafficked lane
- Slopes roundabouts junctions
- Industrial and multimodal platforms
- Airport runways and parking apron
- Bus and trucks parking place
- Providing high skid resistance (Thin overlay Chip Seal)
- Reducing traffic noise
  - Porous asphalt and acoustic thin overlay
- Waterproofing Concrete structure
  - Sand asphalt
- For snow bound regions
- In Stress Absorbing Membrane Interlayer (SAMI)
- For high rainfall regions

Specifications of CRMB (E) as per IRC SP 53 - 2002

Designation	Grades and Requirement			Test Method
	CRMB50	CRMB55	CRMB60	
Penetration at 250°C	<70	<60	<50	IS1203-1978
Softening point, (R& B), C Min.	50	55	60	IS1205-1978
Elastic Recovery of half thread in	50	50	50	IS15462-2004
Flash Point, °C Min	220	220	220	IS1209-1978
Separation difference in softening point, ( R&B)°C Max.	4	4	4	IS15462-2 004
Thin Film Oven Test (TFOT) on Residue				
a. Penetration at 25C, Min % of original	60	60	60	IS1203-1978
b. Increase in softening point, °C, Max	7	6	5	IS1205-1978
c. Elastic Recovery of half thread in Ductilometer at 25°C, % Min.	35	35	35	IS15462-2004

**Transportation to the site:** Transportation can be arranged for delivery to your site. HINCOL emulsions are also available on ex-factory basis.

**Availability:** Easy and immediate availability from conveniently located plants across the country