# CRUMB RUBBER MODIFIED BITUMEN

RTI CRMB is based on unique technology that enables homogeneity, stability and consistent properties of binder throughout the supply chain. To achieves are used and a special manufacturing process is adopted and the result is a high performance bituminous binder with unique properties that are consistent.

RTI Crumb Rubber Modified Bitumen is designed to maximize resistance to permanent deformation and reduce fatigue of asphalt mixtures that are used in the most demanding locations.

The careful selection of additives greatly enhances binding performance, improving elasticity, reducing temperature susceptibility and improving adhesion. Our product ranges is particularly suited to heavy traffic locations such as highways, main roads, airfields, roundabouts and bus lanes. Typically we've developed products for a combination of the following needs.

- Superior Elastic Modulus of RTI CRMB helps control deformation under high pavement temperature and heavy loading conditions.
- Increases the fatigue life of pavement under repeated heavy loading conditions.
- Helps in reduction of maintenance cost and is more cost effective on a life cycle cost basis.
- For use in thin surfacing and stone mastic asphalt mixes.
- For use in drainage (porous) asphalt application
- For asphalt mixtures designed for high resistance to permanent deformation and high flexibility.

# CRUMB RUBBER MODIFIED BITUMEN HAS FOLOOWING TYPES:

RTI CRMB 55
RTI CRMB 60

## RTI CRMB

RTI CRMB is a special type of value added Bitumen where the properties have been improved by blending with Crumb Rubber and special type of additives. RTI CRMB with enhanced physical properties, is more resistant to temperature variations, weathering and high traffic loads. This leads to improved pavement life, reduced maintenance costs and excellent driving comfort. RTI CRMB is strictly manufactured as per IRC SP 53:2002 and IS 17079:2019.

## TYPICAL PROPERTIES:

| No | PROPERTIES | RTI CRMB 55 | RTI CRMB 60 |
|---|---|---|---|
| 1 | Penetration at 25 °C, 0.1 mm Max | 60 -30 | 50 -20 |
| 2 | Softening Point, °C min | 55 | 60 |
| 3 | Elastic Recovery of half thread in Ductilometer at 15 °C, % min | 60 | 60 |
| 4 | Flash Point, °C, min | 220 | 220 |
| 5 | Complex modulus as (G*/Sin) as Min 1.0 KPa at 10 rad/s at a temp. °C | 64 | 70 |
| 6 | Separation Difference in Softening Point, °C max | 4 | 4 |
| 7 | Viscosity at 150 °C, poise | 4-8 | 6-12 |
| 8 | Tests on Residue: | | |
| | a) Loss in mass, %, Max | 1.0 | 1.0 |
| | b) Change in Softening Point, °C, Max | 5 | 5 |
| | c) Reduction in penetration of residue at 25 °C, %,Max | 35 | 35 |
| | d) Elastic recovery of half thread in ductilometer at 25 °C, %, Min | 35 | 35 |
| | e) Complex modulus as (G*/Sin) as Min 2.2 KPa at 10 rad/s at a temp. °C | 64 | 70 |

**RTI CRMB 55:** Recommended for moderate climatic areas
**RTI CRMB 60:** Recommended for Hot climatic areas

## ADVANTAGES:

- Lower susceptibility to daily and seasonal temperature various
- Prevents Rutting
- High resistance to deformation at elevated pavement temperature
- High skid resistance
- Better adhesion between aggregates and binder ensures longer life, strength and stability
- Better water resistance
- Better edge resistance properties

## Application:

RTI CRMB is ideal product for wearing courses on

- Heavy trafficked lane
- Slopes, roundabouts, junctions
- Industrial and multimodal, junctions
- Airport Runways
- Parking places
- Bridges and flyovers
- High rainfall regions

It is also recommended for Stress Absorbing Membrane Interlayer application

## To Ensure Best Results:

Recommended temperature for application

| No | Process | Temperature Range |
|---|---|---|
| 1 | Mixing with Aggregates | 170 – 185 °C |
| 2 | Laying | 150 – 170 °C |
| 3 | Compaction | Over 140 °C |
| 4 | End of Compaction | 110 – 120 °C |

## Availability:

RTI CRMB is available in
Bulk

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