

**HINDUSTAN COLAS LIMITED**



*Better Roads, Better Life*

**Jan-Mar  
2010**

# **CUSTOMER CONNECT**



“CUSTOMER CONNECT”, The Quarterly Newsletter of **Hindustan Colas Ltd**, aims at strengthening exchange of information and experience sharing amongst its customers. The success of this communiqué is largely dependent on feedback and information inflow from our customers and we thank them for their continued support.

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#### 1. EMULSIFIED BITUMEN

Bitumen is visco-elastics which behave like a liquid as well as solid over a wide range of temperature. It's major application in road industry has given birth to many innovative techniques for converting it into workable form.

Emulsification of Bitumen is one of the most widely accepted techniques to convert conventional Bitumen into liquid form without any hazards to the environment.

Bitumen Emulsions or Emulsified Bitumen is a heterogeneous, two-phase systems consisting of two immiscible liquids - bitumen and distilled water, stabilized by an emulsifier. The bitumen is dispersed throughout the continuous aqueous phase in the form of minute droplets which are held in suspension by electrostatic charges imparted to the bitumen particles by an emulsifier.

Bitumen Emulsions are classified as Cationic, Anionic and Non ionic. Amongst them cationic emulsion are widely used in road constructions owing to the fact that majority of aggregates carries negative charges which attracts positive charge of cationic emulsion and promote better coating and adhesion.

#### 2. GRADES OF EMULSIFIED BITUMEN

Emulsified Bitumen is of the following five grades:

- |                             |       |
|-----------------------------|-------|
| a) Cationic Rapid Setting-1 | CRS-1 |
| b) Cationic Rapid Setting-2 | CRS-2 |
| c) Cationic Medium Setting  | CMS   |
| d) Cationic Slow Setting-1  | CSS-1 |
| e) Cationic Slow Setting-2  | CSS-2 |

#### 3. APPLICATION TO ROAD INDUSTRY

In today's scenario fast execution of road projects together with maintaining the quality of work is a matter of concern for Road Industry.

The Government is targeting to construct 20 km of road everyday. Such high target can only be achieved by using innovative techniques and products.

Bitumen Emulsion is one such product which not only contributes to fast execution of work but also ensures quality work with better adhesion.

Applications and advantages of various grades of Bitumen Emulsions are as follows:

#### CRS1 AS PER IS 8887-2004

It is a specially designed product for ensuring a uniform and strong **Tack Coat** for bituminous road construction purpose. Hincol CRS1 is also suitable as binder for Penetration Macadam and Sand Seal

#### ADVANTAGES OF CRS-1

- Easy and uniform spray
- Low temperature curing
- Highly adhesive properties
- Water resistant and enhances easy drainage of water
- Enhances structural strength of layers
- Prevents lateral movements of structural layers

#### CRS2 AS PER IS 8887-2004

HINCOL CRS-2 Emulsion is a more viscous liquid with higher binder content and is most suited for applications such as:

- Surface Dressing
- Grouting
- Penetration Macadam

#### ADVANTAGES OF CRS-2

- Better coating & easy to spray
- Low temperature curing
- Highly adhesive properties
- Prevents lateral movements of structural layers
- Provides a water impervious layer to prevent water ingress
- From water table below the road layers

#### CMS AS PER IS 8887-2004

An exceptionally versatile product with delayed breaking action for various applications as mentioned below:

- Pot Hole repair / Patch work
- 20 mm Pre-mix Carpet

## ADVANTAGES OF CMS

- Stable patch formation
- Works well in rainy season
- Economical
- Bond with existing surface
- Least interference with traffic
- Bonds well to cool, damp surfaces
- Low temperature cure
- Minimal preparation time for surface repair
- Resistance to peeling off under heavy traffic
- Resistance to stripping by water
- Instant setting and fast development of strength

## CSS1 AS PER IS 8887-2004

HINCOL CSS-1 oil based Bitumen Emulsion is designed to exceed the functional requirements of respective applications in prime coating on WMM/WBM surfaces

## ADVANTAGES OF CSS-1

- Superior penetration into miniature pores of sub bases
- Extended breaking
- Penetrate the cracks & crevices and impart strength to the layers
- Low temperature curing
- Prevents permeability of atmospheric air to the bottom layer
- Binds loose aggregates together strongly
- Water resistant and enhances easy drainage of water
- Compatible with Portland cement

## CSS2 AS PER IS 8887-2004

HINCOL CSS-2 Cationic Bitumen Emulsion is used for Fog Seal, Slurry Seal, and Premix Seal coat

## ADVANTAGES OF CSS-2

- Good penetration into miniature pores of sub base
- Extended breaking
- Easy to mix with better coating ability
- Penetrate the cracks & crevices and impart strength to the layers
- Bonds well to cool, damp substrates/surfaces
- Low temperature cure
- Prevents permeability of atmospheric air to the bottom layer
- Binds loose aggregates together strongly
- Water resistant and enhance easy drainage of water
- Prevents raveling and rutting

## 4. ART OF EMULSIFICATION

Bitumen Emulsions are now not new to Indian Infrastructure Industry and it is gaining popularity

owing to its environment friendly, ease in application and cost effective nature. Market demands for the superior quality products are also growing leaps and bounds.

We, at HINCOL, focus only on giving high quality products through our vast pool of technical knowledge, highly sophisticated machinery and superior raw material. Manufacturing of Bitumen Emulsion is a carefully controlled process in which temperature, viscosity, pressure, percentage of binder, rotor speed and stator diameter plays major role and any deviation may result into inferior quality product.

## 5. QUICK QUALITY CHECK AT THE SITE

Emulsion quality can be tested very easily at the site. There are some simple tests that can be conducted to establish the quality of the product.

Take a sample of CSS1 Emulsion in a clean dry 500ml beaker and keep it undisturbed for 24 hrs. A diluted sample will show separation while undiluted sample will remain uniform, as in below picture.



Similarly, determination of Binder Content of Bitumen Emulsion for other grades of Emulsion can be checked by using evaporation method as per IS 8887-2004.

## DO'S AND DON'TS OF EMULSIONS

Avoid dilution of Emulsion with water or a liquid as this may deteriorate the quality.

Bitumen Emulsion work best at ambient temperatures, so heating is not required.

In case of Packed Emulsions roll the drums before use.

Don't compromise on the quality as the Binder percentage plays the major in Emulsion performance.

## 6. AT HINCOL WE PURSUE EXCELLENCE

**“Excellence is the unlimited ability to improve the quality of what you have to offer “**

HINCOL is in the process of achieving excellence in serving its customers in the best possible way by constantly upgrading the existing production process and its internal management systems to give better



quality products with quality service to the customers.

HINCOL has set up its new Corporate/Head Office at Mumbai. The address is as follows:

### New Corporate Office

Hindustan Colas Ltd.,  
1-4-71/P, Richardson and Cruddas Annexe,  
R & C Building,  
Sir J. J. Road, Byculla,  
Mumbai – 400 008  
Tel.: 022-6151000 (20 lines)

#### ➤ **HINCOL RUNS ON SAP**

In today's market where products and services are increasingly commoditized, leading companies use service excellence to differentiate themselves from their competition. By delivering quality products & services that exceed customer expectations, customers feel appreciated and valued for their business – building customer satisfaction, lifetime relationships, repeat business and service revenues. To achieve delivery of quality products, companies need a robust solution that supports complex, end-to-end business processes, resulting in:

- Prompt and efficient delivery of products
- Ensuring the quality compliance of the products
- Prompt and efficient customer issue resolution
- Consistent, positive multi-channel customer experience
- Maximized cross-selling and up-selling of relevant additional products and services
- Seamless access to information needed to support the customer, lowering service costs

### **Solutions for Differentiation through Service Excellence**

SAP helps in streamlining and differentiating products & service delivery through coordinated and integrated capabilities and services built on an open platform. According to SAP benchmarking studies, companies designing the right product & service offerings, delivering the right quality of products & right level of service based on customer entitlements, and, where applicable, optimal management of service parts inventory have:

- Enhanced cross-selling and up-selling by up to 20%
- Decreased service resolution time by 15% - 25%
- Increased customer retention rates by 5% - 10%
- Reduced cost-to-serve by 10 - 15%

HINCOL strongly believes that technology is an important differentiator in a challenging market. HINCOL has been pioneer in improving its internal processes continuously and in adopting latest technology to deliver the best value proposition to

its esteemed customers. HINCOL takes the pride of announcing the implementation of SAP at all its plants, Marketing Offices and its Corporate Office to improve the efficiency of resources, enhance the quality of products, build robust internal controls and delivering value added products & services to its customers. HINCOL has “gone live” on SAP effective May 2009 and the system has stabilized thanks to young and energetic IT savvy team. This important milestone would not have been possible, without your enduring support and encouragement. By implementing SAP, HINCOL has once again proved that the organization is committed to its customers by embracing latest technology.

#### ➤ **Learning forum with Customers**

As part of customer awareness programme, Hincol has arranged a technical seminar on “**Bitumen Emulsions & Modified Bitumen Technology and their Application**” to MPRRDA at Bhopal.

The different types of Emulsions, Modified Bitumen, and their manufacturing and different applications were discussed with high officials of MPRRDA.



**Chief Engineer, MPRRDA during the seminar at Bhopal**



**HINCOL at Asian Bitumen Conference 2009, Singapore.**

**Write to us at:** [customerconnect@hincol.com](mailto:customerconnect@hincol.com)

We look forward to enhanced contribution from our customers to further enrich this newsletter. We also welcome suggestions, recommendations and critics that will help us serve you better.