



Mansi Polymers Pvt. Ltd.

BIT-BAG™

Bituman Packaging Bag

Anywhere, Anytime



BIT-BAG™ Packaging Bag



Innovative Bit-Bag™ has been developed by Mansi Polymers Pvt Ltd. The bag is a self-stabilizing container made of plastic material, consisting of a FIBC outer bag (recyclable) and an inner liner special-purpose film. The liner is melted together with the bitumen without changing its quality properties. The latest generation of bags includes a simple frame structure for extra stabilization to accommodate the larger mass.

Bit-Bag™ is an efficient and cost-effective way of transporting bitumen, instead of the traditional methods using drums. Hot bitumen is poured into the meltable bags, and then the bag is immersed in cold water. The bag forms a skin around the bitumen, and the bitumen solidifies.

The Bit-Bag™ is designed to carry up to 1,000 kg of road paving bitumen and comes in different sizes to fit the customers' requirements. Its shape and volume is optimized for maximum utilization of containers and trucks.

The Bit-Bag™ can be transported by any common transport system (container, truck, rail) and is a one-way logistic solution. Therefore, the transporter can be utilized for other cargo on its return.

The Bit-Bag™ can then be transported to the end user. When the bag is reheated to the stated temperature, the bag melts and fuses with the bitumen, leaving no waste product.

A range of Bit-Bag™ to suit different pouring and remelting temperatures is available.

Bags can dramatically reduce the packaging costs associated with transporting bitumen.

- Made from Polymers.
- Dramatically reduces to cost of bitumen packaging.
- Meltable bag.
- Eliminates waste, nothing is left over.
- Can be used in hot/humid climates - no limitations.
- Bitumen can be stored cold for long periods of time.*

The Outer bag features UV-light protection and is suitable for every climate zone. It can be stored for up to 12 months*.

** Storage limitations apply according to storage instructions*



USAGE AND HANDLING THE BIT-BAG™

The Bit-Bag™ is filled with bitumen that is exactly cooled down to a temperature slightly higher than the softening point - and lower than the melting point of the plastic liner material of the bag into a special Polyolefin Bag and is let down to harden and become solid for easy handling and cold transportation.

The reduction in carbon emissions due to long haulage of heated bitumen is avoided in all types of cold packing, however with the bag, additional benefit is that there are no environmental left overs and bitumen is only melted when and where needed. The bags also save about 8% of energy consumption in comparison to drums melting or Bitutainers.

The Bit-Bag™ is a revolutionary system assisting in the bitumen transport. It provides a cost efficient alternative to Bitumen drums.

Advantages over the steel drums:

- In general the waste which remains in drums accounts for 3-4%, with Polyolefin Bag there is no residual waste;
- The packaging does not pollute the environment, as drums are hard to recycle and re-sell, especially for projects where the Bitumen is melted distantly from the port at deep inland locations.
- The system is easy for shipping and storing;
- Bitumen is delivered and melted at a convenient location;
- The cost of labour is reduced;
- Due to more efficient heating (only the bitumen is heated and not the drum), carbon emissions are reduced;
- Due to using and melting bitumen only when needed, the constant energy consumption to keep bitumen heated is avoided, which results again in lower carbon emissions;
- Due to cold shipment of the cargo across the world, saving of more carbon emissions in comparison to bulk shipments, which requires constant heating during ocean voyages




Bit-Bag™ Specification and capacity of various sizes

| | 40 Kg | 300 Kg | 1 Ton |
|------------------------------------|-------------|-------------|-------------|
| Capacity | | | |
| Filling quantity for Bitumen (net) | 40 Kg | 300 Kg | 1,000 Kg |
| Materials | | | |
| Outer bag | | PP Fabric | PP Fabric |
| Inner Liner | Polyolefin | Polyolefin | Polyolefin |
| Melting peak inner bag (liner) | 160°C | 160°C | 160°C |
| Storage under roof | 6-12 Months | 6-12 Months | 6-12 Months |
| Multiuise of outer bag | No | No | No |
| Loading in 20Ft Container | | | |
| Number of Bags | TBD | 80 | 20 |
| Quantity of Bitumen - Net Weight | 20.00 MT | 24.00 MT | 20.00 MT |

You Can Customize them to as per your requirement.



BITUMEN PACKING COMPARISON

| |  |  |  |
|--|---|---|---|
| | BULK SHIPMENTS (Bitumen Vessel - Terminal - Tanker) | Used (or) New Drums | BIT-BAG™ |
| Shipping Method | Special Bitumen Vessels – Heated Cargo | Standard Shipping Containers 18MT-20MT per Container | Standard Shipping Container 20mt per container |
| Shipping Availability/Reliability | Limited availability, cyclical supply | Excellent | Excellent |
| Shipping Cost | Expensive, freights vary with demand, difficult to budget for long term projects. | Affordable | Affordable |
| Storage | Extremely capital intensive in bulk terminals, high operating costs, major overheads | Standard Warehouses or directly on site | Standard Warehouses or directly on site |
| Handling | Bulk road tankers to deliver directly on site. Expensive but swift. | Forklifts, 5-6 drums/mt. Used Drums can leak. New drums if mishandled may break as well. Damaged drums that do not break will become difficult to decant. | 3.5ton Fork lifts can handle 2 x 1mt bags at a time. All bags double slinged and self-stabilizing. Can go straight from container to Melter in one move. Highly efficient handling. |
| Ground Transport | Expensive Bitumen Tankers – cargo continuously heated. | Standard trailers, can visit remote locations in smaller flat beds as well. Cheap and affordable. | Standard trailers, can visit remote locations in smaller flat beds as well. Cheap and affordable. |
| Wastage | Certain revolving %age will always remain in the vessel, terminal tank and road tanker. A direct loss. | 3-5% is always left in the drum and is wasted. | Inner lining is completely consumable. 100% of transported cargo is consumed. |
| Decanting / Melting | Product is always in liquid state, easy and immediate decanting. | Each drum has to be cut open (often manually). This is an arduous and inefficient task. Messy and often product is left behind in the drum. | Simple. Outer bag is cut away and the inner lining and cargo is melted in one go. |
| Environmental Impact | Large carbon footprint for entire supply chain as energy is used to keep the cargo heated throughout. | Very Poor as a steel drum has to be produced for just 160 – 180kg of bitumen. A 1000mt project results in 5000+ empty drums to be disposed of. The used drums will have bitumen residue that will inevitably pollute the ground and storage/scrap | Inner lining is 100% consumable and outer lining is 100% recyclable. |
| Other Points | Expensive, large carbon footprint and huge capital needs to be invested into a distribution chain that should be obsolete by now. | Old drums could cross contaminate the bitumen. New Drums are expensive. | An outer woven polypropylene bag ensures chance of leakage is negated. |

Contact us



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