

# TECHNICAL DATA SHEET

## IZ OSAN ASFALT

### Material Specification

#### DESCRIPTION

This material shall be a plant mixed, high performance pavement patching material capable of storage in an uncovered outdoor stockpile for a minimum of 12 months. It shall be composed of laboratory approved mineral aggregates and modified bituminous IZOLSAN ASPHALT® Liquid

Blend from IZOLSAN s.r.o. capable of coating wet aggregates (up to 4% moisture) without stripping and have stripping resistance of retained coating of not less than 95%. The permanent asphalt repair shall be uniform, remain flexible and cohesive to -26° C. and be capable of retaining adhesive qualities in wet applications. The patching materials shall be able to repair asphalt, concrete, surfaced treated roads and not require to be removed and replaced if ever the pavement is overlaid.

#### MATERIALS

##### A) Aggregate

The aggregate shall consist of 100% crushed limestone or a laboratory approved equivalent under ASTM C-136. All aggregate is to be from approved sources, and representative samples of both fine and coarse aggregate shall be from the plant site and laboratory tested. Sampling and testing methods shall be in accordance with accepted local practice.

Gradation analysis to comply with all local requirements. Recommended gradation analysis is as follows:

All aggregate percentages are based on the total weight of aggregate.

ASTM C-88	Soundness Loss	12.0% Max.
ASTM C-131	Los Angeles Abrasion	40.0% Max.
ASTM C-117-200	Sieve (by wash)	2.0% Max.
ASTM C-127 , 128	Absorption	1.0 - 2.0% Max.
ASTM C-127 , 128	Specific Gravity	2.55 - 2.75% Max.
ASTM C-123	Soft Aggregates	3.0% Max.

##### Aggregate Acceptance

Aggregate compatibility approval must be obtained from IZOLSAN s.r.o. prior to material mixing at any mixing plant.

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## B) Bituminous Material

The modified bituminous liquid blend shall be **IZOLSAN ASPHALT®** from **IZOLSAN s.r.o.** which meets the following requirements:

ASTM D-1310 Flashpoint (TOC):	94° C (200° F.) minimum
ASTM D-2170 Kinematic Viscosity at 60° C (140° F.):	300-4000
ASTM D-95 Water:	<b>0.2% maximum</b>
ASTM D-402 Distillate Test:	(Volume of original sample).
To 225° C (457° F)	None
To 260° C (500° F)	0 - 5%
To 315° C (600° F)	0 - 25%
Residue from distillate at 360° C (680° F)	72 - 95%

## RESIDUE TESTS

ASTM D-2171 ABS. VISCOSITY AT 60° C (140° F):	125-425 poises
ASTM D-5 Penetration:	<b>200 minimum</b>
ASTM D-113 Ductility at 4° C (39° F) 1 Cm/Min:	100 minimum
ASTM D-2042 Solubility in Trichloroethylene:	99% minimum

**IZOLSAN ASPHALT®** Liquid Blend shall be shipped from authorized blending terminal locations. Liquid shall be completely blended at terminal under supervision of authorized Quality Control personnel. No additives, modifiers, or extra ingredients are to be introduced into the liquid blend at any time after shipment from terminal. A copy of bill of lading and material certification shall accompany every shipment. Liquid Blend shall be shipped in insulated tankers to maintain oil temperature during transportation.

## PLANT MIX

The cold mix shall consist of aggregates meeting material section A) Aggregate and the bituminous liquid blend meeting material section B) Bituminous Material as indicated in the proposed job mix formula. Bituminous material shall be accepted at the supplier's source and at the plant site on the basis of a supplier material certification.

The preferred mixing ratio shall be 5.5% liquid blend or 55 kg per tonne of mixed material. Continuous on-site testing will determine exact final mixing ratio which will be identified in the final job mix formula.

All aggregate percentages are based on the total weight of the aggregate. The bituminous liquid blend content is based on the total weight of the mix.

The job mix formula information shall provide:

- Aggregate gradation band and aggregate type.
- Bituminous material - amount and type including any additives used.
- Temperature ranges for material preparation.

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## PLANT PREPARATION & OPERATION

The mixture is to be produced through a conventional hot asphalt plant only under the direct supervision of a qualified **IZOLSAN s.r.o.** Quality Control Representative and finished product will not exceed 83° C. The bituminous liquid blend shall not be heated above 94° C. The final mixture must be tested in accordance with **IZOLSAN s.r.o.** Quality Control requirements.

## STOCKPILE INSPECTION

Prior to production the stockpile site is to be inspected for any contaminant such as dirt, sand or debris that may affect the quality of the **IZOLSAN ASPHALT®** High Performance Cold Patch. The stockpile area should be a hard surface, preferably paved with concrete or a bituminous surface.

## IZOLSAN ASPHALT® QUALITY CONTROL

On each load a Quality Control Report will be prepared by an authorized representative of **IZOLSAN s.r.o.**. All phases of production of the plant operation and the material testing on each 300 tonnes of production will be prepared and entered accordingly in each category.

The following Site Tests will be completed including Spot Test, Strip Resistance, Coating Observation, Roll Test. A typical one liter sample will be forwarded to **IZOLSAN s.r.o.** for further testing as below.

## TRAINING OF INSTALLATION CREWS

The successful bidder must make available a complete training program for all road crews to ensure correct patching methods along with updates on this subject. In addition the supplier must provide an installation chart to the volume of material required to repair utility cuts and other excavated areas for references by installers.

## STOCKPILING

One (!) year shelf life. **IZOLSAN ASPHALT®** may be stockpiled over 12 months in an uncovered outdoor stockpile in quantities in excess of 100 tonnes.

## TESTING

After cold mix is manufactured through the approved plant, three (3) further tests are conducted to meet specifications.

ASTM D-2171 Extraction of asphalt 4.5 - 7% maximum

ASTM D-1664 Coating and stripping tests for both wet and dry aggregates

The cold mix, 50 grams is put into 400 ml. of distilled water in a beaker and boiled for 3 min. and stirred at one revolution per second. Retained coating must be in excess of 95% for passmg.

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## Performance Guarantee

**IZOLSAN ASPHALT®** High Performance Cold Patch, when applied according to our Installation Procedures to deteriorated concrete or bituminous pavement surfaces is guaranteed to adhere permanently to the repaired area for the life of the repair or until the surrounding pavement area fails. **IZOLSAN s.r.o.** will replace actual volumes of **IZOLSAN ASPHALT®** at no charge for any **IZOLSAN ASPHALT®** High Performance Cold Patch that should ever ravel or release from a repaired area.

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