



# BITUCHEM ASPHALT LTD



**Manufacturers of Resin and Bituminous Products**

Laymore Road, Forest Vale Industrial Estate, Cinderford, Gloucestershire GL14 2YH

Tel: 01594 826768 Fax: 01594 826948

Email: [info@bituchem.com](mailto:info@bituchem.com) Web: [www.bituchem.com](http://www.bituchem.com)



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## Product Overview

Bituchem Natratex™ and Colourtex™ are proprietary specialist asphalts using a clear resin binder, with relevant colour co-ordinated aggregate to produce a macadam for a number of applications. These materials are produced on a conventional asphalt plant similar to that of a traditional blacktop. Asphalt products are delivered to site in insulated tipper lorries in accordance with BS 594987:2007 'Asphalt for roads and other paved areas - Specification for transport, laying and compaction and type testing protocols'.

Natratex™ is the flagship of Bituchem Asphalt's product range, utilising clear resin binder and natural aggregate to produce a durable, macadam surface course that reveals the character of the stone, leaving a natural finish. Natratex™ can utilise a range of aggregates for both colour and performance. Bituchem can produce Natratex that uses client specified aggregate providing it is suitable for a macadam surface course. Aggregate can range from processed flint gravels to high skid resistant stone if a PSV (polished stone value) has been specified.

Colourtex™ has similar characteristics to Natratex™, however pigment is introduced to the mix. Introducing pigment opens up the colour pallet, allowing Bituchem to produce an impressive range of bright, vivid, and vibrant colours suitable for playgrounds, sports areas, and areas that require contrasting demarcation.

Natratex™ and Colourtex™ boast long term colour retention, ideal for demarcation of pedestrian footways, cycle paths, bus lanes, parking areas, and areas requiring enhanced long-term aesthetics. Generally Natratex is used for more prestigious, formal, heritage sites where colour schemes reflect the character of the site.

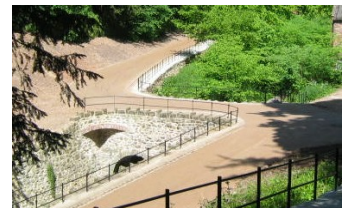


## Technical Details

The design for the pavement structure below the Natratex™ or Colourtex™ surface course layer will be identical to that of a conventional macadam surface course in the same location.

Natratex™ and Colourtex™ is supplied in nominal sizes of 6mm and 10mm depending on use. Where necessary (for Stone Mastic Asphalt - SMA mixes) we can produce macadam using a 14mm stone.

The table below shows the nominal sizes in respect to use, laying depths, and spread rates:



Macadam Type	Aggregate Nominal Size	Recommended Depth after rolling	Approx Coverage per Tonne	Intended use
<b>Natratex™</b>				
Asphalt Concrete	6mm MGSC**	Min 25mm*	17 sq. mtrs	Pedestrian Trafficking (Footpaths, Pavements, Cycle Paths)
	6mm DSC***	Min 30mm*	14 sq. mtrs	Domestic Trafficking (Driveways, Housing Estates, Car parks)
	10mm DSC***	Min 35mm*	12 sq. mtrs	Domestic Trafficking (Driveways, Housing Estates, Car parks)
<b>Colourtex™</b>				
Asphalt Concrete	6mm MGSC**	Min 25mm*	10 sq. mtrs	Pedestrian Trafficking (Footpaths, Pavements, Cycle Paths)
	6mm DSC***	Min 30mm*	14 sq. mtrs	Domestic Trafficking (Driveways, Housing Estates, Car parks)
	10mm DSC***	Min 35mm*	12 sq. mtrs	Domestic Trafficking (Driveways, Housing Estates, Car parks)
Stone Mastic Asphalt (SMA)	6mm SMA	Min 30mm*	14 sq. mtrs	High Volumes of Domestic Trafficking and Service Vehicles
	10mm SMA	Min 35mm*	12 sq. mtrs	Heavy Trafficking (Trunk Roads, Bus Lanes, Regular HGV)
	14mm SMA	Min 40mm*	10 sq. mtrs	Heavy Trafficking (Trunk Roads, Bus Lanes, Regular HGV)

\*minimum thickness at any one point. \*\*Medium Grade Surface Course. \*\*\*Dense Surface Course



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## Installation Considerations

Natratex™ and Colourtex™ is laid in the same way as a conventional blacktop. However, whether hand applied or by machine, all equipment needs to be clean to avoid contaminating the material and causing discolouration.

The surface to which the macadam is to be laid should be of adequate strength to bear the construction of the new surfacing without future deformation. Before the laying of material, the surface should be free of ice, standing water, snow, and loose material. It is recommended to apply a bond coat (preferably of the bituminous variety) to the prepared surface to eliminate water ingress and ultimately 'plating off', i.e. where the surface course separates from the base course. Ensuring that the bond coat has cured is vital, otherwise bleeding can occur, discolouring/contaminated the surface course.

When the material has been laid, either by hand or machine, it is recommended to compact the surface as soon as possible, using a tandem roller, preferably of the vibratory type. Compacting the finished surface requires a lot less effort when it is above 120°C, below this temperature will prove difficult to compact.

Ideally it is best to complete all schemes in as few visits as possible to prevent potential variation in appearance.

Bituchem produce and recommend using a clear jointing sealer which is supplied in 20KG buckets used to seal the edges and joints of new macadam, preventing water ingress and chipping loss in these areas.

### Adverse Conditions

With regard to BS 594987:2007 'Asphalt for roads and other paved areas - Specification for transport, laying and compaction and type testing protocols', Laying should be avoided if standing water is present on the surface to be laid or if wet weather is forecasted on the day of laying. Asphalt should not be laid if the ground is frozen. Laying should be suspended if air temperatures fall to 0°C, or -3°C in calm conditions. If temperatures are falling then time for compacting after laying should be considered. Both Natratex and Colourtex become difficult to work under 120°C so it is paramount that after laying, compaction is completed immediately. Note that thinner asphalt surfaces will cool a lot quicker to that of thicker ones. At Bituchem, asphalt is loaded into insulated lorries at approximately 175°C. Depending on load size, (the fuller the lorry, the less heat loss), generally the asphalt loses approximately 3-5°C per hour whilst on the road.



## Approved Installation Contractors

For a list of contractors in your area that have had experience laying our products please contact Bituchem direct on 01594 826768.



## Trafficking finished product

Depending on weather conditions, product density and product use, trafficking of finished product varies, however for any macadam product, Bituchem recommends leaving the finished surface for a minimum of 12 hours before opening. During the summer where high ambient temperatures are probable, it is best to leave the surface for a minimum of 24 hours or until the surface has fully cooled throughout the whole course.





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## Maintenance and Aftercare

Bituchem have a full range of maintenance products and services for both Natratex™ and Colourtex™ products, similarly to conventional black macadam.

Bituchem produce cold applied macadam to match the original supplied material. This is available in 25KG buckets/pails which can be used in areas where there has been changes to raised ironworks and areas where small repairs need to be completed. This material has a 3 month shelf.

Bituchem source aggregate from well established quarries to ensure continuity of supply over a number of years. This ensures that there is no significant variation in aggregate if any material is required at a later date to either repair or extend an existing installation.

Bituchem can produce small batches of hot mix asphalt direct from the plant in quantities as small as 1 tonne, for trench reinstatement, utility work repairs, etc.

For joints, cut edges and sealing patchwork, Bituchem produce Clear Hot Joint Paint available in 20KG containers.

If the finished surface becomes soiled from spillages and debris, it is recommended to remove these marks using a citrus cleaner. Avoid using solvent based cleaners as this will mark and can induce premature deformation.



Bituchem manufacture a sealer material that is designed specifically for proprietary macadam. NatraSeal™ is a material that is sprayed on to the surface of the laid macadam, penetrating the upper surface course, leaving a new binder film, preventing the ingress of water and loss of surface chippings from freeze-thaw action. This will prolong the life of Natratex™ and Colourtex™ macadam.

## Quality Control

Natratex™ and Colourtex™ are manufactured and supplied in accordance with the requirements of BS EN ISO 9001 and Sector Scheme 14 for the quality management for the production of asphalt mixes.

## Bituchem Asphalt Website

For more information on Natratex™ and Colourtex™ products including photographs and locations, please visit [www.bituchem.com](http://www.bituchem.com)

Alternatively you can contact our offices direct where we will also be able to provide you with material specification sheets.



**Disclaimer** - The information contained in this leaflet is based upon knowledge and experience of the materials used in the manufacture of the products. However, since the application of the products is carried out by the customer and is beyond the control of Bituchem Asphalt Limited, Bituchem does not accept any liability or responsibility whatsoever for any loss or damage resulting from the use or application of the products outside the scope of the intended use and precautions set out in this leaflet and any accompanying data sheets.





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## Health and Safety

SAFETY DATA SHEETS
Code: BITUCHEM ASPHALT LTD
Issue Date: JANUARY 2010
<p><b>1. Identification of Substance &amp; Company</b></p> <p><b>NATRATEx™ / COLOURTEX™ WEARING COURSE</b></p> <p><b>Company</b></p> <p>Bituchem Asphalt Ltd Laymore Road Forest Vale Industrial Estate Cinderford Gloucestershire GL14 2YH Telephone: Dean (01594) 826768 Fax: Dean (01594) 826948</p>
<p><b>2. Composition/Information on Ingredients</b></p> <p>Modified Asphalts are mixtures of aggregates, bitumens, synthetic binders and other additives eg. Polymers, cellulose fibres, natural latex, synthetic latex and pigments. The additives in the mixture will not exceed 10% in the mixture and are fully bound within it and are not considered to be hazardous.</p> <p>For further details of the specification refer to the relevant Technical Data Sheet.</p>
<p><b>3. Hazards Identification</b></p> <p>These products are NOT classified as hazardous in accordance with the CHIP regulations (s1 1994/3247).</p> <p>The main hazards presented by Asphalt depends on the temperature of the material.</p> <p>The following hazards may apply. Hot materials may burn the skin. Fumes from Asphalt are unlikely to be hazardous when laid in open air situations, but there may be a risk to health by continuous inhalation of high vapour concentrations which might arise in confined or semi-confined spaces.</p>
<p><b>4. First Aid Measures</b></p> <p><b>Summary of First Aid Procedures</b></p> <p><b>Inhalation</b> Immediately remove to fresh air. If breathing is stopped or irregular, apply artificial respiration, give heart massage if necessary and seek medical attention.</p> <p><b>Skin Contact</b> Burns caused by contact with hot material should be cooled by immediately drenching with cold water. The bitumen may then be removed under medical supervision with warm medical paraffin.</p> <p><b>Eye Contact</b> Irrigate with water for at least ten minutes. If pain persists seek medical attention.</p> <p><b>Ingestion</b> Remove to fresh air and give water to drink. Seek medical advice.</p>



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## Health and Safety - Continued

### 5. Fire Fighting Measures

#### Suitable Extinguishing Media

Dry powder, foam.

#### Unsuitable Extinguishing Media

Carbon dioxide

#### Special Exposure Hazards in Fire

Hydrocarbon fumes may be released.

#### Special Protective Equipment for Fire Fighters

Full protective clothing including suitable respirator or breathing apparatus.

### 6. Accidental Release Measures

#### Personal Precautions

Ensure the temperature of the Asphalt does not present a Safety Hazard.

Wear overalls and gloves.

#### Environmental Precautions

Entry into watercourses should be avoided.

#### Methods for Cleaning

No special requirements.

### 7. Handling and Storage

#### Handling

Skin contact with the materials should be avoided. Inhalation of fumes should be avoided. Inhalation of fumes should be avoided as far as is reasonably practicable.

#### Storage

No special requirements.

Refer to the relevant Technical Data Sheet for the specific product.

### 8. Exposure Controls/Personal Protection

#### Take Measures to Prevent

Inhalation of dust.

Inhalation of excessive quantities of dust during cutting or surface treatment of hardened asphalt.

#### Exposure Control Limits / Source

(a) Asphalt Fumes - O.E.S.	5mg/m <sup>3</sup>	8 Hours T.W.A.
	10mg/m <sup>3</sup>	15 min, T.W.A.
(b) Total Dust - O.E.S.	10mg/m <sup>3</sup>	8 Hours T.W.A.
Respirable Dust - O.E.S.	4mg/m <sup>3</sup>	8 Hours T.W.A.
Respirable Quartz - M.E.L.	0.3mgm <sup>3</sup>	8 Hours T.W.A.
Crystalline Silica SiO <sub>2</sub>		

O.E.S = Occupational Exposure Standard

M.E.L. = Maximum Exposure Limit

#### Respiratory Protection

Suitable masks if dust / fume is present in significant quantities.

#### Hand Protection

Gloves.

#### Eye Protection

Goggles may be required.

#### Skin Protection

Overalls.



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## Health and Safety - Continued

### 9. Physical and Chemical Properties

Appearance	Black, or pigmented or natural aggregate colour granular Solid
Odour	Strong
pH	Neutral
Boiling Point / Range	Not applicable
Melting Point / Range	Not applicable
Flash Point (°C)	Above 300°C
Flammability	Not determined
Auto Flammability	Above 330°C
Explosive Properties	Not determined
Oxidising Properties	Not determined
Vapour Pressure	Not applicable
Relative Density	Above 2.0
Water Solubility	Insoluble
Fat Solubility	Not determined

### 10. Stability and Reactivity

#### Conditions to Avoid

Sources of ignition and temperatures above 300°C.

#### Materials to Avoid

Strong oxidising agents, e.g. chlorates which may be used in agriculture.

#### Hazardous Decomposition Products

The substances arising from the thermal decomposition of the bitumen binder in Asphalt will largely depend on the particular conditions but may contain the following:

Carbon Dioxide, Carbon Monoxide, Water, Particulate Matter, Hydrogen Sulphide, Sulphur Oxides, Polycyclic Aromatic Hydrocarbons, Unburnt Hydrocarbons, Nitrogen Oxides, Vanadium Pentoxide.

### 11. Toxicological Information

Fumes inhaled over a prolonged period could constitute a health hazard.

Prolonged skin contact may cause dermatitis and malignant warts.

### 12. Ecological Information

#### Environmental Assessment

When used and disposed of as intended, no adverse environmental effects are foreseen.

#### Mobility

Asphalts are non volatile materials that will sink in water and form a solid layer on the surface of the ground.

#### Persistence and Degradability

Asphalts are resistant to degradation and will persist in the environment for a considerable period of time.

#### Ecotoxicity

Not expected to be toxic to aquatic organisms.



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## Health and Safety - Continued

### Disposal Consideration

#### Likely Residues / Waste Product

Asphalt is an inert material.

#### Safe Handling of Residues / Waste Product

Aggregates are inert but should be disposed of in accordance with local and national legal requirements. See the Environmental Protection Act 1990 "Duty of Care".

### Transport Information

#### Special Carriage Requirements

None - keep covered.

### Regulatory information

This product is NOT classified as dangerous for transport.

### Other Information

#### Training Advice

Wear and use of PPE.

#### Recommended Use and Applications

Industrial and construction applications.

#### Further Information

The General Manager  
Bituchem Asphalt  
Telephone (01594 826768)

#### Key Data Used to Compile Data Sheet

HSE Guidance Note EH40/98  
PPE Regulations 1992  
COSHH Regulations 1994  
Environmental Protection Act 1990  
HSE Crystalline Silica EH59 10/97