



PRODUCTS

PROVIDING SAFE AND SUSTAINABLE SOLUTIONS



WE OPEN THE WAY

Colas Limited operates throughout the UK supplying an extensive range of products to local markets from strategically located depots.

With over 100 years in manufacturing within the bitumen emulsion market, Colas is able to draw on a vast level of experience and knowledge which is complimented by a strong focus on **research and development**.

As a result the company has built up unrivalled expertise in product manufacture, application techniques and specialist equipment. Colas are committed towards delivering innovation across a number of market sectors with the aim of achieving **sustainable solutions** for our customers enabling them to deliver best value.

Colas provides an extensive portfolio of products for use in the following Market Sectors:

- > Highway Maintenance
- > Local Authorities
- > Surfacing Contractors
- > Utilities
- > Civil Engineering
- > Toll Manufacturing





PRODUCTS DESIGNED TO PROVIDE

SAFE AND SUSTAINABLE SOLUTIONS.

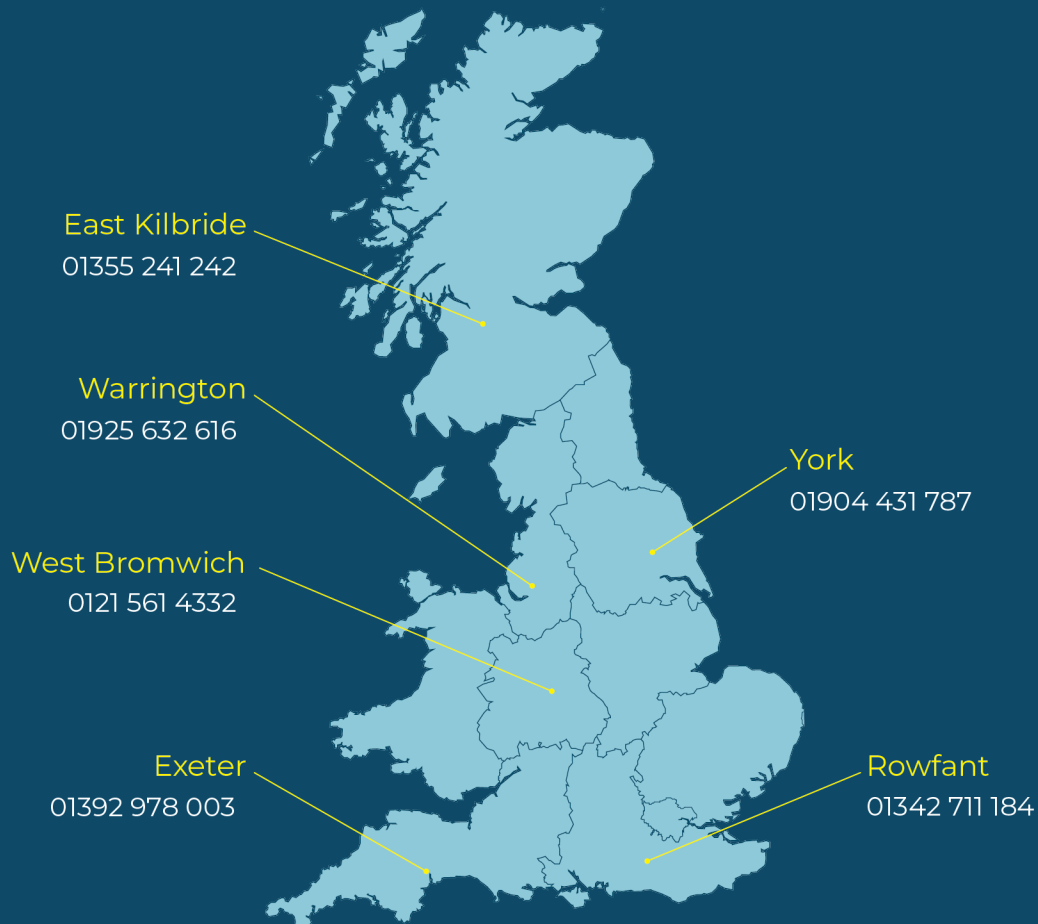
Our technical expertise is supported by the highest regard for **safety, quality and customer care**. In view of the constant development being undertaken in our laboratories, we advise customers in their own interests to ensure that this guide is the latest publication.

All products are sold subject to our standard conditions of sale which are available on request. No responsibility will be accepted for the use of any of our product(s), which is not in accordance with our current recommendations. For further information or for on-site advice please call our National Sales Office:

T: 01925 632616

COLAS LOCAL DEPOT NETWORK

All Colas products are manufactured in accordance with a Quality System certified to ISO9001 and are available through the Company's National Sales Office or network of local depots as well as independent stockists, details of which are available on request.



REINSTATEMENTS

Bitucrete	8
Colpatch	10
Bitukold	12
RS Bitukold	13
Colspray	14
H4	15
H4 Polymer	16
Preformed Road Markings	17
Eurolines	19
Patchmaster 100	20
Patchmaster 200	21
Colseal	22



Bitucrete is a deferred set, storage grade macadam for use as a repair material in footways, footpaths and cycle tracks. It is also ideal for instant high quality temporary repairs on carriageways. **Bitucrete** is cold applied and therefore safe to handle.

Available in a variety of grades, **Bitucrete** can be used for footway repairs, patching, reinstatements and temporary surfacing. **Bitucrete** provides an immediate cure for potholes in car parks, roads, drives, factory floors and many other surfaces.

Bitucrete is a combination of paving grade bitumen's, additives and selected aggregates. High PSV granite or basalt aggregate makes it suitable for all classes of road and footway. Available in black and red.

WHERE TO USE?

- Patches potholes in bituminous surfaces
- Reinstates trenches in lightly trafficked surfaces
- Provides temporary ramping for high kerbs and exposed ironwork
- Fills worn areas in paths and drives

PREPARATION

Ensure that the surface to be repaired is clean and free from loose material, oil, grease and standing water. Prime base surface with **Leotak**.

Edges of the area to be repaired should be formed vertically as far as possible and then treated with **Bitukold**, **RS Bitukold** or **Colspray** edge sealant prior to forming joints. For small potholes, **Bitukold**, **RS Bitukold** or **Colspray** may be used over the surface area of the hole as a tack coat.

Workability can be ensured even in cold weather by simply manipulating the **Bitucrete** in its sealed bag. N.B: To aid workability of bagged **Bitucrete** in winter, store bags in a warm area (>10°C ambient temperature) for 24 hours prior to use if possible.

APPLICATION

Tip sufficient **Bitucrete** from the bag to over-fill the hole, ensuring that all corners are filled.

Compact the material to the surrounding level using a compactor, roller or hand tamper depending on the nature of the site. For large areas use a vibrating plate or roller slightly wetting the drum with water. If under-filling has taken place, simply add more product and compact to level. Material should not be laid any deeper than 2 1/2 times the size of the nominal stone in any one layer.

The repair will withstand immediate heavy trafficking, however, where the repair is to be crossed by fork-lift trucks and HGVs, extra compaction and curing time must be allowed.

Bitucrete remains flexible for some time after application. Curing is brought about by both air drying and compaction. The rate of cure is dependent upon temperature as well as the weight and volume of traffic. However, under normal traffic conditions, **Bitucrete** will not depress, track or pick up during the curing process.

As the material will take up the contours of potholes naturally and form an immediate repair, it is ideal for irregularly shaped potholes. **Bitucrete** is also suitable for temporary ramping of exposed ironwork.

Grade	Nominal Size	Material Specification
4mm	0/4mm	AC 4 fine surf 160/220DS
6mm	0/6mm	AC 6 med surf 160/220DS
6mm (Red)	0/6mm	AC 6 med surf 160/220DS
10mm	0/10mm	AC 10 close surf 160/220DS

COVERAGE

The table below shows the approximate rate of spread of various compacted thicknesses of **Bitucrete**. Please note that the covering capacity of **Bitucrete** may be affected by such factors as the density and grading of the aggregates, condition of the substrate and final state of compaction. On more irregular substrates, heavier rates of spread are to be expected.

Spread Rate Guide	
Average thickness of course (mm)	Coverage (m ² /t)
20	18 to 24
25	15 to 19
30	13 to 15
35	11 to 13
40	10 to 12
45	9 to 11
50	8 to 10
60	7 to 8.5
70	6 to 7.5
75	5 to 6.5
100	4 to 5

PACKAGING

Bitucrete is available in 25kg sealed plastic bags (40 x 25kg per pallet).

STORAGE

Bitucrete has a storage life of up to six months in sealed bags and under good storage conditions. Bags are batch numbered for easy stock rotation.

STANDARDS

Bitucrete complies with BS EN 13108-1 Bituminous Mixtures. Material Specification. Asphalt Concrete.

SAFETY

For full safety information, please request the **Bitucrete** Safety Data Sheet 03b using the contact information at the back of this brochure.

COLPATCH

COLPATCH



Colpatch is a BBA HAPAS approved, cold applied storage grade macadam that is ideal for instant, high quality repairs to bituminous and concrete surfaces.

Colpatch is formulated from paving grade bitumen, selected aggregates and Macfix additive supplied under licence by Macismo Asphalt & Innovation. This unique additive results in flexibility within the repair reducing the risk of reflective cracking. It also provides the long storage properties of **Colpatch** which enables the remaining material to be stockpiled externally all year round without deterioration and remains workable in cold weather conditions

Colpatch is easy to use with no mixing required with a long storage life of up to two years. To accommodate the customer's storage capability the material is available in a variety of options.

WHERE TO USE?

- Patches/potholes in bituminous surfaces
- Reinstates trenches in trafficked surfaces
- Carriageway repairs
- Reinstatements and temporary surfaces

PREPARATION

Ensure that the surface to be repaired is clean and free from loose material, oil, grease and standing water.

To achieve a long lasting repair it is recommended that the base surface is primed with **Leotak**. Edges of the area to be repaired should be vertically formed as far as possible and then treated with **Bitukold**, **RS Bitukold** or **Colspray** edge sealant prior to forming joints. For small potholes, **Bitukold** or **Colspray** may be used over the surface area of the hole as a tack coat. However a quick repair can be performed without any cutting out, tack coats or edge sealants.

APPLICATION

Apply sufficient **Colpatch** to over-fill the area to be reinstated, ensuring that all corners are filled by gently kneading the material with a shovel to evenly spread it across the full area.

Compact the material to the surrounding level using a hand tamper or compactor/roller. For large areas and deep sections, use a vibrating plate or roller slightly wetting the drum with water. If under-filling has taken place, simply add more product and compact to level.

It is recommended that deep patches should be built up in 15-40mm compacted layers as this will result in better compaction being achieved.

Once compacted the **Colpatch** is ready to be trafficked. Curing is brought about by both air drying and compaction, with the rate of cure dependent upon temperature and the weight and volume of traffic. However, under normal traffic conditions, **Colpatch** will not depress, track or pick up during the curing process.

Colpatch remains flexible for some time after application as the material will take up the contours of potholes naturally and form an immediate repair, it is ideal for irregularly shaped potholes.



COVERAGE

The below table shows the approximate rate of spread of various compacted thicknesses of **Colpatch**.

Spread Rate Guide	
Average thickness of course (mm)	Coverage (m ² /t)
20	22 to 28
30	15 to 19
40	11 to 15
50	9 to 12
60	8 to 10
75	6 to 8
100	4 to 6

Please note that the covering capacity of **Colpatch** may be affected by such factors as the density and grading of the aggregates, condition of the substrate and final state of compaction. On more irregular substrates, heavier rates of spread are to be expected.

PACKAGING

Colpatch is available in bulk loads, 1 tonne bulk bags, 25kg sealed bags (40 x 25kg per pallet) and 25kg sealed buckets (36 x 25kg per pallet).

STORAGE

Keep free from frost and extremes of heat.

STANDARDS

Colpatch is BBA HAPAS Approved Certificate 11/H179

SAFETY

For full safety information, please request the **Colpatch** Safety Data Sheet 03c using the contact information at the back of this brochure.



BITUKOLD



Bitukold is a cold hand applied, thixotropic bitumen emulsion designed for sealing vertical joints. On small patches, **Bitukold** can also be used as a tack coat, thereby saving on the need to use a separate tack coat emulsion. **Bitukold** is mainly used for the protection of new joints in freshly laid asphalt or macadam.

WHERE TO USE?

- Transverse or longitudinal vertical joints
- Trench reinstatements
- Patch repairs
- Drain or manhole frames and exposed ironwork
- Kerb channels

PREPARATION

Bitukold should not be applied in ambient temperatures of less than 5°C. Ensure surface is clean and free from loose material, oil, grease, standing water and weeds.

APPLICATION

A soft fibre or turks head brush should be used to apply the **Bitukold**. The brush must be dampened using clean water and any excess shaken off before commencing application. Then using a full brush of material, apply evenly in one direction, covering the whole face of the joint. In very hot weather application will be easier if the joint surface is slightly dampened.

In normal conditions surfacing can commence within 15 minutes. The application of hot material rapidly completes the drying. Drying will be delayed in cold, damp and humid weather.

Wash the brushes immediately after use with soapy water followed by **Leoclean**.

COVERAGE

On vertical joints 1.5kg/m² gives a dried film thickness of 1mm. For joints 50mm deep, a 15kg bucket covers approximately 200 linear metres of joint. Saw cutting the edge of the joint will maximise the rate of spread. As a tack coat in small patches and potholes a spread rate of 0.25-0.45kg/m² should be achieved.

PACKAGING

Bitukold is available in re-sealable 15kg lidded buckets (36 x 15kg per pallet).

STORAGE

Protect from frost or extremes of heat. **Bitukold** has a storage life of up to six months in sealed buckets under good storage conditions.

For further information please refer to the Road Emulsion Association Technical Data Sheet No.2 - Safe Handling and Storage of Bitumen Emulsions. For further advice please contact our National Sales Office.

STANDARDS

Bitukold complies with BS 594987 Clause 6.9 Joints, vertical face coating, and is suitable for jointing as required in clause 903.36 (iii) of the Specification of Highway Works.

SAFETY

For full safety information, please request the **Bitukold** Safety Data Sheet 04 using the contact information at the back of this brochure.

RS BITUKOLD



RS Bitukold is a rapid setting, cold applied thixotropic bitumen emulsion designed for sealing vertical joints. The cationic formulation of **RS Bitukold** ensures a rapid set even in cold, damp conditions, with an initial cure taking place within 15 minutes. **RS Bitukold** is mainly used for the protection of new joints in freshly laid asphalt or macadam.

WHERE TO USE?

- Transverse and longitudinal vertical joints
- Horizontal cracks in asphaltic roads
- Trench reinstatements
- Patch repairs
- Drain or manhole frames
- Kerb channels

PREPARATION

RS Bitukold should not be applied in ambient temperatures of less than 5°C. Ensure surface is clean and free from loose material, oil, grease, standing water and weeds.

APPLICATION

RS Bitukold can be applied by pouring from a spouted watering can or, alternatively, spray applied through the **Roadmaster Sprayer**.

COVERAGE

RS Bitukold should be applied at a rate of 0.7 – 1.5kg/m² depending upon the texture and porosity of the surface and the application method.

For joints 50mm deep, a 15kg bucket covers approximately 200 linear metres. Saw cutting the edge of the joint will maximise the rate of spread.

PACKAGING

RS Bitukold is available in re-sealable 15kg black lidded buckets (36 x 15kg per pallet) or cardboard boxes containing 60 x 10kg bags.

STORAGE

Protect from frost or extremes of heat. **RS Bitukold** has storage life of up to six months in sealed buckets under good storage conditions.

For further information please refer to the Road Emulsion Association Technical Data Sheet No.2 - Safe Handling and Storage of Bitumen Emulsions. For further advice please contact our National Sales Office.

STANDARDS

RS Bitukold is a UKCA Marked cationic emulsion to BS EN 13808:2013 C60B3/4 or C65B3/4. **RS Bitukold** also complies with BS 594987 Clause 6.9 Joints, and is suitable for jointing as required in clause 903.36 (iii) of the Specification of Highway Works.

Full UKCA Marking information is available from the Colas Products website.
www.colasproducts.co.uk

SAFETY

For full safety information, please request the **RS Bitukold** Safety Data Sheet 93 using the contact information at the back of this brochure.



Colspray is a rapid setting, cold applied bitumen spray designed for sealing vertical joints. **Colspray** can also be used as a tack coat helping to prevent the ingress of water.

WHERE TO USE?

- Transverse or longitudinal vertical joints
- Trench reinstatements
- Patch repairs
- Drain or manhole frames
- Kerb channels

PREPARATION

Ensure that the surface is clean and free from loose materials, oil, grease, standing water and weeds.

APPLICATION

Shake can vigorously before use. Turn can upside down and apply **Colspray** in even strokes with nozzle 200-300mm away from the surface to be treated. Ensure complete coverage. After use spray briefly with can in upright position to clear nozzle.

COVERAGE

The coverage rate for **Colspray** should be 0.7 to 1.5 kg/m², depending on the texture and porosity of the surface.

PACKAGING

Colspray is supplied in 750ml aerosol cans (12 per pack).

STORAGE

- Caution: pressurised container, protect from sunlight
- Do not pierce or burn even after use
- Do not expose to temperatures exceeding 50°C
- Do not spray on a naked flame or any incandescent material
- Keep out of reach of children

STANDARDS

Manufactured in accordance with ISO9001:2015 quality systems. **Colspray** complies with BS 594987 Clause 6.9 Joints.

SAFETY

For full safety information, please request the **Colspray** Safety Data Sheet 149 using the contact information at the back of this brochure.



H4 is a hot poured joint sealant designed for the treatment of reinstatements and asphalt overlays.

WHERE TO USE?

- Transverse or longitudinal vertical joints
- Patch repairs
- Trench reinstatements
- Drain or manhole frames
- Kerb channels

PREPARATION

Ensure that the joints to be sealed are clean and free from dust, fuel and oil spillage. The face of the joints should be dry with a surface temperature ideally of at least 10°C. Do not apply to icy surfaces or in rain.

APPLICATION

H4 must be heated before use. For best results, use a heating kettle with an indirect heating system such as hot oil. Ensure that **H4** doesn't exceed 200°C and that the oil does not exceed 230°C. When hot, pour either from a watering can or direct from the melting kettle via a pressure fed heated hose with a special nozzle. The 25kg tin pails are not suitable for placing on or over direct heat (i.e. gas or wood fire).

COVERAGE

For a 40mm vertical joint face and a 2mm coated thickness of **H4**, 0.08kg, seals approximately one linear metre of joint or a 25kg pack seals approximately 300 linear metres of joint.

PACKAGING

H4 is supplied in 25kg siliconized easy strip cartons (20 x 25kg per pallet) or 12.5kg siliconized easy strip cartons (40 x 12.5kg per pallet) and in 25kg metal pails with handles (24 x 25kg per pallet) being leak proof, these pails are particularly convenient for use during hot weather.

STORAGE

Keep free from frost and extremes of heat. Do not stack. Do not store in direct sunlight.

STANDARDS

H4 is a UKCA Marked paving grade bitumen complying to BS EN 12591 which also complies with BS 594987 Clause 6.9 Joints. **H4** is suitable for jointing as required in clause 903.36(i) of Volume 1 of the Specification for Highway Works.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay
- This product is hazardous for transportation when carried at temperatures above 100°C

For full safety information, please request the **H4** Safety Data Sheet 12 using the contact information at the back of this brochure.

Further advice can be found on the Eurobitume Safe Handling of Bitumen Card available on the Eurobitume website.

H4 POLYMER



H4 Polymer is a modified hot poured joint sealant designed for the treatment of reinstatements and asphalt overlays giving greater flexibility to the joint.

WHERE TO USE?

- Transverse or longitudinal vertical joints
- Patch repairs
- Trench reinstatements
- Drain or manhole frames
- Kerb channels

PREPARATION

Ensure that the joints to be sealed are clean and free from dust, fuel and oil spillage. The face of the joints should be dry with a surface temperature ideally of at least 10°C. Do not apply to icy surfaces or in rain.

APPLICATION

H4 Polymer must be heated before use. For best results, use a heating kettle with an indirect heating system such as hot oil. Ensure that **H4 Polymer** doesn't exceed 200°C and that the oil does not exceed 230°C. When hot, pour either from a watering can or direct from the melting kettle via a pressure fed heated hose with a special nozzle. The 25kg tin pails are not suitable for placing on or over direct heat (i.e. gas or wood fire).

COVERAGE

For a 40mm vertical joint face and a 2mm coated thickness of **H4 Polymer**, 0.08kg, seals approximately one linear metre of joint or a 25kg pack seals approximately 300 linear metres of joint.

PACKAGING

H4 Polymer is supplied in 25kg metal pails with handles (24 x 25kg per pallet) being leak proof, these pails are particularly convenient for use during hot weather.

STORAGE

Keep free from frost and extremes of heat. Do not stack. Do not store in direct sunlight.

STANDARDS

H4 Polymer is a UKCA Marked polymer modified bitumen complying to BS EN 14023 which also complies with BS 594987/45/80-50 Clause 6.9 Joints. **H4 Polymer** is suitable for jointing as required in clause 903.36(ii) of Volume 1 of the Specification for Highway Works.

Full UKCA Marking information is available from the Colas Products website.
www.colasproducts.co.uk

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay
- This product is hazardous for transportation when carried at temperatures above 100°C

For full safety information, please request the **H4 Polymer** Safety Data 56H using the contact information at the back of this brochure.

Further advice can be found on the Eurobitume Safe Handling of Bitumen Card available on the Eurobitume website.

PREFORMED ROAD MARKINGS



Prefomed Road Markings are skid resistant thermoplastic symbols, letters and numbers. **Prefomed Road Markings** are non-toxic, contain no lead or chromate pigments and are skid resistant to >55 SRV.

WHERE TO USE?

- Roads
- Car parks
- Playgrounds
- Cycle lanes

PREPARATION

Prefomed Road Markings are easy to apply to bituminous and concrete surfaces. Before application, always ensure that the area is clean, dry and free from dust, oil and fuel residues. **Premark Primer** is required for concrete, stone and worn macadam surfaces.

Ensure that the primer is completely dry before the material is applied. In cold conditions warming of the surface prior to application is required to enhance adhesion.

Clean area where **Prefomed Road Markings** are to be applied thoroughly by removing all sand, dirt, chemicals and oily substances. If there is any moisture present in the surface this must be removed with the gas burner.

APPLICATION

Place the **Prefomed Road Markings** on the surface with the beaded top coat facing up. Make sure the individual pieces are positioned correctly and with no gaps in-between.

Heat the material using a powerful gas burner (pressure min. 3 bar). Move the flame slowly but steadily 10cm to 30cm over the material in a sweeping motion so that heat is evenly applied. The material must be heated until all the material is liquid (approx. 200°C).

Applying insufficient heat will result in inadequate bonding and failure. If overheated, superficial scorching of the material can occur by means of brown blotching, but this discolouring will soon disappear once the marking is exposed to traffic and weather.

COVERAGE

Varies dependent upon the size and type of symbol, letter or number being installed.

PACKAGING

Prefomed Road Markings are supplied in flat pack cardboard boxes. Some symbols and markings are supplied in pieces that may require assembly on-site.

STORAGE

- Keep flat and store in a cool, dry place – between 2°C and 32°C
- Maximum of 25 packs high
- Shelf life in sealed packaging is 12 months
- In cold weather, application will be assisted by storing overnight at room temperature

PREFORMED ROAD MARKINGS

STANDARDS

Complies to EN 1436 Classes: S3, Q3, R3.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

For full safety information, please request the **Preformed Road Markings** Safety Data Sheet 106 using the contact information at the back of this brochure.

EUROLINES



Eurolines are skid resistant thermoplastic markings designed for demarcation and lining. **Eurolines** are non-toxic, contain no lead or chromate pigments and are skid resistant to >55 SRV.

PREPARATION

Eurolines are easy to apply to bituminous and concrete surfaces. **Premark Primer** should be used when applying **Eurolines** to concrete, stone and worn macadam surfaces.

Ensure that the primer is completely dry before the material is applied. In cold conditions warming of the surface prior to application is required to enhance adhesion.

Clean area where **Eurolines** are to be applied thoroughly by removing all sand, dirt, chemicals and oily substances. If there is any moisture present in the surface this must be removed with the gas burner.

APPLICATION

Eurolines should be placed on the surface with the beaded top coat facing up making sure the individual pieces are positioned correctly and with no gaps in-between.

The material should be heated using a powerful gas burner (pressure min. 3 bar). Move the flame slowly but steadily 10cm to 30cm over the material in a sweeping motion so that heat is evenly applied. The material must be heated until all the material is liquid (approx. 200°C).

Applying insufficient heat will result in inadequate bonding and subsequent failure of the material. If overheated, superficial

scorching of the material can occur resulting in brown blotching, but this discolouring will soon disappear once the **Eurolines** are exposed to traffic and weather.

COVERAGE

100mm x 5000mm
50mm x 5000mm

PACKAGING

Eurolines come in a variety of colours: White, Yellow, Primrose and Red in packs ready for use.

Each pack contains either:

- 6 (100mm x 5000mm) rolls
- 12 (50mm x 5000mm) rolls

STORAGE

- Keep flat and store in a cool, dry place – between 2°C and 32°C
- Maximum of 25 packs high
- Shelf life in sealed packaging is 12 months
- In cold weather, application will be assisted by storing overnight at room temperature

STANDARDS

Complies to EN 1436 Classes: S3, Q3, R3.

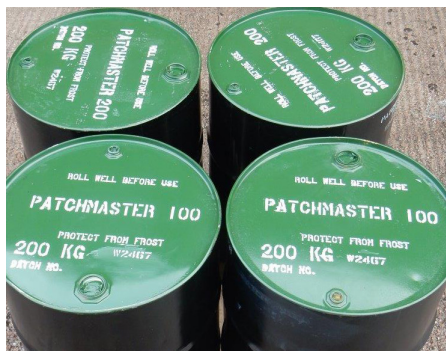
SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

For full safety information, please request the **Eurolines** Safety Data Sheet 106 using the contact information at the back of this brochure.

PATCHMASTER 100



Patchmaster 100 is a cationic bitumen emulsion specifically formulated to be used in conjunction with automated spray injection patching equipment and to be used with an approved aggregate. The emulsion is used both as a tack coat and as a binder in the spray injection patching operation. For higher stressed repairs use polymer modified **Patchmaster 200**.

WHERE TO USE?

In conjunction with automated spray injection patching equipment.

PREPARATION

See operators method statement.

APPLICATION

Patchmaster 100 is designed for use with specialist spray injection patching equipment and should only be used when the ground temperature is $>5^{\circ}\text{C}$ and rising, and $<40^{\circ}\text{C}$. Humidity should preferably not exceed 70%, although **Patchmaster 100** can be applied in higher humidity and in colder temperatures but this will prolong the break time.

COVERAGE

See operators method statement.

PACKAGING

Patchmaster 100 emulsion is available in bulk loads or 200kg drums.

STORAGE

Protect from frost. Drums should be rolled frequently to avoid separation. Bulk material should be circulated before use. For further information please refer to the Road Emulsion Association Technical Datasheet No. 2 - Recommendations for the Safe Handling and Storage of Bitumen emulsions. For further advice please contact our National Sales Office.

STANDARDS

Patchmaster 100 is a UKCA Marked cationic bitumen emulsion complying to BS EN 13808:2013 C60B3/4.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Patchmaster 100** Safety Data Sheet 46 using the contact information at the back of this brochure.

PATCHMASTER 200



Patchmaster 200 is a polymer modified cationic bitumen emulsion specifically formulated to be used in conjunction with automated spray injection patching equipment and to be used with an approved aggregate. The emulsion is used both as a tack coat and as a binder in the spray injection patching operation and is ideal for higher stress repairs.

WHERE TO USE?

In conjunction with automated spray injection patching equipment.

PREPARATION

See operators method statement.

APPLICATION

Patchmaster 200 is designed for use with specialist spray injection patching equipment and should only be used when the ground temperature is $>5^{\circ}\text{C}$ and rising, and $<40^{\circ}\text{C}$. Humidity should preferably not exceed 70%, although **Patchmaster 200** emulsion can be applied in higher humidity and in colder temperature but this will prolong the break time.

COVERAGE

See operators method statement.

PACKAGING

Patchmaster 200 emulsion is available in bulk loads or 200kg drums.

STORAGE

Protect from frost. Drums should be rolled frequently to avoid separation. Bulk material should be circulated before use. For further information please refer to Road Emulsion Association Technical Datasheet No. 2 - Recommendations for the Safe Handling and Storage of Bitumen emulsions. For further advice please contact our National Sales Office.

STANDARDS

Patchmaster 200 is a UKCA Marked cationic bitumen emulsion to BS EN 13808:2013 C60BP3/4.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Patchmaster 200** Safety Data Sheet 46 using the contact information at the back of this brochure.

COLSEAL



Colseal is a pre-mixed slurry seal for sealing utility reinstatement and patch repairs. It is also ideal for sealing pre-surface dressing patches. It can also be used for covering score marks and for the treatment of driveways and pathways.

WHERE TO USE?

- Carriageways
- Footways
- Driveways

PREPARATION

The surface should be clean, dry and free of any loose chippings/debris (the treatment and removal of any weeds and moss should be carried out prior to laying preparation). Use masking tape to protect any kerbs/ironwork etc. from being covered (this is to be removed while the **Colseal** is still wet).

APPLICATION

Mix thoroughly before use using a drill paddle.

Pour onto surface in manageable amounts and using a soft brush with handle or squeegee, spread evenly over the surface to the recommended thickness of approximately 1.5-2mm, promptly finishing this area in the same directional brush stroke.

If a thickness greater than 1.5-2mm is required we recommend an additional application but it must be ensured that the first application is set fully before reapplying.

The material should be applied on a dry day at temperatures of 10°C and rising with no possibility of rainfall. Setting times vary with temperature. At the recommended thickness setting times will be, at 25°C approximately 1-3 hours and at 10°C 3-6 hours.

COVERAGE

1 x 25kg bag will cover approximately 10-14m² @ 1.5 - 2mm thickness, depending on surface texture.

PACKAGING

Colseal is supplied in 25kg buckets (36 x 25kg per pallet) or cardboard boxes containing 40 x 25kg bags.

STORAGE

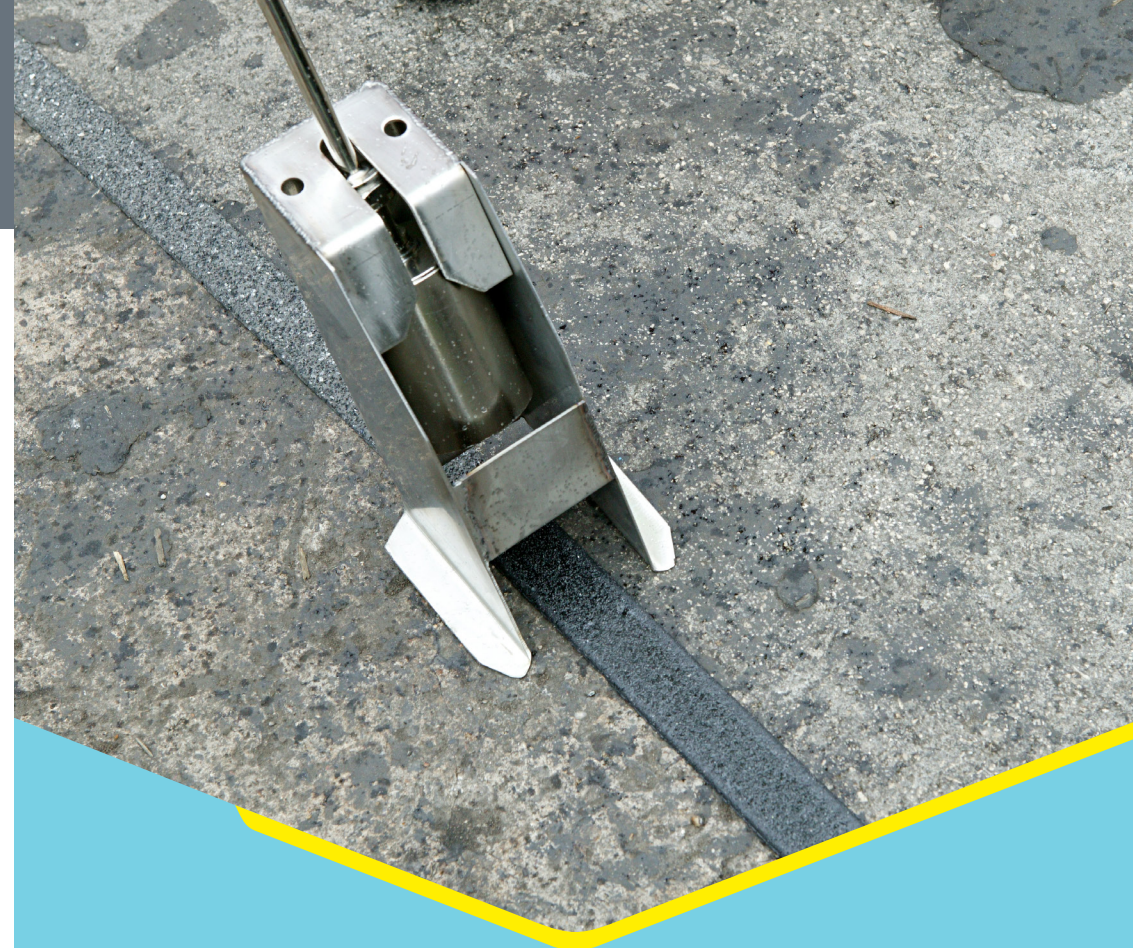
Store in a cool, dry place, protect from frost.

STANDARDS

Supplied in accordance to ISO9001.

SAFETY

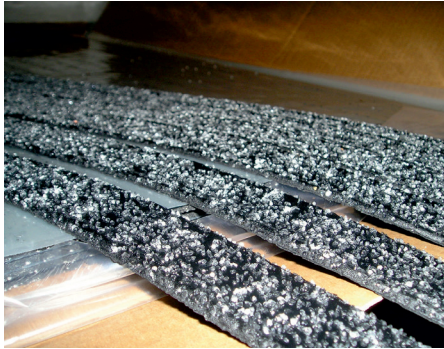
For full safety information, please request the **Colseal** Safety Data Sheet 152 using the contact information at the back of this brochure.



OVERBANDING

Colstrips	24
Gripstrip	25
Jointgrip OB	26
GripRoll	28

COLSTRIPS



Colstrips are BBA HAPAS approved skid resistant overbanding and crack sealing thermoplastic strips, designed to seal and repair static cracks up to 5mm wide and 20mm deep in nonporous bituminous and concrete highways.

Colstrips seal patches and reinstatements preventing the ingress of water helping to extend the life of the repair. **Colstrips** are easy to apply with no wastage and can be trafficked almost immediately. **Colstrips** are non-toxic, contain no lead or chromate pigments and are skid resistant to >65 SRV.

WHERE TO USE?

- Overbanding for patches and reinstatements

PREPARATION

Colstrips are easy to apply to bituminous and concrete surfaces. Before application always ensure the area is clean, dry and free from dust and oily residues. Concrete surfaces should be primed with **CP Primer** ensuring that the primer is completely dry before the **Colstrips** are applied.

APPLICATION

Preheat the surface making sure it is free from moisture, remove **Colstrips** from their protective wrapping and place on the road surface.

Heat the **Colstrips** with a propane torch using a slow sweeping motion, making sure that you do not spot heat any areas as this may scorch the material.

Colstrips must be heated until they start to bubble.

The material will cool and harden within 5-10 minutes of installation.

Applying insufficient heat will result in inadequate bonding and subsequent failure of the material.

COVERAGE

1 metre lengths.

PACKAGING

Colstrips are supplied in flat pack cardboard boxes, each box contains 80 (1000mm x 35mm) strips.

STORAGE

- Keep flat and store in a cool, dry place – between 2°C and 32°C
- Maximum of 25 packs high
- Shelf life in sealed packaging is 12 months
- In cold weather, application will be assisted by storing overnight at room temperature

STANDARDS

Complies to EN 1436 Classes: S5.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

For full safety information, please request the **Colstrips** Safety Data Sheet 106 using the contact information at the back of this brochure.



GRIPSTRIPS



Gripstrip is an anti-skid, self-adhesive, overbanding joint and crack sealing tape. **Gripstrip** consists of an extruded bituminous compound modified with elastomers and fast bonding resins.

WHERE TO USE?

- Horizontal cracks in asphaltic roads
- Transverse and longitudinal joints
- Trench reinstatements
- Patch repairs
- Drain or manhole frames

PREPARATION

Ensure that the joint or crack is dry, clean and free from dust, fuel and oil spillage. For best results use when ambient temperature is 15°C or above. **Gripstrip** should not be applied to cracks wider than 10mm unless the crack has been pre-filled with approved material such as **Jointfill A2, Jointfill N1 & N2** or **Leoseal R**.

APPLICATION

Gripstrip is applied to the road surface manually or with a specially adapted trolley. It is self-adhesive with the underside protected by peel off backing paper.

Once laid heavy foot pressure should be applied to assist adhesion. Applied **Gripstrip** will become embedded through trafficking.

COVERAGE

Each roll will overband 25 linear metres.

PACKAGING

Gripstrip is supplied in a box with 2 x 40mm x 25m rolls.

STORAGE

Keep in dry store under cover.

STANDARDS

Gripstrip has a skid resistance value of ≥ 60 and therefore complies with the requirements of the New Roads and Street Works Act.

SAFETY

For full safety information, please request the **Gripstrip** Safety Data Sheet 94 using the contact information at the back of this brochure.

JOINTGRIP OB



Jointgrip OB is an anti-skid overbanding joint sealant. It is a proprietary formulation of blended paving grade bitumen incorporating special polymers and abrasive aggregates to provide a compound of toughness, flexibility, adhesiveness and resistance to flow.

WHERE TO USE?

- Horizontal cracks in concrete and asphaltic roads
- Transverse and longitudinal joints
- Airfield surfaces where extra protection is required beyond edges or joints or cracks
- Trench reinstatements
- Patch repairs

PREPARATION

Ensure that the joint or crack to be treated is dry, clean and free from dust, fuel and oil spillage. For best results cracks to be sealed should be thoroughly cleaned and dried using a hot compressed air lance, grit-blasting or power brushing to remove all detritus. Do not apply to icy surfaces or in cold, damp conditions.

APPLICATION

Jointgrip OB should be heated and agitated in a purpose built temperature controlled bitumen preheater and horizontal mixer unit ensuring that the temperature does not exceed 200°C.

The material should be discharged within the specified pouring temperature (170-190°C) into a pre-warmed suitable pouring bucket and then into an overbanding shoe of the appropriate width and applied at a thickness which should be between 2-2.5mm.

Alternatively, for small sites a heavy duty metal bucket may be used with a pourer lip, positioned on a purpose-built stand with gas ring. **Jointgrip OB** will need to be broken up and heated in the bucket to just pourable temperature and agitated with a flat metal stirrer, having one end curved to enable aggregate to be kept suspended.

N.B: Agitate the material in the bucket from time to time to avoid localised over-heating and aggregate separation (Warning: do not

Density (SG)	1.5kg/ltr
Application/ pouring temperature	170 - 190°C
Safe heating temperature	190°C
Flash point	>250°C
Softening point	85°C
Flow (ASTM Plate)	≤5mm

PROPERTIES

If required an application of sand whilst hot will remove reflectivity (gloss) of the finished overband - however, the initial gloss finish of the product diminishes soon after trafficking.

JOINTGRIP OB

COVERAGE

When used as an overbanding on reinstatement joints, reflective and small cracks, 1000kgs will overband approximately 3500 linear metres at 40mm width, 2.5mm height.

Rate of use may increase dependent on application.

PACKAGING

Jointgrip OB is available in 25kg (approx.) paper sacks (40 x 25kg per pallet) and 12.5kg siliconized easy strip cartons (40 x 12.5kg per pallet).

STORAGE

Keep in dry store under cover.

STANDARDS

Jointgrip OB complies with the skid resistance value required by the new Roads and Street Works Act.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

NB: This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information please request the **Jointgrip OB** Safety Data Sheet 35 using the contact information at the back of this brochure.

GRIPROLL



GripRoll is a unique BBA HAPAS Approved skid resistant overbanding and crack sealing thermoplastic roll. **GripRoll** has been specially formulated to be more flexible at lower temperatures than standard thermoplastic rolls and is a marked improvement on the conventional glass grains producing a skid resistance value >70.

GripRoll is designed to seal and repair static cracks up to 5mm wide and 20mm deep in nonporous bituminous and concrete highways. **GripRoll** seals patches and reinstatements preventing the ingress of water helping to extend the life of the repair. **GripRoll** is easy to apply with no wastage and can be trafficked almost immediately.

WHERE TO USE?

- Overbanding for patches and reinstatements

APPLICATION

Preheat the surface making sure it is free from moisture, roll out the **GripRoll** and place on the road surface.

Where you are applying to a non-bituminous substrate, prime the surface with **Colas Thermo-Tac Primer** before rolling out the **GripRoll**.

Heat the **GripRoll** with a propane torch using a slow sweeping motion, making sure that you do not spot heat any areas as this may scorch the material.

GripRoll must be heated until it starts to bubble and melt then remove the heat. The material will cool and harden within 5-10 minutes of installation. Always check the **GripRoll** does not lift, if any areas do lift, apply more heat.

Applying insufficient heat will result in inadequate bonding and subsequent failure of the material.

COVERAGE

Each roll is 5m x 35mm.

PACKAGING

GripRoll is supplied in boxes, each box contains 12 rolls (5m x 35mm).

STORAGE

- Keep flat and store in a cool, dry place
- Do not expose to UV rays as material will become brittle
- Shelf life in sealed packaging is 12 months
- In cold weather, application will be assisted by storing overnight at room temperature

STANDARDS

GripRoll is BBA HAPAS Approved.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

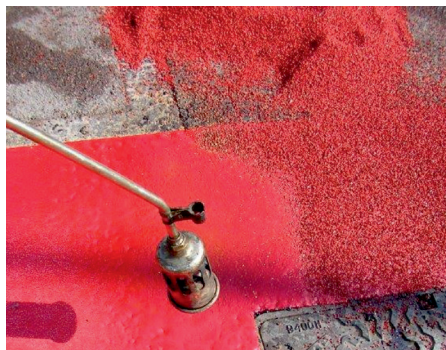
- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

For full safety information please request the **GripRoll** Safety Data Sheet 164 using the contact information at the back of this brochure.



ANTISKID

Antiskid Sheets	30
Tac-Pads	32
Thermosafe 65	34



Antiskid Sheets are skid resistant thermoplastic sheets available in a variety of colours which are ideal for application on bus and cycle lanes as well as other high stress areas. **Antiskid Sheets** are easy to use, can be cut to size and are instantly trafficked once cooled. **Antiskid Sheets** are non-toxic, contain no lead or chromate pigments and are skid resistant to >55 SRV.

PREPARATION

Antiskid Sheets are easy to apply to bituminous and concrete surfaces. Before application always ensure the area is clean, dry and free from dust, oil and fuel residues. **Premark Primer** should be used when **Antiskid Sheets** are applied to concrete, stone and worn macadam surfaces. Ensure that the primer is completely dry before the material is applied. In cold conditions warming the surface prior to application is required to enhance adhesion.

APPLICATION

Antiskid sheets should be placed on the surface with the beaded top coat facing up making sure the individual pieces are positioned correctly and with no gaps in-between.

The material should be heated using a powerful gas burner (pressure min. 3 bar). Move the flame slowly but steadily 10-30cm over the material in a sweeping motion so that heat is evenly applied. The material must be heated until all the material is liquid (approx. 200°C).

If enhanced skid resistance is required calcined bauxite should be applied using a shovel as soon as the **Antiskid Sheet** material is molten and, working in small areas (approximately 200mm) at a time, ensure that it has embedded into the melted **Antiskid Sheet**. Repeat the process until the **Antiskid Sheet** is completely covered.

Once cooled the excess bauxite should then be removed using a stiff brush, with any areas where bauxite has not been retained being reheated and further bauxite applied.

Applying insufficient heat to the **Antiskid Sheets** will result in inadequate bonding and subsequent failure of the material. If overheated, superficial scorching of the material can occur resulting in brown blotching, but this discolouring will soon disappear once the **Antiskid Sheets** are exposed to traffic and weather.

COVERAGE

Each sheet will cover an area of 1m x 600mm. 1 x 25kg bag of 1-3mm calcined bauxite is sufficient to treat three **Antiskid Sheets**.

PACKAGING

Antiskid Sheets are supplied in flat pack boxes each box contains 5 sheets (1000mm x 600mm).

STORAGE

- Keep flat and store in a cool, dry place – between 2°C and 32°C
- Maximum of 25 packs high
- Shelf life in sealed packaging is 12 months
- In cold weather, application will be assisted by storing overnight at room temperature

STANDARDS

Complies to EN 1436 Classes: S3, Q3, R3.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

For full safety information, please request the **Antiskid Sheet** Safety Data Sheet 106 using the contact information at the back of this brochure.



Tac-Pads are a pressure sensitive self-adhesive tile, made from Methacrylate resin. Requiring no heat.

WHERE TO USE?

- Footpaths
- Controlled & Uncontrolled crossing points
- Railway platform edges
- Cycle routes
- Approach to any hazardous areas

PREPARATION

Surfaces must be dry, clean and free from dust, oil and fuel spillage. A primer is required for concrete, stone and worn macadam surfaces.

APPLICATION

Clean application area thoroughly by removing all sand, dirt, chemicals and oily substances.

The installation is simple and easy to do. The high-performance adhesive on the back of the **Tac-Pad** is protected by a release paper that must be removed before application.

We recommend removing the protective paper on only 1/4 of the surface and fold it up under **Tac-Pad** allowing the **Tac-Pad** to be in the correct position before removing the remaining protective paper.

Walk over the entire **Tac-Pad** paying particular attention to the edges ensuring full adhesion.

Application on non-bituminous surfaces (e.g. concrete and metal):

Follow steps in the first paragraph above.

Apply Actisol primer on to the entire surface area where the marking is to be installed. Allow the primer to dry until it is no longer sticky. The more porous the surface, the more primer is required.

COVERAGE

Each Tactile measures 400mm x 400mm.

STORAGE

- Keep flat and store in a cool, dry place – between 20°C and 32°C.
- Do not expose to UV rays as material will become brittle.
- Store flat. Maximum of 25 packs high.
- Shelf life in sealed packaging is 6 months.
- In cold weather, application will be assisted by storing overnight at room temperature.



STANDARDS

British Standard BS 8300; the Approved Documents for the Building Regulations; The Traffic Signs Regulations and General Directions 2016, The Traffic Signs Manual, Design Standards for Accessible Railway Stations - A joint Code of Practice published by the UK Department for Transport and Transport Scotland in 2015; Traffic Advisory Leaflets; and Local Transport Note 1/20: Cycle Infrastructure Design.

SAFETY

For full safety information, please request the **Tac-Pads** Safety Data Sheet using the contact information at the back of this brochure.

THERMOSAFE 65



Thermosafe 65 is a skid resistant thermoplastic sheet for surfaces that require a higher skid resistant finish. Available in a variety of colours, **Thermosafe 65** are ideal for worn /polished road surface covers and to provide a non-slip surface to stairs, steps and access ramps for the disabled.

Thermosafe 65 is cost effective and a rapid effective solution to those road users most at risk, i.e. those who ride motorcycles or scooters and are particularly vulnerable to sudden changes in surface grip. The sheets are easy to use; can be cut to size and are instantly trafficked once cooled. **Thermosafe 65** is non-toxic, contain no lead or chromate pigments and is skid resistant to >65 SRV.

WHERE TO USE?

- Footpaths
- Uncontrolled crossing points

PREPARATION

Thermosafe 65 is easy to apply to ironwork, bituminous, concrete, block paving as well as treated and untreated surfaces. Always ensure the area is clean, dry and free from dust, oil and fuel residues. Warming the surface prior to application is required to enhance adhesion. Apply **Thermosafe Primer** to the area and apply the sheets immediately.

APPLICATION

Thermosafe 65 should be applied with a hand lance. Trafficking can commence when material has fully cooled. Sheets may be cut to shape using tinsnips or a Stanley knife if required.

COVERAGE

Each sheet will cover an area of 1000mm x 600mm.

PACKAGING

Thermosafe 65 is supplied in flat pack cardboard boxes, each box contains 5 sheets (1000mm x 600mm).

STORAGE

- Keep flat and store in a cool, dry place – between 2°C and 32°C
- Maximum of 25 packs high
- Shelf life in sealed packaging is 12 months
- In cold weather, application will be assisted by storing overnight at room temperature

STANDARDS

Complies to EN 1436 Classes: S5.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

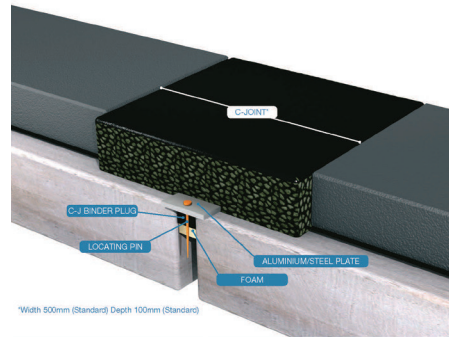
- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls and protective footwear)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

For full safety information, please request the **Thermosafe 65** Safety Data Sheet 106 using the contact information at the back of this brochure.



SEALANTS

C-Joint	36
Jointfill N1	37
Coljoint N2	39
Jointfill A2	41
Sett Grout	43
Stud Grout	44



Problems with bridge expansion joints are well known. A punishing environment created by traffic loads and climate conditions means that the right jointing system is imperative if the structure and bearings are to be protected from water and salts.

Expansion joint systems developed in the past have either not performed adequately, e.g. due to mechanical failure, or were not cost effective. **C-Joint** bridges this gap.

C-Joint is the perfect choice of system for low to medium movement bridge expansion joints. It is an asphaltic plug joint which is able to accommodate up to ± 25 mm horizontal movement from mid gap opening position. Special grades are designed for greater movement for particular situations.

The main components of **C-Joint** are a high performance elastomer modified bitumen binder and single size aggregate. Together they create a joint matrix which gives both flexibility and strength enabling the joint to accommodate all kinds of movement whether they are thermal, rotational or traffic induced. As it is completely watertight the bridge structure and bearing system are fully protected.

Several different grades of binder are available in order to meet different climatic conditions throughout the world. For the bridge engineer **C-Joint** is a cost effective, durable and versatile bridge joint system and comes with the guarantee of the Colas name.

FEATURES AND BENEFITS

FLEXIBLE

C-Joint is virtually omni-directional being able to accommodate longitudinal, rotational, vertical and transverse movements. It can accommodate up to ± 25 mm horizontal movement.

WATERTIGHT

Being completely watertight, **C-Joint** protects the structure and bearing system from moisture. Drainage can be incorporated into **C-Joint** to remove any sub surface water.

SILENT

When trafficked there is little or no increase in noise levels.

QUICK INSTALLATION

Rapid installation and the ability to be installed in partial widths reduces the disruption to road users and other costs.

VERSATILE AND ADAPTABLE

C-Joint can be installed in new and old structures and is constructed to meet the requirements of individual sites.

RAPIDLY AND EASILY REPAIRED

If damaged by accident, **C-Joint** can be easily and rapidly repaired. During resurfacing work it can be planed off and topped up again.

SAFE

C-Joint is flush with the road surface, provides no obstacle to traffic and has no parts to come loose and become traffic hazards.

DURABLE

C-Joint contains no mechanical parts which may require replacement and is able to withstand structure movements and traffic loads in all climates.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet glove, overalls, protective footwear, face visor).
- DO NOT allow water to contact hot material.
- DO NOT exceed maximum safe heating temperature.
- If molten material contacts skin:
 - DO NOT attempt to remove.
 - Immerse affected area in cold running water for at least 10 minutes.
 - Seek medical advice without delay.

This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information, please request the **C-Joint** Safety Data Sheet 91 using the contact information at the back of this brochure.

Jointfill N1 is a polymer modified, bituminous, hot applied joint sealant compound. It is designed to be tough, flexible and have good extension properties over a wide range of ambient temperatures. **Jointfill N1** is suitable for joints between concrete and bituminous surfacing preventing entry of water and other materials. It has excellent recovery properties and low temperature flexibility.

Jointfill N1 is not recommended for overbanding due to its lack of skid resistance. **Jointgrip OB** is recommended for overbanding due to its superior skid resistance properties.

WHERE TO USE?

- Carriageways
- Runways
- Motorways
- Footways

PREPARATION

Damaged joints must be repaired using an epoxy mortar approved by Colas. If necessary joints should also be treated by grit blasting. Joints and cracks should always be thoroughly cleaned and dried with a hot compressed air lance in order to remove all moisture and dirt. This process should be carried out immediately prior to the application of **Jointfill N1**.

Concrete joints should be primed with **CP Primer** before applying **Jointfill N1**.

APPLICATION

Jointfill N1 should be heated indirectly and agitated in a purpose-built sealant preheater unit with thermostatic control. Ensuring that the temperature does not exceed 190°C. The heater unit should be air-jacketed or oil-jacketed. The materials should then be pumped in to the joint, or poured at temperatures between 170-190°C using a melter pourer or bucket with a 'V' lip, with the minimum loss of temperature. Joints should be sealed to a level of at least 3mm below the surface.

Application Properties	
Pouring temperature	170°C - 190°C
Safe heating temperature	185°C for 6 hours maximum. 190°C maximum temperature

COVERAGE

Weight of Jointfill N1 Sealant to fill 100m joint (kg)						
Depth of joint (mm)	Width of joint (mm)					
	15	20	25	30	35	40
20	35	46	58	70	81	93
25	-	-	72	87	101	116
30	-	-	-	-	122	139
35	-	-	-	-	142	162
40	-	-	-	-	-	185

PACKAGING

Jointfill N1 is available in plastic lined papersacks holding 20kg (nominal). Remove the paper and load into heating equipment.

STORAGE

Keep in dry store under cover.

STANDARDS

Jointfill N1 is manufactured on a purpose-built plant to an ISO 9001 quality system which covers all Colas manufactured products. Under this system all batches undergo rigorous QC testing before being released for use. **Jointfill N1** complies with the specification given BS EN 14188-1:2004 Joint Fillers and Sealants – specifications for hot applied sealants for a Type N1 Sealant.

JOINTFILL N1

Test Name	Method	Specification
Softening point (Ring and Ball)	BS EN 1427	≥85 °C
Cone penetration (25°C, 150g, 5s)	BS EN 13880-2	40 to 130dmm
Resilience (25°C, 75g ball, 5s)	BS EN 13880-3	≥60%
Flow resistance (60°C, 5h, 75%)	BS EN 13880-5	<2mm
Extension test: 3 cycles of extension to 75% at a rate of 6mm/hr @ -20°C	BS EN 13880-10	Pass 3 cycles
Density	BS EN 13880-1	Typically 1.015g/cm ³ @ 25°C

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet glove, overalls, protective footwear, face visor).
- DO NOT allow water to contact hot material.
- DO NOT exceed maximum safe heating temperature.
- If molten material contacts skin:
 - DO NOT attempt to remove.
 - Immerse affected area in cold running water for at least 10 minutes.
 - Seek medical advice without delay.

This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information, please request the **Jointfill N1** Safety Data Sheet 06 using the contact information at the back of this brochure.

COLJOINT N2

Coljoint N2 is a polymer modified, bituminous, hot applied joint sealant compound. It is designed to be tough, flexible and have good extension properties over a wide range of ambient temperatures.

Coljoint N2 is suitable for joints between concrete and bituminous surfacing preventing entry of water and other materials. It has excellent recovery properties and low temperature flexibility.

Coljoint N2 is not recommended for overbanding due to its lack of skid resistance. **Jointgrip OB** is recommended for overbanding due to its superior skid resistance properties.

WHERE TO USE?

- Carriageways
- Runways
- Motorways
- Footways

PREPARATION

Damaged joints must be repaired using an epoxy mortar approved by Colas. If necessary joints should also be treated by grit blasting. Joints and cracks should always be thoroughly cleaned and dried with a hot compressed air lance in order to remove all moisture and dirt. This process should be carried out immediately prior to the application of **Coljoint N2**.

Concrete joints should be primed with **CP Primer** before applying **Coljoint N2**.

APPLICATION

Coljoint N2 should be heated indirectly and agitated in a purpose-built sealant preheater unit with thermostatic control. Ensuring that the temperature does not exceed 195°C. The heater unit should be air-jacketed or oil-jacketed. The materials should then be pumped in to the joint, or poured at temperatures between 175–190°C using a melter pourer or bucket with a 'V' lip, with the minimum loss of temperature. Joints should be sealed to a level of at least 3mm below the surface.

Application Properties	
Pouring temperature	170°C - 190°C
Safe heating temperature	185°C for 6 hours maximum. 190°C maximum temperature

COVERAGE

Weight of Coljoint N2 Sealant to fill 100m joint (kg)						
Depth of joint (mm)	Width of joint (mm)					
	15	20	25	30	35	40
20	30	40	50	60	70	80
25	-	-	62.5	75	87.5	100
30	-	-	-	90	105	120
35	-	-	-	-	122.5	140
40	-	-	-	-	-	160

PACKAGING

Coljoint N2 is available in plastic lined papersacks holding 15kg (nominal). Remove the paper leaving plastic liner and load into heating equipment.

STORAGE

Keep in dry store under cover.

STANDARDS

Coljoint N2 complies with the specification given in BS 2499: Part 1 1993 Hot-applied joint sealant systems for concrete pavements - Part 1. Specifications for Joint Sealants; Type N2 Sealant.

COLJOINT N2

Test Name	Specification
Cone Penetration (25°C, 150g)	4 to 10mm
Flow (60°C, plate)	<10mm
Extension Test (3 cycles at -20°C at 6mm/hour for 3 hours)	<50mm ² debonding <20mm ² rupture, with less than 3mm depth Force between 160-1600N
Resilience (25°C)	40% minimum recovery
Determination of bitumen compatibility	No adhesion failure, no oily exudate
Softening Point	≥85°C
Density at 25°C (g/cm ³)	1.017 (Typical value)

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet glove, overalls, protective footwear, face visor).
- DO NOT allow water to contact hot material.
- DO NOT exceed maximum safe heating temperature.
- If molten material contacts skin:
 - DO NOT attempt to remove.
 - Immerse affected area in cold running water for at least 10 minutes.
 - Seek medical advice without delay.

This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information, please request the **Coljoint N2** Safety Data Sheet 06 using the contact information at the back of this brochure.

JOINTFILL A2

Application Properties	
Pouring temperature	170°C/190°C
Safe heating temperature	185°C for 6 hours maximum, 190°C maximum temperature

COVERAGE

Weight of Jointfill A2 Sealant to fill 100m joint (kg)						
Depth of joint (mm)	Width of joint (mm)					
	15	20	25	30	35	40
20	36	48	60	72	84	96
25	-	-	75	90	105	120
30	-	-	-	108	126	144
35	-	-	-	-	147	168
40	-	-	-	-	-	192

PACKAGING

Jointfill A2 is supplied in plastic lined paper sacks holding 20kg (nominal) of material. Remove paper and put in to heating equipment.

STORAGE

Keep in dry store under cover.

STANDARDS

Jointfill A2 is manufactured on a purpose-built plant to an ISO 9001 quality system which covers all Colas manufactured products. Under this system all batches undergo rigorous QC testing before being released for use. If a BS EN 14188-1:2004 product is required see **Jointfill N1**.

Jointfill A2 is a hot applied rubberised bitumen compound designed to be tough, flexible and have good extension properties over a wide range of temperature conditions. It is used for sealing horizontal expansion joints on concrete and asphalt pavements where low movement is expected.

Jointfill A2 prevents entry of water and other materials, it has good recovery properties and low temperature flexibility. **Jointfill A2** is not recommended for overbanding due to its lack of skid resistance, **Jointgrip OB** is recommended for this application due to its superior skid resistance properties.

WHERE TO USE?

- Carriageways
- Car parks
- Footways

PREPARATION

Damaged joints must be repaired using an epoxy mortar approved by Colas. If necessary joints should also be treated by grit blasting. Joints and cracks should always be thoroughly cleaned and dried with a hot compressed air lance in order to remove all moisture and dirt. This process should be carried out immediately prior to the application of **Jointfill A2**. Concrete joints should be primed with **CP Primer** before applying **Jointfill A2**.

APPLICATION

Jointfill A2 should be heated indirectly and agitated in a purpose-built sealant preheater unit with thermostatic control. Ensuring that the temperature does not exceed 190°C. The heater unit should be air-jacketed or oil-jacketed. The materials should then be pumped in to the joint, or poured at temperatures between 170-190°C using a melter pourer or bucket with a 'V' lip, with the minimum loss of temperature. Joints should be sealed to a level of at least 3mm below the surface.

More thorough advice is given in BS 2499-2:1992 Hot Applied Joint Sealant Systems for Concrete Pavements. Code of Practice for Application and Use of Joint Sealants.

Test Name	Specification
Softening point (Ring and Ball)	Typically 70 - 90°C
Cone penetration (25°C, 150g)	25 - 50mm
Flow resistance (Mould Method at 45°C)	<15%
Extension test (0°C, ASTM D1191)	Pass 3 cycles
Density	Typically 1.2g/cm ³ at 25°C

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet glove, overalls, protective footwear, face visor).
- DO NOT allow water to contact hot material.
- DO NOT exceed maximum safe heating temperature.
- If molten material contacts skin:
 - DO NOT attempt to remove.
 - Immerse affected area in cold running water for at least 10 minutes.
 - Seek medical advice without delay.

This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information, please request the **Jointfill A2** Safety Data Sheet 06 using the contact information at the back of this brochure.



Sett Grout is a hot applied bituminous compound which secures all types of setts/ cobbles. **Sett Grout** has been developed in order to solve the pouring and setting problems encountered with some filled bitumen grouting materials. Adhesion, flow and pouring properties have been improved whilst still retaining recommended softening point and penetration characteristics.

WHERE TO USE?

- To secure all types of setts and cobbles

PREPARATION

When grouting cobbles/setts, use the cobbles/ setts manufacturer's installation instructions ensuring that cobbles/setts are dry and clean.

APPLICATION

Sett Grout should be heated indirectly and agitated/stirred in a purpose-built sealant preheater-unit with thermostatic control to ensure that solids are evenly dispersed throughout the pouring material at all times. The heater unit should be air-jacketed or oil-jacketed. Ensure that the temperature does not exceed 190°C as this will result in hardening and loss of elasticity. The materials should then be pumped into the joint, or poured at temperatures between 170-180°C using a melter pourer or bucket with a 'V' lip, with the minimum loss of temperature. Joints should be sealed to a level of at least 3mm below the surface. In cold conditions the temperature of the **Sett Grout** should be raised accordingly and in frosty weather this could well be up to, but not above, 190°C to counteract the chilling effect the setts/ cobbles will have on the poured grout.

COVERAGE

The spread rate for a 20mm wide x 75mm deep joint ~ 3kg/linear metre of joint. N.B: When using 200mm x 100mm setts, 1m² of granite setts contains 15 linear metres of joint. On this basis, the spread rate of **Sett Grout** is 45kg/m² of granite setts, assuming joints are 20mm wide x 75mm deep.

PACKAGING

Sett Grout is available in 25kg (nominal) paper sacks or as a shrink-wrapped pallet (40 x 25kg).

STORAGE

Keep in dry store under cover.

STANDARDS

Sett Grout is a proprietary product produced to a manufacturing system accredited to ISO9001.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet glove, overalls, protective footwear, face visor).
- DO NOT allow water to contact hot material.
- DO NOT exceed maximum safe heating temperature.
- If molten material contacts skin:
 - DO NOT attempt to remove.
 - Immerse affected area in cold running water for at least 10 minutes.
 - Seek medical advice without delay.

This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information, please request the **Sett Grout** Safety Data Sheet 33 using the contact information at the back of this brochure.

STUD GROUT



Stud Grout is a hot applied bituminous compound which secures reflective road studs.

Stud Grout has been developed in order to solve the pouring and setting problems encountered with some bitumen grouting materials. Adhesion, flow and pouring properties have been improved whilst still retaining recommended softening point and penetration characteristics.

WHERE TO USE?

- To secure all types of reflective road studs

PREPARATION

When grouting road studs, use the road stud manufacturer's installation instructions ensuring that studs are dry and clean.

APPLICATION

Stud Grout should be heated indirectly and agitated/stirred in a purpose-built sealant preheater-unit with thermostatic control to ensure that solids are evenly dispersed throughout the pouring material at all times. The heater unit should be air-jacketed or oil-jacketed. Ensure that the temperature does not exceed 190°C as this will result in hardening and loss of elasticity. The materials should then be pumped into the joint, or poured at temperatures between 170-180°C using a melter pouter or bucket with a 'V' lip, with the minimum loss of temperature. Joints should be sealed to a level of at least 3mm below the surface. In cold conditions the temperature of the **Stud Grout** should be raised accordingly and in frosty weather this

could well be up to, but not above, 190°C to counteract the chilling effect the stud will have on the poured grout.

COVERAGE

Spread Rate – refer to road stud manufacturer's guidance.

PACKAGING

Stud Grout is available in 25kg (nominal) paper sacks or as a shrink-wrapped pallet (40 x 25kg).

STORAGE

Keep in dry store under cover.

STANDARDS

Stud Grout is a proprietary product produced to a manufacturing system accredited to ISO9001.

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet glove, overalls, protective footwear, face visor).
- DO NOT allow water to contact hot material.
- DO NOT exceed maximum safe heating temperature.
- If molten material contacts skin:
 - DO NOT attempt to remove.
 - Immerse affected area in cold running water for at least 10 minutes.
 - Seek medical advice without delay.

This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information, please request the **Stud Grout** Safety Data Sheet 33 using the contact information at the back of this brochure.



FOOTWAY SURFACE TREATMENTS

Cationic Slurry Seal Emulsion	46
Leocatic Spray	48
Leochip VLS	50

CATIONIC SLURRY SEAL EMULSION (CSS)

CATIONIC SLURRY SEAL EMULSION (CSS)



Cationic Slurry Seal Emulsion (CSS) is a key constituent of slurry seal for hand or machine application. Ideal for rejuvenating cracked, spalled and worn surfaces.

CSS is based on a K3 cold emulsion with a fast application and drying time of approximately 30 minutes. This means that the material can be laid quickly, economically and safely with the minimum disruption to road users and residents.

By varying the size of aggregates used, the texture depth can be altered to suit site requirements with typical slurries based on 0/4 or 0/6mm grades for footway or urban carriageway application.

Other components are required to be mixed on site with **CSS** emulsion in order to produce a slurry seal e.g. stabiliser, cellulose fibre and cement. These materials are supplied by Colas and further details are available on request.

For higher stressed areas, Colas Ltd can offer a polymer modified version of **CSS**, please contact our National Sales Office for further information.

WHERE TO USE?

- Footways
- Carriageways
- Car parks
- Hard shoulders

PREPARATION

The surface to be treated must be free from all dust and loose material and should be cleaned thoroughly with a mechanical broom and/or suction sweeper, supplemented if necessary by hand sweeping. Open cracks must be cleared of vegetation and other loose material. All debris and loose material arising must be removed.

APPLICATION

CSS emulsion mixes can be produced in simple bell mixers or for larger quantities, in purpose built mixing equipment provided proper attention is given to mix composition.

CSS mixes are spread using a rubber bladed squeegee and soft broom. It is recommended that **CSS** is only applied when the ground temperature is 5°C and rising or less than 40°C.

COVERAGE

When using 4mm aggregate the coverage from a 200kg drum is approximately 160–200m².

PACKAGING

CSS is supplied in bulk and in 200kg drums.

STORAGE

Protect from frost. Drums should be rolled frequently to avoid separation. Bulk material should be circulated before use. For further information please refer to the Road Emulsion Association Technical Data Sheet No. 2 - Recommendations for the safe handling and storage of bitumen emulsion. For further advice please contact our National Sales Office.

STANDARDS

CSS is a UKCA Marked cationic emulsion to BS EN 13808:2013 C55B(F) or C60B(F).

CSS also complies with the withdrawn BS 434-1 Standard as a K3 Type emulsion.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Cationic Slurry Seal Emulsion** Safety Data Sheet 02S using the contact information at the back of this brochure.

LEOCATIC SPRAY



Leocatic Spray is a 60% Bitumen content, cold applied cationic emulsion. **Leocatic Spray** is particularly useful for the construction and maintenance of footways and other low stress sites. **Leocatic Spray** is an exceptionally versatile product with a variety of uses.

WHERE TO USE?

- Surface dressing
- Stabilising footpaths
- Patching
- Bond coat

PREPARATION

Varies depending on the application.

APPLICATION

SURFACE DRESSING:

Leocatic Spray is ideal for surface dressing lightly trafficked sites such as footways. Depending on site conditions it may be necessary to apply a double surface dressing wherein two binder and chipping applications are carried out in quick succession. Typical rates of application when 6mm chippings are used (as guide only).

DOUBLE DRESSING

1st application: 0.9-1.4 l/m²
2nd application: 0.9-1.4 l/m²
For design guidelines refer to Road Note 39.

STABILISING FOOTPATHS:

On sites subject to low stress it may be economical to prepare, in situ, a combined binder/surface course by means of an application of **Leocatic Spray** into the interstices of the aggregate after the latter has been spread on the foundation and compacted. **Leocatic Spray** is particularly effective where the stone layer is open or wet. For full specification please contact your local Colas office.

PATCHING:

When repairing potholes and deep depressions, the area to be treated should first be cleaned of all loose material and cut out to a regular shape with all the sides vertical or slightly undercut. The bottom and sides of the hole or depression should be thoroughly coated with emulsion. Clean aggregate should be placed in the hole to a thickness slightly greater than its depth and well rammed or rolled. The minimum amount of emulsion required to coat the stones should then be poured on (excessive amounts of emulsion may create 'fat' spots in the road). The patch should then be covered with clean 10mm or 6mm chippings and again rolled or rammed.

BOND COAT:

Where coated macadams or asphalts are employed, a bond/tack coat of **Leocatic Spray** can be used (and may be specified) between layers to provide an adhesive and dust free surface.

Typical emulsion rates of application: 0.3-0.5 l/m².

BASE TREATMENT:

A freshly cut or placed formation and/or freshly laid sub-base can be sealed with **Leocatic Spray** in order to preserve moisture equilibrium and so retain volume and strength.

Typical emulsion rates of application: 0.9-1.4 l/m².

REMEDIAL TREATMENT:

Where the shape of the surface to be healed is satisfactory but a surface is slippery or in danger of imminent break-up, surface dressing with **Leocatic Spray** may be employed as a remedial treatment to seal the surface and/or restore surface texture.

Approximate rates of application when 6mm chippings are used: 1.1-1.5 l/m².

LEOCATIC SPRAY

COVERAGE

Please see opposite page for the various applications for guidance.

PACKAGING

Leocatic Spray is available in bulk, 200kg drums and 25kg containers.

STORAGE

Protect from frost. 200kg and 25kg units should be rolled frequently to avoid separation. Bulk material should be regularly circulated. For further information please refer to the Road Emulsion Association Technical Datasheet No. 2 - Recommendations for the Safe Handling and Storage of Bitumen emulsions. For further advice please contact our National Sales Office.

STANDARDS

Leocatic Spray is a UKCA Marked cationic emulsion to BS EN 13808:2013 C55B3/C60B3.

Leocatic Spray also complies with the withdrawn BS 434-1 Standard as a K1-60 Type emulsion.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Leocatic Spray** Safety Data Sheet 23LS using the contact information at the back of this brochure.

LEOCHIP VLS



Leochip VLS is a cold applied, durable surface dressing binder. **Leochip VLS** is ideal for producing a high quality, natural and aesthetically pleasing finish to drives and footpaths.

WHERE TO USE?

- Driveways
- Footpaths
- Tow paths
- Decorative areas

PREPARATION

Surfaces must be free from weeds, standing water, dust, dirt, loose material and oil spillage. Any potholes should be patched and any cracks should be filled with Colas **Leoseal R** or a **Leoseal R** and sand mortar mixture.

APPLICATION

Leochip VLS can be poured from a watering can, spread by hand using an ordinary notched rubber bladed squeegee or sprayed through a specially adapted nozzle.

Leochip VLS should be applied at a spread rate of 1.3 to 1.8 ts/m^2 depending upon the texture and porosity of the surface and choice of chipping size. Chippings should comply with BS EN 13043 and the recommendations in Table 4 of PD 6682-2. 2.8/6.3mm chippings are recommended.

Leochip VLS should be applied in temperatures $>10^{\circ}\text{C}$ and dry conditions should prevail for at least 12 hours after application.

N.B: Not all aggregates are suitable for use with Bitumen Emulsion and advice regarding aggregate suitability can be obtained by contacting our National Sales Office.

COVERAGE

Depending on the texture and porosity of the surface to be treated **Leochip VLS** will achieve the following approximate coverage rates.

25kg = 14-19 m^2
 200kg = 110-155 m^2
 (Typical aggregate coverage is 8-11 kg/m^2)

PACKAGING

Leochip VLS is available in 200kg drums or 25kg containers.

STORAGE

Protect from frost. Drums should be rolled frequently to avoid separation. For further information please refer to the Road Emulsion Association Technical Datasheet No. 2 - Recommendation for the safe handling of Bitumen Emulsions. For further advice please contact the National Sales Office.

STANDARDS

Leochip VLS is a UKCA Marked cationic emulsion to BS EN 13808:2013 C67B.

Full UKCA Marking information is available from the Colas Products website.
www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Leochip VLS** Safety Data Sheet 23V using the contact information at the back of this brochure.



SURFACE DRESSING BINDERS

Secure Chip	52
Surfix C	53
Surfix 80S	54
SLX 80	55
Premium 80	56
Prinmuls MP90X	57

SECURE CHIP



Secure Chip is a spray applied emulsion binder for application to recently completed surface dressings.

Secure Chip is designed to reduce the amount of post sweeping required by securing the dressing aggregate in the mosaic structure minimising the risk of damaged windscreens from chippings dislodged by passing vehicles. Application of **Secure Chip** also gives a pleasing aesthetic and long lasting black colour resembling an asphalt surface.

The low application rate of **Secure Chip** results in the rapid breaking of the emulsion meaning that sites can be opened to traffic quickly minimising any disruption to local residents.

WHERE TO USE?

- On recently surface dressed road

PREPARATION

Secure Chip should be applied to recently applied surface dressings that have been swept.

APPLICATION

Secure Chip should be machine spray applied to recent surface dressing, after an initial sweeping of the site, at a temperature of 85°C.

COVERAGE

Secure Chip should be applied at spread rate of 0.2-0.4L/m².

PACKAGING

Secure Chip is supplied in bulk loads.

STORAGE

Secure Chip should be stored at 80-85°C in purpose built bulk storage tanks or spray tankers. For further information please refer to the Road Emulsion Association Code for Good Practice for the use and safety of Mobile Storage Tanks.

STANDARDS

Secure Chip complies with BS EN 13808:2013.

SAFETY

For full safety information, please request the **Secure Chip** Safety Data Sheet 156S using the contact information at the back of this brochure.

SURFIX C



Surfix C is a conventional grade cationic bitumen emulsion for surface dressing. By using selected emulsifying agents with a suitable emulsion grade penetration bitumen **Surfix C** has been specifically designed for use as a hot applied surface dressing binder.

WHERE TO USE?

Surfix C is suitable for use on carriageways, driveways, footways, canal tow paths and all sites as a conventional grade surface dressing binder as specified in the Design Guide for Road Surface Dressing, Road Note 39.

PREPARATION

Please refer to the Road Surface Treatment Association's (RSTA)/ADEPT Code of Practice for Surface Dressing.

APPLICATION

Surfix C should be applied at a temperature of 85°C through a bulk binder distributor which has been tested for compliance to BS 1707 (hot binder distributors for surface dressing).

The surface dressing works should be in accordance with the recommendations contained in Design Guide for Road Surface Dressing, Road Note 39 and the RSTA's Codes of Practice for Surface Dressing.

COVERAGE

Refer to the Design Guide for Road Surface Dressing, Road Note 39 or contact our National Sales Office using the details at the back of this brochure for further guidance.

PACKAGING

Supplied in bulk loads and 200kg drums.

STORAGE

In purpose built bulk storage tanks or spray tankers **Surfix C** should be stored at 80-85°C and circulated daily. Drums should be rolled frequently to avoid separation and must be protected from frost. For further information regarding the storage of emulsion in drums please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

Surfix C is a UKCA Marked cationic emulsion to BS EN 13808:2013 C69BF2/3.

Surfix C also complies with the withdrawn BS 434-1 Standard as a K1-70 Type emulsion.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Surfix C** Safety Data Sheet 15 using the contact information at the back of this brochure.



Surfix 80S is a BBA HAPAS approved intermediate grade polymer modified bitumen emulsion. By using selected emulsifying agents with a suitable emulsion grade penetration bitumen it has been specifically designed for use as a hot applied surface dressing binder.

WHERE TO USE?

Surfix 80S is suitable for use on carriageways, driveways, footways, canal tow paths and all sites as an intermediate grade surface dressing binder as specified in the Design Guide for Road Surface Dressing, Road Note 39.

PREPARATION

Please refer to the Road Surface Treatment Association's (RSTA)/ADEPT Code of Practice for Surface Dressing.

APPLICATION

Surfix 80S should be applied at a temperature of 85°C through a bulk binder distributor which has been tested for compliance to BS 1707 (hot binder distributors for surface dressing).

The surface dressing works should be in accordance with the recommendations contained in Design Guide for Road Surface Dressing, Road Note 39 and the RSTA's Codes of Practice for Surface Dressing.



COVERAGE

Refer to the Design Guide for Road Surface Dressing, Road Note 39 or contact our National Sales Office using the details at the back of this brochure for further guidance.

PACKAGING

Supplied in bulk loads.

STORAGE

Surfix 80S should be stored at 85°C in a purpose built bulk storage tank or spray tanker and circulated daily. For further information please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

Surfix 80S is a UKCA Marked cationic bitumen emulsion to BS EN 13808:2013 C69BP2/3.

Surfix 80S complies with the requirements of Road Note 39, Design Guide for Road Surface Dressing as an Intermediate Grade surface dressing binder.

Full UKCA Marking information is available from the Colas Products website.
www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Surfix 80S** Safety Data Sheet 15 using the contact information at the back of this brochure.



SLX 80 is a BBA HAPAS approved premium grade polymer modified cationic bitumen emulsion. By using selected emulsifying agents with a suitable emulsion grade penetration bitumen it has been specifically designed for use as a hot applied surface dressing binder.

Conventional non-modified surface dressing binders may lack the cohesive strength necessary to retain chippings under the extra shear stress imposed on road surfaces by vehicles braking or turning sharply. The addition of polymer gives improved properties and enhanced performance. To aid application **SLX 80** has a slight thixotropic nature and excellent breaking properties.

WHERE TO USE?

SLX 80 is suitable for use on higher stressed, heavier trafficked sites as a premium grade surface dressing binder as specified in Road Note 39.

PREPARATION

Please refer to the Road Surface Treatment Association's (RSTA)/ADEPT Code of Practice for Surface Dressing.

APPLICATION

SLX 80 should be applied at a temperature of 85°C through a bulk binder distributor which has been tested for compliance to BS 1707 (hot binder distributors for surface dressing).

The surface dressing works should be in accordance with the recommendations contained in Design Guide for Road Surface Dressing, Road Note 39 and the RSTA's Codes of Practice for Surface Dressing.

Due to high residual binder viscosity, optimum results are obtained with **SLX 80** during the warmer months of May to August.

COVERAGE

Refer to the Design Guide for Road Surface Dressing, Road Note 39 or contact our National Sales Office using the details at the back of this brochure for further guidance.

PACKAGING

Supplied in bulk loads.

STORAGE

SLX 80 should be stored at 85°C in a purpose built bulk storage tank or spray tanker and circulated daily. For further information please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

SLX80 is a UKCA Marked cationic bitumen emulsion to BS EN 13808:2013 C70BPF2/3

SLX80 complies with the requirements of Road Note 39, Design Guide for Road Surface Dressing as a Premium Grade surface dressing binder.

Full UKCA Marking information is available from the Colas Products website.
www.colasproducts.co.uk

SAFETY

For full safety information, please request the **SLX 80** Safety Data Sheet 15 using the contact information at the back of this brochure.



PREMIUM 80



Premium 80 is a BBA HAPAS approved premium grade polymer modified cationic bitumen emulsion. By using selected emulsifying agents with a suitable emulsion grade penetration bitumen it has been specifically designed for use as a hot applied surface dressing binder.

WHERE TO USE?

Premium 80 is suitable for use on higher stressed, heavier trafficked sites as a premium grade surface dressing binder as specified in the Design Guide for Road Surface Dressing, Road Note 39.

PREPARATION

Please refer to the Road Surface Treatment Association's (RSTA)/ADEPT Code of Practice for Surface Dressing.

APPLICATION

Premium 80 should be applied at a temperature of 85°C through a bulk binder distributor which has been tested for compliance to BS 1707 (hot binder distributors for surface dressing).

The surface dressing works should be in accordance with the recommendations contained in Design Guide for Road Surface Dressing, Road Note 39 and the RSTA's Codes of Practice for Surface Dressing.

Due to high residual binder viscosity, optimum results are obtained with **Premium 80** during the warmer months of May to August.

COVERAGE

Refer to the Design Guide for Road Surface Dressing, Road Note 39 or contact our National Sales Office using the details at the back of this brochure for further guidance.

PACKAGING

Supplied in bulk loads.

STORAGE

Premium 80 should be stored at 85°C in a purpose built bulk storage tank or spray tanker and circulated daily. For further information please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

Premium 80 is a UKCA Marked cationic bitumen emulsion to BS EN 13808:2013 C70BPF2/3.

Premium 80 complies with the requirements of Road Note 39, Design Guide for Road Surface Dressing as a Premium Grade surface dressing binder.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Premium 80** Safety Data Sheet 16 using the contact information at the back of this brochure.



PRINMULS MP90X



Prinmuls MP90X is a BBA HAPAS approved super premium grade polymer modified bitumen emulsion with a high binder content. Specifically designed for use as a heavy duty surface dressing binder on high speed and heavily trafficked roads.

WHERE TO USE?

Prinmuls MP90X is suitable for use on higher stressed, heavier trafficked sites as a super-premium grade surface dressing binder as specified in the Design Guide for Road Surface Dressing, Road Note 39.

PREPARATION

Please refer to the Road Surface Treatment Association's (RSTA)/ADEPT Code of Practice for Surface Dressing.

APPLICATION

Prinmuls MP90X should be applied at a temperature of 85°C through a bulk binder distributor which has been tested for compliance to BS 1707 (hot binder distributors for surface dressing).

The surface dressing works should be in accordance with the recommendations contained in Design Guide for Road Surface Dressing, Road Note 39 and the RSTA's Codes of Practice for Surface Dressing.

Due to high residual binder viscosity, optimum results are obtained with **Prinmuls MP90X** during the warmer months of May to August.

COVERAGE

Refer to the Design Guide for Road Surface Dressing, Road Note 39 or contact our National Sales Office using the details at the back of this brochure for further guidance.

PACKAGING

Supplied in bulk loads.

STORAGE

Prinmuls MP90X should be stored at 85°C in a purpose built bulk storage tank or spray tanker and circulated daily. For further information please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

Prinmuls MP90X is a UKCA Marked cationic bitumen emulsion to BS EN 13808:2013 C70BPF2/3/4.

Prinmuls MP90X complies with the requirements of Road Note 39, Design Guide for Road Surface Dressing as a Super Premium Grade surface dressing binder.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Prinmuls MP90X** Safety Data Sheet 16 using the contact information at the back of this brochure.





BOND COATS

Colbond 50	60
Colbond Multi	62
Leotak	63



Colbond 50 is nominally a 50% binder content polymer modified bitumen emulsion. **Colbond 50** forms a uniform film of polymer modified bitumen on the road surface which promotes a strong adhesive bond between a bituminous overlay and the existing surface. The application of **Colbond 50** also improves the waterproofing of the road pavement.

Colbond 50, when fully broken, prevents 'pick-up' on the wheels, tracks or tyres of the paver/delivery vehicles and prevents debonding of the overlay during subsequent service life when subjected to traffic stresses.

WHERE TO USE?

- Carriageways
- Footways
- Car parks

PREPARATION

Surface to be sprayed must be free from detritus, standing water, loose material and oil spillage.

APPLICATION

Prior to the application **Colbond 50** should be circulated thoroughly. **Colbond 50** should be applied at 0.4l/m² to achieve the recommended 0.2kg/m² for newly laid and existing asphalt substrates or 0.7l/m² for milled surfaces as stated in BS 594987: Table 5.

Vehicular traffic should be kept off the treated area until the emulsion has fully broken and the colour changes from brown to black, then the overlay should be applied.

It is recommended that **Colbond 50** is only applied when the ground temperature is 5°C and rising or <40°C. Humidity should preferably not exceed 70% however **Colbond 50** can be applied in higher humidity but this will prolong the break time. Because the base binder used in **Colbond 50** is polymer modified, it behaves differently from conventional bitumen emulsions and it may therefore be necessary to warm the **Colbond 50** to ease application.

When applying through small motorised or petrol driven units ensure the sprayer system is flushed regularly, this is of particular importance when impeller driven pumps are used.

COVERAGE

It is recommended that the **Colbond 50** is applied at coverage rates specified in BS 594987 Clause 5.5 application of bond coats. For further information or guidance please contact our National Sales Office using the details at the back of this brochure.

PACKAGING

Colbond 50 is available in bulk or 200kg drums.

STORAGE

Protect from frost. Bulk storage tanks should be circulated before use and maintained between 65-85°C. Drums should be rolled frequently to avoid separation. For further information please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

Colbond 50 is a UKCA Marked cationic emulsion to BS EN 13808:2013 C50BP4/5 which also complies with BS 594987 Clause 5.5 Application of bond coats.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Colbond 50** Safety Data Sheet 11 using the contact information at the back of this brochure.



Colbond Multi is a polymer modified cationic bitumen emulsion designed to be applied both as a bond coat and vertical joint paint. **Colbond Multi** forms a uniform film of polymer modified bitumen on both horizontal and vertical faces forming a strong adhesive bond between bituminous overlay and the existing surface.

In addition the application of **Colbond Multi** also improves the waterproofing of the road pavement. **Colbond Multi**, when fully broken, prevents 'pick-up' on the wheels, tracks or tyres of the paver/delivery vehicles and prevents disbanding/debonding of the overlay during subsequent service life when subjected to traffic stresses.

Applied to vertical edges **Colbond Multi** replaces conventional hot pour bitumen.

WHERE TO USE?

- Carriageways
- Footways
- Car parks

PREPARATION

Surface to be treated must be free from detritus, standing water, loose materials and oil spillage.

APPLICATION

Prior to application **Colbond Multi** should be circulated thoroughly. **Colbond Multi** should be applied at 0.3l/m² to achieve the recommended 0.2kg/m² for newly laid and existing asphalt substrates or 0.52/m² to achieve 0.35kg/m² for milled surfaces as stated in BS 594987: 6.9 Joints.

Vehicular traffic should be kept off the treated area until the emulsion has fully broken, colour changes from brown to black, then the overlay should be applied.

It is recommended that **Colbond Multi** is applied when the ground temperature is 5°C and rising or <40°C. Humidity should preferably not exceed 70% however **Colbond Multi** can be applied in higher humidity but this will prolong the break time. **Colbond Multi** should be applied at 85°C using a mechanical spray tanker calibrated to BS 1707 (Hot binder distributors for road surface dressing).

COVERAGE

It is recommended that the **Colbond Multi** is applied at coverage rates specified in BS 594987 Clause 5.5 Application of bond coats and 6.9 Joints. For further information or guidance please contact our National Sales Office using the details at the back of this brochure.

PACKAGING

Colbond Multi is available in bulk loads.

STORAGE

Protect from frost. Bulk material should be circulated before use. For further information please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

Colbond Multi is a UKCA Marked cationic emulsion to BS EN 13808:2013 C67BP4 or C69BP4.

Full UKCA Marking information is available from the Colas Products website.
www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Colbond Multi** Safety Data Sheet 11 using the contact information at the back of this brochure.



Leotak is a cold applied rapid-acting 40% cationic bitumen emulsion. When cured **Leotak** forms a thin uniform film of bitumen on the road surface which gives an adhesive bond between a bituminous overlay and an existing surface. For best results, tack coating is strongly recommended when performing such tasks as overlaying with hot rolled asphalt, macadam or when patching or carrying out inlaid work.

Leotak adheres exceptionally well, even in damp conditions. The overlay is held securely in place and the entry of water between road pavement courses is hindered.

WHERE TO USE?

- Carriageways
- Footways
- Car parks

PREPARATION

Surface to be treated must be free from detritus, standing water, loose materials and oil spillage.

APPLICATION

Leotak should be sprayed or hand applied between 0.3-0.6 l/m² (depending on the texture, porosity etc. of the surface) to give the thinnest film consistent with complete coverage.

Vehicular traffic should be kept off the treated area until the emulsion has fully broken, colour changes from brown to black. When emulsion has fully broken then apply the overlay.

COVERAGE

1 x 25kg container should cover approximately 40m²

1 x 200kg drum should cover approximately 320m²

PACKAGING

Leotak is available in bulk, 200kg drums, 25kg and 12.5kg containers.

STORAGE

Protect from frost. Bulk material should be circulated before use. Drums should be rolled frequently to avoid separation. For further information please refer to the Road Emulsion Associations code of Good Practice for the use and safety of Mobile Storage Tanks. For further advice please contact our National Sales Office.

STANDARDS

Leotak is a UKCA Marked cationic emulsion to BS EN 13808:2013 C40B3/4.

Leotak also complies with the withdrawn BS 434-1 Standard as a K1-40 Type emulsion.

Full UKCA Marking information is available from the Colas Products website.

www.colasproducts.co.uk

SAFETY

For full safety information, please request the **Leotak** Safety Data Sheet 23 using the contact information at the back of this brochure.



MORTARS

Colas C45	66
Colas C60	68
Colas Cubeset	70
Colas HSC10	72

Colas C45 is a pre-mixed cement based non-shrink bedding mortar suitable for the support of road ironwork and highway furniture.

When placed the mixed mortar will harden in approximately 10 minutes. The compressive strength gain will reach 20N/mm² within 45 minutes allowing early opening of roads to vehicular traffic. The self-contained product only needs to be mixed with water on site and the rapid setting assists the re-bedding of manhole frames and the setting of new frame systems.

The product is chloride free and can be safely used with cast iron and steel units.

WHERE TO USE?

- Re-bedding of raised manhole frames
- Bedding of frames in new roads
- Support of road furniture

PREPARATION

Laitance and all loose material including dust, oil and grease should be removed in order to produce a sound substrate. The work area should be pre-wetted taking care to remove any standing water before placing the **Colas C45** mortar.

Excess water should not be added once setting of the mortar has commenced and further mixing should not be used to re-work the mix.

The mortar should be placed within approximately 10 minutes of mixing. The working time may be extended in cold conditions and may be slightly shortened in hot conditions.

APPLICATION

To achieve the most consistent mortar mix, mechanical mixing is recommended. Thorough hand mixing is suitable but care should be taken to ensure that the mix is fully wetted out without the use of excess water. Mechanical mixing may be carried out in a suitable vessel using a slow speed high torque drill and Mortar Stirrer. Hand mixing may be carried out using a clean spot board or wheelbarrow. Each 25kg bag of **Colas C45** requires to be mixed with 3.3 litres of water to give a mortar consistency.

Set suitable levelling shims onto the working

surface ready to receive the frame or unit.

Place the mixed mortar onto the prepared surface and lower the frame or unit onto the mortar and knock down onto the pre-set shims to line and level. The bed thickness laid in a single application should be between 15-75mm. Thicker support beds can be achieved by applying further material as soon as the lower bed has hardened sufficiently not to damage the original bed.

The placed mortar will have hardened sufficiently to carry out further work, such as haunching, within 20 minutes depending on the ambient conditions. Alternatively thicker beds may be formed by adding clean dry pea shingle up to a maximum of 30% of the weight of the **Colas C45**. No additional water is required for mixing.

Curing: No special curing is required at temperatures between 5°C and 35°C. For placing at temperatures outside this range, contact our National Sales Office.

COVERAGE

Each 25kg bag of **Colas C45** will enable a manhole frame 600mm x 600mm to be raised approximately 25mm.

The volume yield of each 25kg bag of **Colas C45** is approximately 12.75 litres.

PACKAGING

Colas C45 is supplied in 25kg sack bags (50 x 25kg bags per pallet) and 25kg buckets (40 x 25kg per pallet).

STORAGE

Colas C45 will have a shelf life of 6 months when kept in dry conditions at a temperature of 5°C to 35°C.

STANDARDS

Colas C45 has been tested in accordance with appropriate parts of EN 12390. The product conforms to DTp: HD 27/15. Design Manual for Roads and Bridges V7 Sec2.3.11. Mortars for bedding ironwork such as manhole cover frames during repairs may be trafficked when the strength has reached 20N/mm². For rapid construction, this strength should be achieved within 2 hours. **Colas C45** will achieve the required strength of 20N/mm² within 45 minutes at a temperature of 20°C.

PERFORMANCE

Compressive Strength (Water addition: 2.75 litres per 25kg of **Colas C45**).

Typical Mortar Properties @ 20°C		
Compressive strength	45 mins	20MPa
	60 mins	25MPa
	1 day	35MPa
	7 days	45MPa
	28 days	55MPa
Density	2,200 kg/m ³	
Approx. working life @ 20°C	10 mins	

Variations in water content and ambient temperature for particular applications may alter mortar consistency and compressive strength achieved.

SAFETY

For full safety information, please request the **Colas 45** Safety Data Sheet 119 using the contact information at the back of this brochure.

Colas C60 is a pre-mixed cement based non-shrink bedding mortar suitable for the support of road ironwork and highway furniture.

The mixed mortar, when laid, will harden in approximately 10 minutes. The compressive strength gain will reach 20N/mm² within 1 hour allowing early opening of roads to vehicular traffic. The self-contained product only needs to be mixed with water on site and the rapid setting assists the re-bedding of manhole frames and the setting of new frame systems.

The product is chloride free and can be safely used with cast iron and steel units.

WHERE TO USE?

- Re-bedding of raised manhole frames
- Bedding of frames in new roads
- Support of road furniture

PREPARATION

Laitance and all loose material including dust, oil and grease should be removed in order to produce a sound substrate. The work area should be rewetted taking care to remove any standing water before placing the **Colas C60** mortar.

Excess water should not be added once setting of the mortar has commenced, further mixing should not be used to re-work the mix. The mortar should be placed within approximately 10 minutes of mixing. The working time may be extended in cold ambient conditions and may be slightly shortened in hot ambient conditions.

APPLICATION

To achieve the most consistent mortar mix, mechanical mixing is recommended. Thorough hand mixing is suitable but care should be taken to ensure that the mix is fully wetted out without the use of excess water. Mechanical mixing may be carried out in a suitable vessel using a slow speed high torque drill and Mortar Stirrer. Hand mixing may be carried out using a clean spot board or wheelbarrow. Each 25kg bag of **Colas C60** requires to be mixed with 3.3 litres of water to give a mortar consistency.

Set suitable levelling shims onto the working surface ready to receive the frame or unit. Place the mixed mortar onto the prepared surface and lower the frame or unit onto the mortar and knock down onto the pre-set shims to line and level. The bed thickness applied in a single application should be between 15-75mm. Thicker support beds can be achieved by applying further material as soon as the lower bed has hardened sufficiently not to damage the original bed.

The placed mortar will have hardened sufficiently to carry out further work, such as haunching, within 20 minutes depending on the surrounding ambient conditions. Alternatively thicker beds may be formed by adding clean dry pea shingle up to a maximum of 30% of the weight of the **Colas C60**. No additional water is required for mixing. After placement no special curing is required in moderate ambient conditions.

The placed mortar will have hardened sufficiently to carry out further work, such as haunching, within 20 minutes depending on the surrounding ambient conditions.

Curing: No special curing is required at temperatures between 5°C and 35°C. For placing at temperatures outside this range, contact our National Sales Office.

COVERAGE

Each 25kg bag of **Colas C60** will enable a manhole frame 600mm x 600mm to be raised approximately 25mm.

The volume yield of each 25kg bag of **Colas C60** is approximately 12.75 litres.

PACKAGING

Colas C60 is supplied in 25kg sack bags (50 x 25kg bags per pallet) and 25kg buckets (40 x 25kg per pallet).

STORAGE

Colas C60 will have a shelf life of 6 months when kept in dry conditions at a temperature of 5°C to 35°C.

STANDARDS

Colas C60 has been tested in accordance with appropriate parts of EN 12390. The product conforms to DTp: HD 27/15, Design Manual for Roads and Bridges V7 Sec 2.3.11 Mortars for bedding ironwork such as manhole cover frames during repairs may be trafficked when the strength has reached 20N/mm². For rapid construction, this strength should be achieved within 2 hours. **Colas C60** will achieve the required strength of 20N/mm² within 1 hour at a temperature of 20°C.

PERFORMANCE

Typical Mortar Properties @ 20°C		
Compressive strength	60 mins	20MPa
	1 day	35MPa
	7 days	45MPa
	28 days	55MPa
Density	2,200 kg/m ³	
Approx. working life @ 20°C	10 mins	

Variations in water content and ambient temperature for particular applications may alter mortar consistency and compressive strength achieved.

SAFETY

For full safety information, please request the **Colas C60** Safety Data Sheet 120 using the contact information at the back of this brochure.

Colas Cubeset is a single pre-mixed cement based non-shrink concrete designed with selected graded silica aggregates and additives. The mixed product may be placed in sections of 20mm up to 650mm in a single pour.

Colas Cubeset is suitable for all concrete works where early strength development is required in order to allow early use of the placed sections. The product may be used for localised repairs plus large area placement or re-instatement of concrete pavements.

The mixed concrete, when placed, will harden in approximately 20 minutes. The compressive strength gain will reach 22N/mm² within 2 hours allowing early opening of sections to foot and vehicular traffic. The self-contained product only needs to be mixed with water on site.

The product is chloride free and can be safely used in contact with steel reinforcement. After placement no special curing is required in moderate ambient conditions. In rapid drying conditions, expected rain or frost protection should be applied.

WHERE TO USE?

- Concrete restoration – recasting with concrete or mortar
- Structural strengthening – adding mortar or concrete
- Increasing physical resistance – adding mortar or concrete
- Resistance to chemicals – adding mortar or concrete
- Preserving or restoring passivity – increasing cover with additional mortar or concrete
- Preserving or restoring passivity – replacing contaminated or carbonated concrete

Other uses include:

- Concrete repairs to accept foot and vehicular traffic
- Forming of new pavement areas
- Re-instatement of deteriorated pavement areas
- Rapid repairs to roadways & runways
- Structural support situations

PREPARATION

Laitance and all loose material including dust, oil and grease should be removed in order to produce a sound substrate. The work area should be pre-wetted taking care to remove any standing water before placing the **Colas Cubeset**.

Excess water should not be added. Once setting of the concrete has commenced, further mixing should not be used to re-work the mix. The concrete should be placed within approximately 15 minutes of mixing. The working time may be extended in cold ambient conditions and may be slightly shortened in hot ambient conditions. For cold weather working warm mixing water at up to 30°C may be used.

APPLICATION

To achieve the most consistent concrete mix, mechanical mixing using a forced action mixer such as the Creteangle is recommended. Small mixes may be made using a heavy duty slow speed high torque drill and Mortar Stirrer. Each 25kg bag of **Colas Cubeset** requires 2.25 litres of water to give a medium workability concrete consistency. Part bag mixing should not be undertaken.

Mixed **Colas Cubeset** should be placed onto the dampened prepared surface as soon as mixing is complete. Once placed fully compact the concrete to obtain maximum strength development. The bed thickness applied in a single application should be between 20-650mm. The placed concrete will have hardened sufficiently to carry out further work within 20 minutes depending on the surrounding ambient conditions.

Curing: No special curing is required at temperatures between 5°C and 35°C. For placing at temperatures outside this range, contact our National Sales Office.

At early stages do not allow placed concrete to rapidly dry and protect from rain and frost.

COVERAGE

The volume yield of each 25kg bag of **Colas Cubeset** is approximately 11.5 litres.

PACKAGING

Colas Cubeset is supplied in 25kg sack bags (50 x 25kg per pallet).

STORAGE

Colas Cubeset will have a shelf life of 6 months when kept in dry conditions at a temperature of 5°C to 35°C. Storage at higher temperatures or high humidity may reduce the shelf life.

STANDARDS

Colas Cubeset has been tested in accordance with appropriate parts of EN 12390, EN 13412. **Colas Cubeset** meets the requirements of the Highways England Specification for Highway Works Series 1700 for Structural Concrete.

PERFORMANCE

Typical Mortar Properties @ 20°C		
Compressive strength	120 mins	20MPa
	1 day	35MPa
	7 days	45MPa
	28 days	65MPa
Density	2,200 - 2,300 kg/m ³	
Approx. working life @ 20°C	15 mins	
Elastic modulus in compression	41.2GPa @ 28 days	
Bond strength via pull off test	2.4MPa @ 28 days	
Cl Content	<0.003%	

Variations in water content and ambient temperature for particular applications may alter mortar consistency and compressive strength achieved.

SAFETY

For full safety information, please request the **Colas Cubeset** Safety Data Sheet 122 using the contact information at the back of this brochure.

Colas HSC10 is a pre-packaged cement based concrete containing graded aggregates and non-shrink additives. **Colas HSC10** is supplied to site ready to use only requiring the addition of mixing water to produce a medium workability high strength durable concrete.

The mixed concrete, when placed, will harden in approximately 10 minutes and reach initial set in approximately 15 minutes. **Colas HSC10** can be placed in a single pass from 30mm to 400mm. Thicker sections can be achieved by placing additional layers once the preceding layer has reached initial set. The compressive strength gain will reach 18N/mm² within 1 hour allowing early opening of roads to vehicular traffic.

The rapid setting assists the re-bedding of manhole frames and the setting of new frame systems. The product is chloride free and can be safely used with cast iron and steel units. After placement, no special curing is required in moderate ambient conditions.

WHERE TO USE?

- Infilling around re-bedded raised manhole
- Infilling around manhole frames in new roads
- Support of road furniture

PREPARATION

Laitance and all loose material including dust, oil and grease should be removed in order to produce a sound substrate. The work area should be pre-wetted taking care to remove any standing water before placing the **Colas HSC10** concrete.

APPLICATION

To achieve the most consistent concrete mix, mechanical mixing is recommended. Thorough hand mixing is suitable but care should be taken to ensure that the mix is fully wetted out without the use of excess water. Mechanical mixing may be carried out in a suitable vessel using a slow speed high torque drill and paddle. Hand mixing may be carried out using a clean spot board or wheelbarrow.

Each 25kg tub or bag of **Colas HSC10** requires 1.0 to 1.75 litres of water to give a stiff concrete. Excess water should not be added. Combine the aggregate and cement portions and gradually add water until a stiff concrete consistency is achieved. Once setting of the concrete has commenced, further mixing should not be used to re-work the mix. The concrete should be placed within approximately 5 minutes of mixing. The working time may be extended in cold ambient conditions and may be slightly shortened in hot ambient conditions.

Required mixing water is 1.0 to 1.75 litres. Aggregates as supplied contain moisture. Do not add excessive water. Variations in water content for particular applications may alter concrete consistency and compressive strength achieved. Place mixed concrete onto dampened prepared substrate as soon as possible after mixing. Compact concrete into place using a suitable tamp or float. Tools and mixers should be cleaned with water before the **Colas HSC10** has hardened.

Curing: No special curing is required at temperatures between 5°C and 35°C. For placing at temperatures outside this range, contact our National Sales Office.

COVERAGE

The volume yield of each 25kg bag of **Colas HSC10** is approximately 12 litres.

PACKAGING

Colas HSC10 is supplied in 25kg bags (50 x 25kg bags per pallet) and 25kg buckets (40 x 25kg per pallet).

STORAGE

Colas HSC10 will have a shelf life of 6 months when kept in unopened packaging at a temperature of 5°C to 35°C. Storage at higher temperatures may reduce the shelf life.

STANDARDS

Colas HSC10 is manufactured in accordance to BS EN ISO 9001:2015.

PERFORMANCE

Typical Mortar Properties @ 20°C		
Compressive strength	60 mins	18MPa
	1 day	40MPa
	28 days	60MPa
Particle size	0 - 10.0 mm	
Density	2,300 - 2,400 kg/m ³	
Approx. working life @ 20°C	10 mins	

Concrete for installing ironwork such as manhole cover frames during repairs may be trafficked when the strength is expected to be 20N/mm². For rapid construction, this strength should be achieved within 2 hours. **Colas HSC10** will achieve the required strength of 20N/mm² within 1 1/2 hours at a temperature of 20°C.

SAFETY

For full safety information, please request the **Colas HSC10** Safety Data Sheets 154 & 155 using the contact information at the back of this brochure.



ANCILLIARY PRODUCTS

Leoseal R	76
CP Primer	77
Leoclean Industrial	78
Leoclean Standard	79
Oxidised Bitumen	80
Pre-Coated Chippings	81

LEOSEAL R



Leoseal R is an economical flexible waterproofer and crack sealant designed for easy hand application. **Leoseal R** is a specially formulated combination of bitumen emulsion modified with an elastomer which together form a tough and long-lasting barrier against the entry of water. **Leoseal R** has excellent adhesive properties and can be applied to green concrete or damp surfaces.

WHERE TO USE?

- Waterproofing below ground concrete structures
- Crack sealant for roads and footways

PREPARATION

Work should not be carried out in wet or frosty weather. Surfaces must be dry or damp (no standing or running water), as well as clean and free from dust, oil and fuel spillage.

APPLICATION

Stir contents of the bucket prior to use.

WATERPROOFING

Apply **Leoseal R** in two coats using a turks head brush. The first coat should be at a rate of 0.55l/m² with the second applied at right angles at a rate of 0.45l/m². If the surface is hot, very dry or absorbent it may be helpful to first prime the surface with a thin coat of **Leoseal R** diluted in a ratio of 1 part water to 8 parts **Leoseal R**.

When finished, wash brushes with **Leoclean** immediately followed by soapy water.

When backfilling is necessary the **Leoseal R** treatment should not be left longer than 3-4 weeks before this is undertaken.

CRACK SEALING

Cracks up to 3mm.

Pour **Leoseal R** into the crack using a spouted can. Any surplus on the surface should be brushed or squeegeed out to a thin film and dusted over after drying with cement or very fine sand to remove the tack.

Cracks >3mm and up to 25mm

Prime the sides of the crack with a brush coat of **Leoseal R**.

Mix **Leoseal R** with damp sand in the ratio of 1:1 by volume to produce a mortar.

Fill crack with the mortar mix.

Compact the material into the crack and smooth off the surface with a trowel.

N.B: **Leoseal R** sets by the evaporation of water from the product. Application should only be carried out in good drying conditions. A rain resistant set will be delayed if the weather is cold, damp or humid.

COVERAGE

Waterproofing: 1l/m²

Crack Sealing: this cannot be quantified as it depends on the depth of the crack.

PACKAGING

Leoseal R is supplied in 200kg drums or 15kg re-sealable plastic buckets.

STORAGE

Protect from frost. For further advice, please refer to the Road Emulsion Association Technical Data Sheet No.2 - Recommendations for the Safe Handling and Storage of Bitumen Emulsion. For further advice please contact our National Sales Office.

STANDARDS

Leoseal R is a proprietary product manufactured to ISO9001 quality system which covers all Colas manufactured products

SAFETY

For full safety information, please request the **Leoseal R** Safety Data Sheet 10 using the contact information at the back of this brochure.

CP PRIMER



A primer for use with **Jointfill A2**, **Jointfill N1** and **Jointfill N2** sealants. Contains - n-Butyl acetate.

WHERE TO USE?

As a primer prior to the application of **Joint A2**, **Jointfill N1** and **Jointfill N2** sealants.

PREPARATION

Surfaces must be clean and free from dust, oil and fuel spillage.

APPLICATION

CP Primer can be applied by either brush or roller to damp but not wet surfaces. It should be applied at ambient temperatures of between 3°C and 40°C. Allow primer to dry fully before applying sealant.

COVERAGE

CP Primer should be applied as thinly and evenly as possible to achieve a coverage rate of 200g/m² to 400g/m².

PACKAGING

CP Primer is available in 5L metal containers.

STORAGE

CP Primer has a 12 month storage life in original unopened containers. Protect from frost and direct sunlight.

STANDARDS

CP Primer is produced to a manufacturing system accredited to ISO9001 and ISO14001.

SAFETY

For full safety information, please download the **CP Primer** Safety Data Sheet 05 from our website www.colas.co.uk

LEOCLEAN INDUSTRIAL



Leoclean Industrial is a heavy duty cleaner designed to remove bitumen and asphalt grease from all types of equipment used by Highways Contractors. It has been formulated so that when applied it will leave a slip coating that will help prevent material from adhering to the surface of the equipment used.

Leoclean Industrial is a cleaner and degreaser, formulated from derivatives of vegetable oils with a flash point in excess of 90°C.

Leoclean Industrial can replace red diesel as well as chlorinated and paraffin based solvents in most applications.

WHERE TO USE?

Leoclean Industrial is suitable for most surfaces. It is completely safe on all metals, most composite plastics, ceramics, most acrylics, concretes, brick, stone, glass, wood and painted surfaces. It will also not affect any cured resins or vulcanized rubber. Care must be taken on porous surfaces such as concrete some staining or contamination may occur.

APPLICATION

Leoclean Industrial should be applied sparingly onto the affected area and allowed to soak into the contaminant. The softened or dissolved residue should then be removed with absorbent material. Repeat the process if necessary. Remove softened residue off porous surfaces as soon as possible to reduce the risk of any absorption and wash with soapy water. **Leoclean Industrial** has a slower evaporation rate than chlorinated solvent. Where production processes require speed, drying can be enhanced by heat and/or hot air (but not naked flames) and/or vacuum.

COVERAGE

The concentrated nature of **Leoclean Industrial** means that it should be used sparingly.

PACKAGING

Leoclean Industrial is available in 5 and 25 litre plastic containers as well as 200 litre drums.

STORAGE

Store in original container wherever possible. Protect from direct sunlight. Do not spray on naked flame or any incandescent material. Keep out of reach of children.

STANDARDS

Leoclean Industrial is manufactured on a purpose-built plant to an ISO9001 quality system which covers all Colas manufactured products.

SAFETY

For full safety information, please request the **Leoclean Standard/Industrial** Safety Data Sheet 75 using the contact information at the back of this brochure.

LEOCLEAN STANDARD



APPLICATION

Apply **Leoclean Standard** sparingly onto affected area, and allow it to soak into the contaminant. The softened or dissolved residue should then be removed with absorbent material. Repeat the process if necessary. Remove softened residue off porous surfaces as soon as possible to reduce absorption and wash with soapy water. Where production processes require speed, drying can be enhanced by heat and/or hot air (but not naked flames) and/or vacuum. **Leoclean Standard** should be washed from the skin using soap and water.

COVERAGE

The concentrated nature of **Leoclean Standard** means that it should be used sparingly.

PACKAGING

Leoclean Standard is available in 500ml trigger bottles, 5 litre and 25 litre plastic containers and, on request, 200kg drums.

STORAGE

Store in original container wherever possible. Protect from direct sunlight. Do not spray on naked flame or any incandescent material. Keep out of reach of children.

STANDARDS

Leoclean Standard is manufactured on a purpose-built plant to an ISO9001 quality system which covers all Colas manufactured products.

SAFETY

For full safety information, please request the **Leoclean Standard/Industrial** Safety Data Sheet 75 using the contact information at the back of this brochure.

Leoclean Standard is ideal as a heavy duty cleaner for removing mineral oil based marks such as bitumen, asphalt, grease and carbon. It will remove waxes, adhesives, uncured paint and varnish, and also oil based inks.

Leoclean Standard is a cleaner and degreaser, formulated from derivatives of vegetable oils with a flash point in excess of 90°C.

Leoclean Standard can replace red diesel as well as chlorinated and paraffin based solvents in most applications, thus offering a safer alternative for effective cleaning and degreasing.

WHERE TO USE?

Leoclean Standard will help clean up creosote, chewing gum, sealants and other mastics. It is ideal for cleaning oil spills off hard surfaces, cleaning combustion engines, parts washing, tank cleaning and adhesive residue removal.

Leoclean Standard is suitable for most surfaces. It is completely safe on all metals, ceramics, concrete, brick, stone, glass, wood and painted surfaces. It will not affect any cured resins and is safe on most fabrics. However, care should be taken when using on silk, leather and some plastics, acrylics and rubbers. Vulcanised rubber is unaffected. On porous surfaces such as concrete some staining or contamination may occur.

OXIDISED BITUMEN



Oxidised Bitumen is a hot applied bitumen complying with BS EN 13304.

WHERE TO USE?

Oxidised Bitumen is approved for use as components for the manufacture of roofing, flooring, water-proofing, adhesive, sealing and anti-corrosion products.

PREPARATION

Ensure area to be treated is clean and free from dust, fuel and oil spillage.

APPLICATION

For best results use a heating kettle with an indirect heating system such as hot oil. Ensure that the heating temperature doesn't exceed 200°C and that the oil does not exceed 230°C. When hot, pour either from a melter pourer or galvanised bucket with a 'V' lip.

COVERAGE

Varies depending on the application.

PACKAGING

Oxidised Bitumen is available in 25kg silicone coated paper cylinders.

STORAGE

Oxidised Bitumen should be kept under cover and away from direct sunlight.

STANDARDS

Oxidised Bitumen comply with BS EN 13304 (Bitumen and Bituminous Binders Framework for Specification of **Oxidised Bitumen's**).

SAFETY

SAFETY HANDLING PRECAUTIONS (when hot)

- Wear suitable protective clothing (heat resistant gauntlet gloves, overalls, protective footwear, face visor)
- DO NOT allow water to contact hot material
- DO NOT exceed maximum safe heating temperature
- If molten material contacts skin:
 - DO NOT attempt to remove
 - Immerse affected area in cold running water for at least 10 minutes
 - Seek medical advice without delay

This product is hazardous for transportation when carried at temperatures above 100°C.

For full safety information, please request the **Oxidised Bitumen** Safety Data Sheet 12A using the contact information at the back of this brochure.

Further guidance can be found on the Eurobitume Safe Handling of Bitumen Card available on the Eurobitume Website.

PRE-COATED CHIPPINGS



Pre-Coated Chippings are rolled into hot rolled asphalt to form part of the surface. They are resistant to polishing and can be used as part of the laying process to achieve the desired skid resistance which is 65psv in all types of roads from motorways to housing estates. **Pre-Coated Chippings** let you reinstate even the smallest of hot rolled asphalt patches without having to buy the chippings by the tonne.

WHERE TO USE?

- Utility reinstatements
- Hot roll asphalt road patching works
- New hot rolled asphalt surfaces

PREPARATION

To be used in hot tolled asphalt application.

APPLICATION

To be applied by hand or an asphalt hopper.

COVERAGE

The mass of coated chippings required to achieve a given rate of spread is determined by the contractor.

PACKAGING

Pre-Coated Chippings are available in tonne bags or 25kg bags.

STORAGE

To be stored out of direct sunlight or extreme heat. Do not freeze.

STANDARDS

Pre-Coated Chipping complies with BS EN 13108-4:2016 specifies requirements for mixtures of the mix group Hot Rolled Asphalt for use on roads, airfields and other trafficked areas.



**A RANGE OF TOOLS ARE
ALSO AVAILABLE THROUGH
OUR NETWORK OF DEPOTS**

Please contact your local depot for more information.

CONTACT INFORMATION

National Sales Office

Loushers Lane
Warrington
Cheshire
WA4 6RZ
T: 01925 632 616

East Kilbride Depot

7 Glenfield Road
East Kilbride
G75 0RA
T: 01355 241 242

Exeter Depot

Tan Lane
Exeter
EX2 8EG
T: 01392 978 003

York Depot

Unit 1, Birch Court
Osballdwick Link Road
Osballdwick
York
YO19 5JA
T: 01904 431 787

West Bromwich Depot

Unit 20
Kelvin Way Trading
Estate
Kelvin Way
West Bromwich
B70 7TW
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