

High Friction Anti-Skid

Paving the Way to
a Sustainable
Future

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OUR**



PRODUCT INFORMATION

COLDGRIP

Coldgrip, Coldgrip BBA, Coldgrip Export

High Performance Road Surfacing Systems



Description

Coldgrip is a generic name for a range of cold-applied thermoset resin road surfacing systems which provide high friction (skid-resistance) and/or colour demarcation.

High friction properties are achieved and maintained throughout the service life of Coldgrip by scattering calcined bauxite aggregates onto the resin whilst still wet. By providing high friction contact with vehicle tyres, braking is achieved more effectively and with less risk of skidding and loss of control.

High friction and colour demarcation is achieved by using pigmented Coldgrip together with Colourgrip colour coated aggregates.

Coldgrip BBA is BBA/HAPAS (British Board of Agrément/Highway Authorities Product Approval Scheme) approved as a Type 1 system, the highest classification available. This is subject to the scheme guidelines and the specific requirements within the BBA certificate.

Uses

Where high friction is required, Coldgrip can be used on areas such as road carriageways, intersections, junctions, pedestrian crossings, roundabouts, traffic lights, sharp or adverse cambers on bends, car park ramps and any other potentially hazardous road surfaces.

For colour demarcation, Coldgrip can be supplied as a pigmented resin and used in conjunction with Colourgrip colour coated aggregates. Areas of use include cycle lanes, footbridges, subways, pavements, car parks, airports, railway platforms, bus stations, ports, dockyards, ships decks and leisure areas.

Benefits

Coldgrip is based on a high performance polyurethane resin and, consequently, has many advantages over alternative nonslip/anti-skid systems. These include by comparison:

To epoxy systems:

- Quicker curing, especially at lower temperatures
- Less affected by extremes of temperature
- Greater flexibility
- Enhanced adhesion to asphalt
- Less affected by age embrittlement
- Less prone to debonding

To hot applied (or thermoplastic) systems:

- More aesthetically pleasing appearance
- Smaller build-up differential
- Low application temperature
- Can be used where site accessibility is restricted
- Suitable for use in "fire hazard zones"
- Longer service life



Please see the full Coldgrip Method Statement, Application Guide and Video prior to applying to any unusual surfaces, such as timber or metals.

Coldgrip provides a good bond to most common road surfaces, including asphalt, macadam and concrete.

Technical			
	Coldgrip	Coldgrip BBA	Coldgrip Export
Specific Gravity SG (mixed Resin)	1.49kg/l	0.98kg/l	0.98kg/l
Pot Life @ 20°C (approximate)	30 mins	20 mins	20 mins
Initial Set @ 20°C	1 hour	1 hour	1 hour
Open to traffic @20°C	2 hours	2 hours	2 hours
Tensile Strength @ 23°C min.	10.5 N/mm ²	10 N/mm ²	10N/mm ²
Elongation at Break @ 23°C min.	60%	80%	80%
Tensile Adhesion @20°C(typical)	2.5 N/mm ²	2.5 N/mm ²	2.5 N/mm ²
Skid Resistance Value (SRV) *	>80*	>80*	>80*
*Using traffic grade calcined bauxite aggregate.			

For all systems, fully blind the wet resin with aggregate at 8-10kg per m². Following curing, sweep to retain 5-6kg per m²:

For the highest achievable friction, calcined bauxite aggregate is used. For less critical areas other aggregates may be considered.

PRODUCT INFORMATION - COLDGRIP

Laboratory determined Polished Stone Values (PSVs) are shown in the table below:

Polished Stone Values (PSV) - Lab determined	
Typical Values - UK sourced	PSV
Red Granite/Basalt	55-58
Green Granite/Basalt	63
Dark Green Granite/Basalt	61
Black Basalt	55-60
Silver Grey Granite	48-55

Theoretical Spread Rates

The formula for calculating the spread rate can be simplified as follows: $(TD + FT) \times SG = \text{Weight of material required per m}^2$ where: TD = substrate texture depth in mm, FT = required film thickness in mm and SG = specific gravity of the mixed resin system.

At a required film thickness of 1.2mm, the table below estimates the approximate quantities needed.

Spread Rates	Coldgrip	Coldgrip BBA	Coldgrip Export
Specific Gravity (mixed resin)	1.49	0.98	0.98
Texture Depth in mm			
Quantity of Coldgrip Required in Kg/m ²			
0.0	1.788	1.176	1.176
0.5	2.533	1.666	1.666
1.0	3.278	2.156	2.156
1.5	4.023	2.646	2.646
2.0	4.768	3.136	3.136
2.5	5.513	3.626	3.626
3.0	6.258	4.116	4.116

Colours

Coldgrip resin can be coloured with the addition of a pigment pack. The following colours are available:

Neutral
Red
Green
Blue
Yellow
Fawn
Grey
Black

High performance anti-skid surfacing is installed using either natural calcined Bauxite or the colour coated variant supplied as Colourgrip. Where long-term colour retention is a high priority naturally coloured aggregates may be utilised.

See separate Colourgrip Product Information sheet for more information.



Substrate Preparation & Product Application

For more in-depth product application information and techniques, please refer to the Coldgrip Method Statement, Application Guide or Video. The following brief outline is for guidance only and should not sufficiently comprehensive.

- Allow 28 days prior to applying Coldgrip to new asphalt.
- Coldgrip must be applied to surfaces which are clean and dry. Time should be allocated to adequately prepare the substrate prior to the application of Coldgrip. Edges, drain covers etc should be masked.
- The substrate must be sound, as Coldgrip does not provide any structural strength. Repairs should be carried out in advance to ensure an even surface prior to the installation of Coldgrip. The surface should be pre-primed with Adbruf Primer C where necessary.
- Mixing is carried out using a drill and paddle. The mix is then spread over the application area using a squeegee.
- Allow the resin to self-level for a few minutes and then broadcast the aggregates on to the wet film until the surface is fully blinded.
- Whilst curing, any masking tape should be removed.
- The completed surface should be allowed to cure before sweeping off the excess aggregate which can be re-used if clean and dry.
- The surface is now ready for use.

Aftercare

Aftercare is not normally necessary. However, loose detritus can be removed by pressure washing, ensuring that the nozzle is held more than 15cm away from the surface. Oil staining can be treated with a stiff brush and a hard surface detergent.

This should be flushed away with clean water afterwards.

Packaging & Storage

Coldgrip is supplied in 2-part sealed containers - Part A and Part B. These may be plastic or metal containers depending on the variant selected. Pigment paste is supplied in small plastic sealed containers.

Store under cover, in cool, dry, well ventilated conditions. Keep containers closed until use.

Shelf life is normally 12 months in the above storage conditions.

Health & Safety

See separate Safety Data Sheet

Published February 2010

COLDGRIP

Coldgrip - Coldgrip BBA - Coldgrip Export

High Performance Road Surfacing Systems



Resin based road surfacing material with high skid resistance

Coldgrip is a range of cold-applied thermoset resin road surfacing systems which provide high friction (skid-resistance) and/or colour demarcation.

High friction properties are achieved and maintained throughout its service life by scattering calcined bauxite aggregates onto the Coldgrip resin whilst it is still wet and prior to curing. By providing high friction contact with vehicle tyres, braking is achieved more effectively and with less risk of skidding and loss of control.

High friction and colour demarcation is achieved by using pigmented Coldgrip resin together with our Colourgrip range of colour coated calcined bauxite aggregates.

Areas of Use

- Roads
- Road carriageways
- Intersections
- Junctions
- Pedestrian crossings
- Cycleways
- Car parks
- Roundabouts
- Traffic lights

Features and Benefits

- UK BBA/HAPAS Type 1 certificated - the highest possible grade
- Quick curing, especially at lower temperatures
- Greater flexibility
- Polyurethane based
- No odour during application or following curing
- Flexible even at low temperatures
- Superb adhesion
- No heat or specialist equipment needed
- Suitable for use in 'Flammable' areas
- Aesthetically pleasing - no joints or seams
- Available in a range of colours to enhance aggregate dressing used
- Longer service life
- Enhanced adhesion to asphalt

New Application Video Guide - Visit www.adbruf.com



Strong Blue



Emerald Green



Black



Lemon Yellow



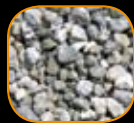
Bold Red



Veniation Red



Grey Granite



Guyanan Bauxite



Red Granite



Chinese Buff

These are a few examples of the aggregates that are available from Adbruf - contact us for more information. Please be aware that our aggregate range is continually updated - visit our website for more information.

What to do next.....

Visit www.adbruf.com to watch our two new Coldgrip videos which highlight the many benefits from choosing a Coldgrip surfacing system and provide comprehensive advice on how to install a Coldgrip surface. Sit back, relax and watch our videos today.

Call or email us now to discuss your requirements in detail.

To find out more about our full range, call us or visit our website where you can view our full product catalogue and obtain further information on all of our products.



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COLOUR COATED AGGREGATES

Benefits & Features

- Highly durable for traffic and pedestrian areas
- Colour remains UV stable
- Enhances the environment
- Chemical & Fuel Resistant
- High level of friction to reduce slipping
- Standard or bespoke colours available
- Weather resistant

Common Uses

Colour Coated Aggregates have various uses which include colour demarcation and skid resistance at roundabouts, traffic lights and pedestrian crossings. They provide visible and physical warning, therefore it can be used on cycle ways, footpaths, bridges, and walkways as well as defining zones for disabled, parent and child etc..

Alternatively it can be used for driveways, industrial and commercial areas eg factories, airports, docks, bus stops, roads, car parks, cycle ways, walkways, driveways, parks and playgrounds.

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NATURAL AGGREGATES AND GRAVELS

Benefits & Features

- Wide range of colours
- Graded to meet criteria
- High friction variants available

Product Description

Aggregates are suitable for use with our cold-applied systems GeoPave, Adtex and Coldgrip. Aggregates are also sometimes used in conjunction with our colour surfacing to add additional skid resistance

A wide range of aggregates is available including high friction calcined bauxites, natural aggregates, and colour coated aggregates.

All aggregates offered can be graded to meet the criteria for inclusion as broadcast aggregates as part of a cold-applied surfacing system.

Natural aggregates are available in different shapes and colours depending on their original source.

Due to the nature of natural aggregates and their variation in colour, AJ Surfacing Contractors Ltd cannot accept liability for any inconsistency with regards to colour or shade in the aggregates that we supply.

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Product Variations

0.9 - 1.4 mm (calcined bauxites only)
1-2mm (red and green granites only)
1-3mm (most aggregate types - the standard grade)
2-5mm (most granites and gravels)
3-6mm (Staffordshire Pink Quartite only)
6-10mm (certain aggregates suitable for tree pits only)

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COLOURGRIP COLOUR COATED AGGREGATES

Benefits & Features

- For use as high friction surfacing on roads
- Highly durable for traffic and pedestrian areas
- Colour remains sunlight stable
- Enhances the environment
- Chemical & Fuel Resistant
- Standard or bespoke colours available
- Weather resistant

Product Description

Colourgrip is a range of pigmented epoxy resin coated aggregates for use as part of cold curing resin systems used to provide anti-skid or high friction surfacing on highways and other paved areas.

Colourgrip products can be manufactured using high psv calcined bauxite for maximum skid resistance or using naturally coloured aggregates to provide maximum colour retention.

Colourgrip is suitable for use with Coldgrip and Adtex cold curing resin systems and with other proprietary polyurethane or epoxy based resin systems.

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COLOURGRIP

Colour Coated Aggregates

Description

Colourgrip is the name of a range of high performance pigmented resin coated aggregates to be used as the dressing in conjunction with cold curing resin systems such as Coldgrip or Adtex or with other proprietary systems.



Base aggregates can be selected for high skid resistance or for extended colour retention. Typically, where exceptional skid resistance is required, calcined bauxite base aggregates would be selected. Where longer term 'through colour' is the priority, naturally coloured aggregates can be specified.

Where underfoot safety is important, Colourgrip colour coated aggregates in pedestrian grade offer high slip resistance in colours that can either highlight hazardous areas or complement the environment.

Uses

- Highways - approaches to roundabouts, traffic lights, pedestrian crossings
- Traffic calming - provides visible and physical warning
- Cycleways and Footpaths
- Bridges, platforms, walkways
- Car Parks - defined zones for disabled, parent and child etc.
- Driveways
- Industrial and Commercial eg factories, airports, docks, railway and bus stations
- Leisure areas

When manufactured using 1-3mm traffic grade calcined bauxite, Colourgrip will provide a vivid, high-friction surface complying with Clause 924 of the Specification for Highway Works when used as a component of a BBA/HAPAS approved high friction surfacing (HFS) system such as Coldgrip.

Benefits

- Strong, opaque and light-stable colours
- Standard or bespoke colours available
- Traffic or pedestrian grade aggregate sizes
- Highly durable
- Weather resistant
- Fuel and chemical resistant
- Skid and slip resistant
- Lead free

Technical

Size Range	Typical Application	
0.8 - 1.4mm	Pedestrian Grade	
1.0 - 3.0mm	Traffic Grade	
Physical Properties (Typical)	AAV	PSV
Guyanese Grey Bauxite	3.8	74
Chinese Buff Calcined Bauxite	2.6	71
Chinese Grey Calcined Bauxite	2.6	83
Green Basalt	4.3	60
Red Granite	1.5	56
Coverage		
Apply at 8-10kg/m ² . Once resin has cured, the excess Colourgrip can be swept off and used again if clean and dry. The final coverage will then be approximately 5-7kg/m ² .		



PRODUCT INFORMATION - COLOURGRIP

Colours

Colour	BS 381C Ref.	RAL	PMS
Bold Red	564	3020	186
Venetian Red *	445	3009	180
Lemon Yellow *	355	1023	116
Emerald Green	228	6024	
Yellow Green*	NA	6018	361
Deep Chrome Green*	267	6002	350
Grass Green*	218	6010	575
Strong Blue*	107	5015	2945
Graphite Black*	642	9011	Black

*Made to order. Minimum quantities apply. Further colours can be manufactured to industry standard matching systems such as RAL, BS or Pantone or to colour samples provided.

All colours are approximate only. Please call for samples.



Surface Preparation

See relevant information for resin system.

Product Application

See relevant information for resin system.

Aftercare

See relevant information for resin system.

Packaging and Storage

Adbruf Colourgrip is sold by the tonne but can be packaged in either polythene sacks containing approx. 25kg, palletised and stretch-wrapped or in palletised bulk bags.

Store under cover, in dry conditions. Wet or damp aggregates should not be used as adhesion and resin system performance may be impaired.

Health & Safety

See separate Safety Data Sheet

Disclaimer

Due to the nature of natural aggregates and their variation in colour, Adbruf Ltd cannot accept liability for any inconsistency with regards to colour or shade in the aggregates that we supply.

Published January 2011



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