

Efficient, Cost Effective and Sustainable Self-Delivery of Asphalt for Small Works



ROADMENDER

Volumetric HOT - MIX Asphalt



Roadmender Asphalt is a mobile volumetric process that enables contractors to make their own premium quality hot-mix asphalt:

- In just the quantity they need (so no waste)
 - At the correct temperature for ideal compaction
 - Directly at the job site, and
 - Without the need to visit an asphalt plant.
- Simply throw the required number of bags, of the mix design you want into the machine, heat and mix for 6-10 minutes depending on quantity. Tip out into a wheelbarrow at 170 degrees C, and lay as normal

All Roadmender Asphalt mix designs are produced to meet the specifications and performance requirements of:

- BS-EN 13108
- PD:6691-2010, and the
- SROH

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Process Summary

Roadmender Process



Excavated Breakout



Is loaded into the drum with 1% Paving Pellets



Heated & mixed for 6-10 minutes until the the mix reaches 170°C



The mixture is then discharged



And laid as binder course



Roadmender Asphalt bagged Surface Course Material



Is then loaded into the drum



Heated & mixed for 6-10 minutes



Discharged at 170°C



And laid as normal



Permanent first time. Every time.



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Roadmender Asphalt is sold in 20Kg bags that are ready to be heated and mixed on site



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Paving Pellets

- Roadmender Asphalt is produced and bagged in our ISO-9001 certified 50,000 sq. ft. factory in Sheffield. The factory adheres to a strict quality management system and factory production controls.



- Roadmender Asphalt's volumetric process is unique in that it is made possible by pelletised bitumen.
- Paving Pellets are a highly polymer modified source of bitumen binder proven to deliver Performance Grade Asphalt with greater elasticity, better adhesion and cohesion, greater low temperature flexibility and elevated high temperature stiffness.
- For example a recent evaluation of the pellets in Stone Mastic Asphalt and Asphalt Concrete when tested to the requirements of the English Highways Agency to Clause 942 of their Specification for Highways, enabled the pellets to be incorporated by a major asphalt company as an approved alternative to polymer modified bitumen by BBA HAPAS. See Technical Data Sheets www.roadmenderasphalt.com/technical/

Rubber Concentrate
Additive



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10 minute mixing process

- During the mixing process, the heat transfer allows the pellets to disperse and melt into the finished mix to produce high quality polymer modified Hot-Mix Asphalt



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The Roadmender

- The Roadmender Machine used to produce the finished mix is a mobile unit that heats and mixes up to 200kg's of Hot-Mix Asphalt per 10 minute cycle.



- **Time efficiency-** Roadmender gangs save ~2.5 hours not having to travel to an asphalt plant and wait in line to collect the required type of hot-mix asphalt before they can start work.
- They may also gain up to another 2 hours at the end of the day when regular gangs' asphalt no longer has the temperature required for proper laying compaction.
- **Efficiency savings-** One hour of real patching is worth about £200 of billing, so every minute saved, has a radical effect on a gang's profitability and goes straight to the bottom line.

- **Cost-** With the Roadmender system, gangs are able to produce **their own asphalt for less than it** costs traditional gangs to collect small volumes of **regular asphalt** from a plant.
- **Waste-** Part of the above savings come from avoiding the ~30% wasted asphalt associated with the traditional process.
- **Recycling-** The Roadmender also enables gangs to recycle the asphalt broken out of the patch to be reused as binder course providing further cost savings.
(see video at: www.roadmenderasphalt.com)
- **Capacity/Sustainability-** In addition to being highly desirable in terms of sustainability, this also allows Roadmender gangs to cover more square metres with fewer materials on board.

- **Minimum order sizes-** Roadmender Asphalt is not hindered by traditional **minimum order sizes** required to collect mix at an asphalt plant.
- **Night repairs-** With the Roadmender System, patching can easily be done at night or during weekends/holidays.
- In addition to the convenience and flexibility this provides, there are also no premiums or upcharges traditionally associated with collecting small quantities of asphalt out of hours
- **First time permanent every time-** It also means that emergency patches can be fixed any time night or day, with permanent first time repairs, avoiding the additional costs of temporary fixes.
- **Hot Boxes:** The Roadmender may also be used to supply multiple small hot boxes for other gangs to use before it goes out on the road

- Patching in remote locations can often waste as much as 4 hours collecting hot asphalt and getting it to the job site.
- Gangs without a large hot box are also often limited to one mix type where 2 may be required.

With the Roadmender, gangs can:

- Save time going directly to the first job
- Carry multiple mix designs on board and
- Patch more repairs
- Plus, hot in place recycling of the binder course enables them to double the asphalt at their disposal

Small repairs can require up to 5 visits to complete:

- 1) Deliver barriers / Traffic management
- 2) Dig site and fix repair- temp with cold mix or leave open
- 3) Grab to remove waste and back fill
- 4) Reinstall black top
- 5) Remove barriers / traffic management

With the Roadmender patching system, contractors can:

- Carry multiple different mix designs on board
- Make first time high quality permanent repairs
- Cut down on vehicle movements
- Reduce waste
- Reduce the use of virgin materials
- Save time
- Save money, and
- Become more efficient

- While **reduced vehicle movements**, less temporary repairs, **greater use of recycled materials**, faster repair times and **improved quality of repairs** made possible by the Roadmender system are a valuable asset to Contractors and Utilities: the broader positive knock-on effects to local communities are also highly relevant.
- A recent study suggests that a 1 minute per day reduction in traffic delays across all motorists on the road in the UK would lead to a £2.2bn saving in terms of productivity and petrol/diesel wastage.



- Roadmender Asphalt is a division of Billian UK Limited
- Billian UK is a specialist bitumen technology company that owns the exclusive license rights to Paving Pellets technology in the UK
- Billian UK also owns the exclusive marketing rights to Roadmender machines in the UK
- Billian UK has to date spent 4 years and over £2m developing Paving Pellets and Roadmender Asphalt technology
- Roadmender Asphalt is now available across the UK
- Billian is a privately held company

For more detailed information regarding Roadmender Asphalt, please go to our website: www.roadmenderasphalt.com

or contact Harry Pearl:

(+44) 07721 454 001

harry@pavingpellets.com