

Foamed asphalt

Foamed cold mix asphalt containing a high proportion of recycled content.

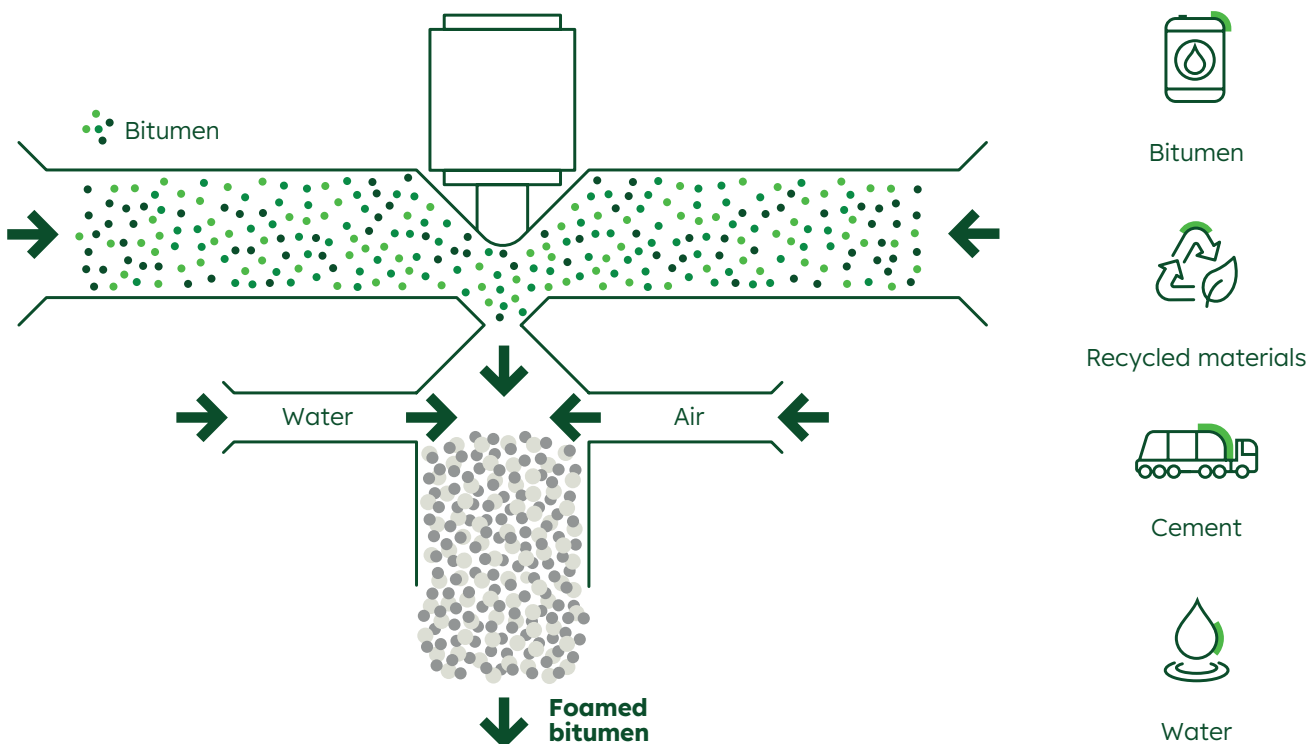
What is foamed asphalt?

Foamed asphalt is a cold mix asphalt containing up to 95% recycled materials, reclaimed fillers/additives, bitumen, cement, and water. It can reduce the carbon emissions associated with asphalt production and laying by a minimum of 40% compared with conventional hot mix materials.

The product is manufactured by injecting water and air into hot bitumen under high pressure, which causes the bitumen to foam, increasing its volume and decreasing its viscosity. This allows the effective coating of aggregate.

Recycled materials that can be used include:

- Recycled asphalt planings (RAP)
- Tar-bound planings
- Excavated asphalt
- Crushed concrete
- Reclaimed granular sub-base



Standards and specifications

Foamed asphalt is designed and manufactured in accordance with ISO9001 and is compliant with:

- Specification for Highways Works Clause 948
- TRL Report 611
- CD226 Design for New Pavement Construction
- BS 9228 For Recycling of Roads

Foamed asphalt type	Foamed asphalt grade	Minimum long term stiffness value	Workability time	Asphalt material equivalent	Stiffness
SVE*	B1	1900MPa	Up to 21 days	HRA/DBM 160/220	1900MPa
	B2	2500MPa		DBM 100/150	2500MPa
QVE**	B3	3100MPa	Up to 4 hours	HRA 40/60	3100MPa
	B4	>4700MPa		DBM/HDM 40/60	4700MPa

Typical carriageway stiffness designed between 3100-4700MPa.

Typical footways 1900MPa or less.

*SVE (Slow Visco-Elastic): Bituminous binder as main component but excluding Portland Cement.

**QVE (Quick Visco-Elastic): Bituminous binder as the main component but also including Portland Cement.

Foamed asphalt is manufactured and installed in accordance with the following additional standards and certification:

- BES 6001 – Responsible Sourcing
- ISO 14001 – Environmental Management
- ISO 45001 – Health & Safety Management
- ISO 45003 – Psychosocial Risk Management
- PAS 2080 – Management in Infrastructure
- NHSS16 – Installation of Asphalt

Where can foamed asphalt be used?

Applications	Foamed asphalt	
	QVE	SVE
Highways – major	●	
Highways – local	●	
Industrial/commercial infrastructure	●	
Housing developments	●	●
Lorry parks	●	
Car parks	●	●
Airports – civil/MOD	●	
Ports infrastructure	●	
Rail infrastructure	●	
Footways/cycleways	●	●
Haunching/trenches	●	●

Benefits of foamed asphalt



Minimum
40% saving

Carbon savings

Foamed asphalt requires less energy to manufacture than conventional asphalt, cutting carbon emissions by a minimum of 40%. Manufactured and installed to PAS2080 standards/certification.



Reduced hazard exposure

Low production temperatures greatly reduce fumes, odours and steam emissions. This minimises the risk of burns from materials and offers a generally safer and more comfortable working environment for operatives and road-users.



Workability

Foamed asphalt can be immediately placed and compacted on site, or it can be stockpiled for later use, extending working times and ensuring continued supply.



Productivity

Material curing times are reduced enabling earlier trafficking, increased outputs and reduced programme durations leading to less disruption for road users.



Waste hierarchy application

Realising value from existing pavement materials, foamed asphalt promotes the circular economy, reducing waste and minimising environmental footprint.



Reusing hazardous waste

Foamed asphalt encapsulates tar-bound planings, allowing for their safe re-use in carriageway construction. This avoids substantial fees associated with transporting and disposing of hazardous waste at regulated landfill sites.

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