

Life™ product information

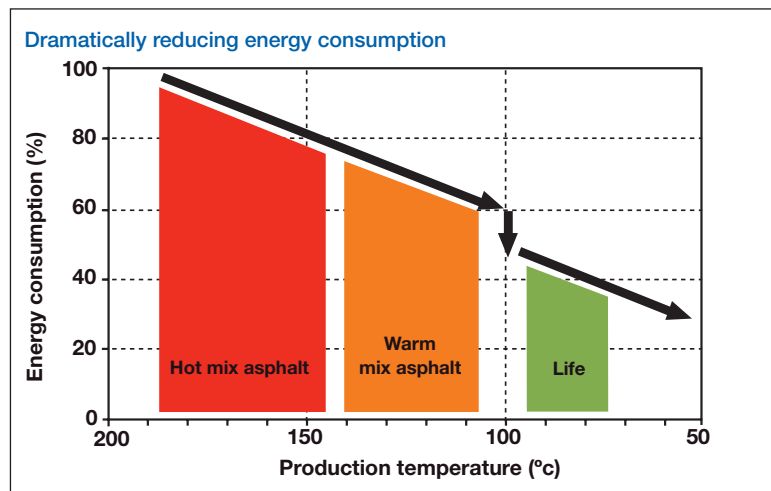


Life is a revolutionary sustainable, foamed mix process that provides the engineering performance of hot mix asphalt yet can be produced and laid at reduced temperatures. Life asphalt technology provides up to an impressive 45% reduction in carbon emissions per tonne.

**45%
CO. SAVING**

**70%
REDUCTION IN
BINDER AGING**

- **Dramatically reducing energy consumption** with up to an impressive 45% reduction per tonne in carbon emissions.
- **Enhanced durability** through reduced binder aging and long term performance. Standard asphalts will harden by up to 40%. The Life process can reduce this by up to 70%
- **Same stiffness and permanent deformation** as hot mix asphalt
- **Good workability and compaction** at reduced temperatures
- Life is laid using conventional surfacing equipment and laying techniques
- Life can be produced using BS EN Standard descriptions, gradings and binder contents
- Life can be used in base, binder and more importantly surface course layers



Enhanced durability

Aging of the binder

	40/60 pen (AC 20)		100/150 pen (AC 20)	
	Life	Hot mix	Life	Hot mix
Penetration (dmm)	46	37*	108	79
Softening point temperature (°C)	52.6	55.0*	43.8	50.4

* Typical values

Applications

Can be used for all infrastructure and commercial asphaltic concrete projects.



Life being laid at Kidsgrove, Stoke

Temperature of Life 14 mm CGSC after discharge (T 94 0C)

Compaction temperature of Life 10 mm CGSC (T 81 0C)

Stiffness and permanent deformation

Stiffness (BS EN 12697-26)

	AC 20	Material	AC 20	AC 20
	100/150 life	AC 20 100/150	40/60 Life	40/60
Stiffness (MPa)	1265	1301	2930	2989

Wheel tracking (BS 598-101)

	Material	
	AC 20 40/60 Life	AC 20 40/60
Rut depth (mm)	3.1	2.4
Wheel tracking rate (mm/h)	1.4	1.0

Wheel tracking (BS EN 12697-22)

	Material	
	AC 20 40/60 Life	AC 20 40/60
Rut depth at 10 ³ cycles (mm)	4.6	4.3
Wheel tracking slope in air (mm/10 ³ cycles)	0.1500	0.1806
Proportional rut depth at 10 ³ cycles (%)	9.3	9.0

Sustainability and local sourcing

Energy use: Aggregate Industries is at the forefront of sustainability and has committed to reduce carbon emissions by 20% by 2012 based on a 2008 base line.

Recyclable: 100% of the product can be recycled thus reducing the amount of material that is sent to landfill.

Manufacturing location: Produced in the UK, under strict environmental and social legislation.

Responsible sourcing: Aggregate Industries is the first company in the world to achieve a BES 6001:2008 Responsible Sourcing Certificate from BRE Global. Products are assessed on:

- quality management
- environmental management
- health and safety management
- greenhouse gas emissions
- minimising raw material usage

- labour practice
- biodiversity
- community engagement.

Carbon footprint calculation*

Oil fired plant - up to 31% reduction in carbon emissions.

Gas fired plant - up to 45% reduction in carbon emissions.

* Measured against cradle to gate baseline figures across the sector, base line figure (32kg/tonne CO² emissions) is taken from a Carbon Trust sponsored report 'Industrial Energy Efficiency Accelerator' published 31st March 2009.

Aggregate

Life is available for all asphaltic concrete (ACs) using a range of standard aggregates. Any special requirements for aggregate properties can be accommodated through consultation.

Binder

Straight run binder.

Installation

Available either through Bardon Contracting or approved licensed contractors.

Manufacturing standard

All Aggregate Industries' products are manufactured in accordance with ISO 9001 and Highway Sector Scheme 14 with factory compliance to ISO 14001.

Policies

Aggregate Industries' policies on the environment and community, health and safety and sustainable solutions for different product applications can be viewed on our website www.aggregate.com

Health and safety:

COSHH data

Full COSHH data on Bardon Asphalt products is available on request. Please call the technical helpline on 0845 600 0860

Technical support

Detailed guidance and assistance with the preparation of specification and use of Bardon Asphalt products is available through the sales office. A free technical service is also available.

For further information, please refer to Bardon Asphalt technical services on 0845 600 0860 or email: techelp@aggregate.com

Bardon Hill, Coalville
Leicestershire LE67 1TL

www.aggregate.com



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