

# Puma Low Temperature (LT) binders

Low temperature, low emission bitumen and PMB

Puma Bitumen offers a low temperature (LT) option with its paving grade bitumen and polymer modified binders (PMB). Puma bitumen LT products are predosed with Anova® 1503 warm mix additive. Puma Bitumen LT binders allow asphalt production at much reduced temperature, saving energy and reducing emissions.

Cargill Anova® 1503 is a non-toxic, bio-based, non-corrosive and low odour liquid additive that enhances asphalt mixture workability, improves reliability, and allows for compaction at lower temperatures.



### Key Benefits

#### Application Benefits

- Biobased, non-hazardous, low odour
- Improved workability
- 20°C - 40°C reduction mixing & compaction temperature
- Reduces odour and fumes on site
- Predosing eliminates handling additives at asphalt plant
- Extend paving season and reduce risk winter and night works
- Increased haul times/distances
- Extend hot bin storage times at asphalt plant
- Increased stone adhesion

#### Sustainability Benefits

- Reduced carbon footprint
- Biobased

#### Economic Benefits

- Reduce energy costs
- Reduce risk of density penalties

### Specification

Puma Bitumen LT products dosed with Anova® 1503 are formulated to comply with the relevant AS2008 or ATS 3110 specifications



### Storage

Anova® 1503 is storage stable for at least two weeks. For storage information on paving grade bitumen or Polymer Modified Bitumen products refer to the relevant Puma Bitumen [TDS](#).

Puma Bitumen recommends use of Queensland Department of Transport and Main Roads Method Q323 in determining the equivalent asphalt compaction temperature with binder containing Anova 1503®.

### Health & Safety

Anova 1503® is non-hazardous, non-toxic. For a full description of hazards associated with the use of bituminous binders, please refer to the appropriate safety data sheet (SDS) available on the [Puma Bitumen website](#).

### Quality assurance

Puma Bitumen is known in the industry for consistently delivering high quality products. Our products can be relied on to perform under the most diverse and demanding road conditions in Australia. This is possible thanks to our innovative product technology, comprehensive quality assurance programmes, efficient operations and a sophisticated production processes unique to Puma – all supported by our highly skilled and experienced staff.

The Puma Energy Global Bitumen Technology Centre based in Altona, Victoria, is where we conduct industry-leading research. It is from here that we provide technical expertise and support to our customers throughout Australia and across the world. Our team of technical specialists is dedicated to ensuring our products are thoroughly tested at every stage – from the selection of crude oil at the start of the production process, right through to delivery.

Our product stewardship and rigorous quality management practices reflect our commitment to delivering the highest quality products that perform on the road. Our dedication to quality is recognised by our accreditation to Australian Standard AS/NZS 9001.

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