

Boost performance, lower costs, and reduce your carbon footprint. Anova[®] gets you there.



Cargill[®] Anova[®] Warm Mix Additive, Adhesion Promoter and Compaction Aid

Improved Compaction and Adhesion at the lowest cost.

With Cargill's non-hazardous* Anova® warm mix additive and adhesion promotor, crews can reliably achieve density and improve workability at lower temperatures while reducing emissions and odor.

The unique performance of our liquid warm mix additive are backed by more than 60 years of technical expertise in bio-based chemistry.





CARGILL® ANOVA® WARM MIX ADDITIVE, ADHESION PROMOTER AND COMPACTION AID

State-of-the-art technology. Sustainable success.



Improving performance

- Reliably achieve density and improve workability at reduced temperature
- Increase haul distance and production windows
- Performs as an adhesion promoter



Creating economic value

- Lowest cost in use
- Lower plant costs due to reduced fuel usage at lower production temperatures
- Liquid product for simple implementation
- Enhances opportunity for compaction or density bonuses



Environmental impact

- Non-hazardous*, low odor
- Made from bio-based chemistries
- Reduce HMA plant emissions
- Reduce fume exposure to work crews during placement



Enriching communities

- Innovative technologies can enable efficient infrastructure investments
- Plant-based raw materials help support farmer, rural communities and agriculture industry growth
- Working with farmers, government, industry groups, customers and consumers to make the future of industrial solutions more sustainable

Our unique solutions. Proven performance.

Cargill® Anova® products can enable reliable production of a balanced mix, regardless of the performance specification. The performance of Cargill's warm mix additive has been confirmed using various test methods used by the industry.

Anova warm mix additive has been shown to improve the moisture resistance of asphalt mixes, while maintaining rutting resistance and improving compaction and workability, even at temperatures significantly reduced compared to conventional hot mix asphalt.



Indirect Tensile Strength Ratio*

Improvement when used as

*AASHTO T283 IDT Tensile Strength Ratio test, after one freeze-thaw cycle



Adhesion Promoter (Aggregate B)

Indirect Tensile Strength Ratio* Improvement when used as an

*AASHTO T283 IDT Tensile Strength Ratio test, after one freeze-thaw cycle



**Mix samples were produced at 160°C and compated with a Marshall compactor at independent laboratory.

Retaining Coating on High Stripping Aggregates



Shaker Table*** test time (hours)

***LS 25-009 The Evaluation of Binder Resistance to Stripping for a Given Aggregate Surface." Quebec Department of Transportation, 2002

CARGILL® ANOVA® WARM MIX ADDITIVE, ADHESION PROMOTER AND COMPACTION AID



Cargill[®] Anova[®] Asphalt solutions have been proven in millions of tons of pavement around the globe.

Cargill[®] Anova[®] Products

CATEGORY/PRODUCT NAME	DESCRIPTION	TYPICAL VISCOSITY, CP AT 25°C	OPEN CUP, FLAS POINT, °C	н сомра	CTION AID	WARM MIX (TEMPURATURE REDUCTION)	ADHESION PROMOTOR	
Warm Mix								
Cargill [®] Anova [®] 1501 additive (NA and LATAM)	High performance, bio-based*, non-hazardous1, and low-odor liquid warm mix additive, compaction aid, and adhesion promotor, that enhances asphalt mixture workability allowing for lower temperature compaction.	210	211	٩	*	***	**	
Cargill [®] Anova [®] 1503 additive (EU and APAC)	High performance, bio-based, non-hazardous ¹ , and low-odor liquid warm mix additive, compaction aid, and adhesion promotor, that enhances asphalt mixture workability allowing for lower temperature compaction.	210	211	***		***	* *	
Cargill [®] Anova [®] 1599 additive	High performance, bio-based, non-hazardous ¹ , and low-odor liquid warm mix additive, compaction aid, with significantly enhanced adhesion promotor properties, asphalt mixture workability, and lower temperature compaction.	1,500	289	***		***	***	
CATEGORY/ PRODUCT NAME	DESCRIPTION	TYPICAL VISCOSITY, AT 25°C	CP OP		N CUP, POINT, °C	RHEOLOGY MODIFIER		
Modifiers								
Cargill [®] Anova [®] 1000 modifier (EU and APAC)	Basic high quality bio-based rheology modifier, ideal for modifying low temperature Performance Grade (PG), reducing viscosity, and increasing penetration grades in paving grade and emulsified asphalt binders.	51		290		۵۵		
Cargill [®] Anova [®] 1005 modifier	High performance bio-based rheology modifier with enhanced Useful Temperature Interval (UTI), long term stability, and polymer compatibilization. Ideal for modifying low temperature Performance Grade (PG), reducing viscosity, and increasing penetration grades in paving grade and emulsified asphalt binders.	61			290	***		
Cargill [®] Anova [®] 1006 modifier (NA and LATAM)	High performance bio-based rheology modifier with enhanced Useful Temperature Interval (UTI), long term stability, and polymer compatibilization. Ideal for modifying low temperature Performance Grade (PG), reducing viscosity, and increasing penetration grades in paving grade and emulsified asphalt binders.	63		2			***	
CATEGORY/ PRODUCT NAME	DESCRIPTION	TYPICAL VISCOSITY, CI AT 25°C	P OPEN FLASH P	PEN CUP, SH POINT, °C COI		TION AID	REJUVENATOR	
Rejuvenators								
Cargill [®] Anova [®] 1815 rejuvenator (NA and LATAM)	High-performance rejuvenator, supporting high levels of recycled content. Enhances durability and aging resistance, while improving compaction and workability.	100	30)			**	
Cargill [®] Anova [®] 1817 rejuvenator (EU and APAC)	High-performance rejuvenator, supporting high levels of recycled content. Enhances durability and aging resistance, while improving compaction and workability.	100	30	300		•	**	
Cargill [®] Anova [®] 1825 rejuvenator	Basic high quality rejuvenator, supporting medium levels of recycled content. Enhances durability, while improving workability. *Limited availability.	60	27	277		-	**	
Cargill [®] Anova [®] 1845 rejuvenator	Highest performance rejuvenator and compatibilizer for highly aged recycled binder. Enhances durability, significantly enhances aging resistance, while improving compaction and workability.	470	26	i 🍐		•	***	
CATEGORY/ PRODUCT NAME	DESCRIPTION	TYPICAL VISCOSITY, AT 25°C	TYPICAL COSITY, CP AT 25°C		OPEN CUP, FLASH POINT, °C		ADHESION PROMOTOR	
Anti-Strips	'							
Cargill [®] Anova [®] 1440 adhesion promoter	High-performance, low-odor, bio-based liquid anti-strip additive that significantly enhances asphalt-aggregate adhesion. The additive is non-corrosive ¹ , non-amine based, and non-acidic for ideal use and handling.	420	420		303		***	
CATEGORY/ PRODUCT NAME	DESCRIPTION	TYPICAL VISCOSITY, CP AT 25°C	OPEN CUP, FLAS POINT, °C	DPEN CUP, FLASH ADH POINT, °C PROM		REJUVENATOR	RHEOLOGY MODIFIER	
Cold Mix Modifiers								
Cargill [®] Anova [®] 1300 rejuvenating cold mix modifier	High-performance, low VOC, high flashpoint cold mix and cold patch additive that can be used with both virgin and 100% RAP mixtures.	12	180	-		***	***	
Cargill [®] Anova [®] 1310 rejuvenating cold mix modifier (NA and LATAM)	High-performance, low VOC, high flashpoint cold mix and cold patch additive that can be used with both virgin and 100% RAP mixtures. Formulated for improved coating and moisture resistance.	14	175	66		***	***	
Cargill [®] Anova [®] 1312 rejuvenating cold mix modifier (EU and APAC)	High-performance, low VOC, high flashpoint cold mix and cold patch additive that can be used with both virgin and 100% RAP mixtures. Formulated for improved coating and moisture resistance.	14	175	**		***	***	
CATEGORY/ PRODUCT NAME	DESCRIPTION		TYPICAL VISCOSITY, CP AT 25°C		EMULSION STABILIZER			
Emulsion Stabilizer								
Cargill [®] Anova [®] 1701 emulsion stabilizer	Additive that stabilizes both anionic and cationic bituminous emulsions, significantly extending both short term and long term storage stability and improve homogeneity in emulsions with oil phase floatation or settlement issues due to density differences.	Water Soluble Powder			666			

1According to regulation (EC) No. 1272/2008 and 29 CFR 1910.1200

*Bio-based according to ASTM D6866

Additional marks equals enhanced feature:

Proven performance. The Cargill way.

A partnership with Cargill provides your business an undeniable advantage. We offer you a proven record of support from our state-of-the-art asphalt applications lab. Cargill's unique support system starts with materials evaluation, trial assistance, plant implementation and integration and continues through quality assurance and ongoing support, meaning you can count on us to provide the expertise and chemistries required to meet your toughest challenges.







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