

ARRMULS® A-211

Anionic (-) Slow-Setting Emulsifier

TECHNICAL DATA SHEET

EMULSIFIER FOR TACK COAT, PAVEMENT SEALERS AND COATING EMULSIONS

ArrMuls A-211 is a bitumen emulsifier chemical used to produce anionic slow setting (SS-1, SS-1h) emulsions conforming to typical specifications including AASHTO M-140/ASTM D-977. It is added to water, with or without any pH adjustment, to produce a soap solution suitable for easy emulsification of all asphalt types. ArrMuls A-211 can save emulsion producers, and sealer and coating manufacturers costs related to product waste, recall, rework and repair. ArrMuls A-211 produces small particle size and highly stable emulsions that compound easily. It does not promote biological growth in emulsions, and is conducive to reducing odor complaints and costly product recalls. ArrMuls A-211 can be used to make various emulsions for different applications eliminating the need for multiple emulsifier and emulsion storage tanks.

APPLICATIONS

- Tack Coat
- Pavement Sealer
- Industrial Coating Emulsions
- Fog Seal
- Mixing Grade

USE ARRMULS A-211 WHEN YOU NEED AN EMULSION THAT:

- Remains stable after extended storage
- Breaks and dries faster
- Compounds easily at elevated emulsion temperatures
- Promotes longer product shelf life

FEATURES

SUPERIOR EMULSION STABILITY

Produces shear-, sieve- and settlement-stable emulsions with typical mean particle size of $<3 \mu\text{m}$

HIGHER PAVING PRODUCTION RATES

Faster drying and curing times mean higher productivity for paving, sealing and coating

LONGER PRODUCT SHELF LIFE

Does not promote biological growth that leads to bad odor and over-pressurized product pails

COMPOUNDED AT HIGHER TEMPERATURES

Emulsion can be compounded at elevated temperatures rather than waiting days for the emulsion to cool

BETTER SEALER DURABILITY

Strengthens resistance to moisture damage and abrasion wear loss

Improves wetting and coverage of substrate for stronger bonding

OPERATIONAL FLEXIBILITY

Reduces need for multiple emulsifier and emulsion storage tanks

EASY TO HANDLE

No heat and no pH adjustment required

COMPATIBILITY

BITUMEN

Compatible with most bitumens, including polymer-modified, paraffin-rich, and lower penetration varieties

AGGREGATE

Easily mixes and is compatible with recycled bitumen pavement, limestone, granite and most other types of aggregate and granular materials, even when damp or dusty

COMPOUNDING ADDITIVES

Compatible with various clays, fibers, pigments and other compounding additives used in pavement sealers and industrial coating emulsions

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USAGE RECOMMENDATIONS

TACK COAT, FOG SEAL, MIXING-GRADE:

1.0–1.4 % by weight of emulsion

PAVEMENT SEALERS, INDUSTRIAL COATINGS:

1.6–2.2 % by weight of emulsion

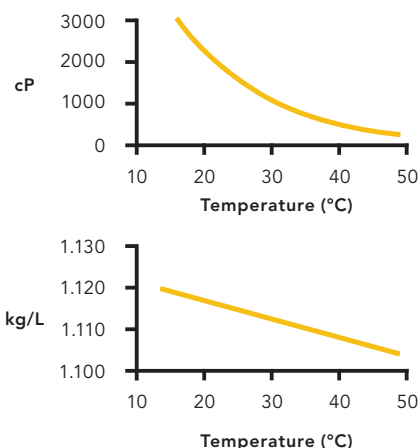
Use as-is or adjust soap pH with caustic soda up to pH of 11.5.

Typical bitumen content is 60–62%.

PHYSICAL CHARACTERISTICS

Property	Description
Appearance, 25 °C (77 °F)	Dark-Colored Liquid
Odor	Resinous
Density, 25 °C (77 °F)	1.1 kg/L (9.3 lb/gal)*
Viscosity, 25 °C (77 °F)	1,110 cP*
TSCA Inventory	Listed
DSL Inventory	Listed
C.A.S. Number	Proprietary

*The density and viscosity data reported are typical and not specifications.
Typical ranges for density values are $\pm 2\%$.
Typical ranges for viscosity values are $\pm 20\%$.



HANDLING AND STORAGE

Always handle ArrMuls A-211 in accordance with Safety Data Sheet (SDS) and proper safety procedures. Avoid product contamination with other materials. Do not heat product in excess of 49 °C (120 °F) for prolonged periods. Recommended product storage and handling temperature range is 21–49 °C (70–120 °F).

AVAILABILITY

ArrMuls A-211 is available outside of North America only.

ArrMuls A-211 is available in packaged quantities in 1,041 L/275 gal IBC totes (1,088.6 kg/2,400 lb net weight) and 208 L/55 gal metal drums (217.7 kg/480 lb net weight).

TECHNICAL SUPPORT

To request additional product information, contact your regional Road Science representative.

You can also contact us at **+1-918-960-3800** or **customerservice@roadscience.net**, or visit our website at **www.roadscience.net**.

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