



ARRMULS® TACK TECHNOLOGY

HANDLING, STORAGE & APPLICATION RECOMMENDATIONS

TACK COAT EMULSION

PLANT HANDLING AND STORAGE

- Always handle asphalt emulsion products in accordance with Safety Data Sheet (SDS) and proper safety procedures.
- Emulsion handling and storage guidelines generally coincide with typical industry standards. The Asphalt Emulsion Manufacturers Association (AEMA) MS-19, *The Basic Asphalt Emulsion Manual*, outlines accepted standards.
- Store emulsion in the plant at a temperature range of 80-120°F.
- If it is necessary to apply heat to emulsion in the storage tank, use warm water between 160°F and 190°F as heat source. Apply moderate agitation or circulate the emulsion in the tank while applying heat. Avoid using steam or hot oil as heat source.
- Mix emulsion in tank using moderate agitation or circulate for 15-30 minutes once every few days during extended storage.
- Use dedicated anionic lines.

CONTRACTOR FIELD APPLICATION

- Field application guidelines generally coincide with typical industry standards. The Asphalt Emulsion Manufacturers Association (AEMA) MS-19, *The Basic Asphalt Emulsion Manual*, outlines accepted standards.
- Do not heat emulsion to temperature greater than 120°F in the distributor truck. Slowly circulate the emulsion in the distributor truck while applying heat.
- Do not continually circulate or over-pump emulsion in the distributor truck. If necessary, circulate emulsion only once every few days for 5-10 minutes to assure homogeneity.
- Do not dilute emulsion.
- Apply emulsion at a temperature of 80-160°F.
- Proper tack coat application rate is dependent on type of surface to which it is applied. Consult with agency specifications for recommended application rate.

ARRMULS TACK TECHNOLOGY CHEMICAL KIT

PLANT HANDLING AND STORAGE

ArrMuls Tack Part A

- Always handle ArrMuls products in accordance with SDS and proper safety procedures.
- ArrMuls Tack Part A consists of fine particles dispersed in water. Proper handling and storage is important for maintaining quality and integrity. ArrMuls Part A can be stored for long periods of time, generally up to five years.
- If allowed to freeze, apply heat gradually to avoid localized overheating near heat transfer surfaces.
- Store at temperatures between 50° and 120°F

Drums and Totes

- Never leave drums or tote containers open when not in use. When closing drums or totes, ensure they are properly sealed.
- When pumping product from drum or tote, remove bung or top cap.

Bulk Storage

- Storage capacity should be equal to or greater than 7,500 gallons, or 1.5 times the maximum delivery amount. Tank should be equipped with means to agitate material in the tank, such as top-down or side-mounted mixers or recirculation line.
- Check state and federal guidelines regarding the need for secondary containment.
- Carbon steel, stainless steel, glass fiber reinforced and polypropylene plastic tanks with a cone bottom versus a flat bottom are preferred.
- Carbon or stainless steel positive displacement gear pumps with Teflon® seals and bushings are recommended.

ArrMuls Tack Part B

- Always handle ArrMuls products in accordance with SDS and proper safety procedures.
- ArrMuls Tack Part B consists of fine particles dispersed in water. Proper handling and storage is important for maintaining quality and integrity. The maximum recommended length of storage is generally no longer than six months.
- Do not allow Tack Part B to freeze.
- Store at temperatures between 50° and 95°F

Drums and Totes

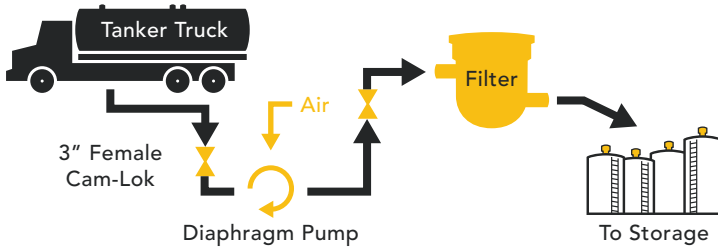
- Never leave drums or tote containers open when not in use. When closing drums or totes, ensure they are properly sealed.
- When pumping product from drum or tote, remove bung or top cap.
- Crusts or skins can form in drums or tote that have been partially emptied. It is best to remove these prior to use.

Bulk Storage

- Storage capacity should be equal to or greater than 7,500 gallons, or 1.5 times the maximum delivery amount. Tank should be equipped with means to agitate material in the tank, such as top-down or side-mounted mixers or recirculation line.
- Check state and federal guidelines regarding the need for secondary containment.
- Carbon steel, stainless steel, glass fiber reinforced and polypropylene plastic tanks with a cone bottom versus a flat bottom are preferred.
- Carbon or stainless steel positive displacement gear pumps with Teflon® seals and bushings are recommended.

ARRMULS TACK PART B

BULK UNLOADING AND HANDLING SYSTEM RECOMMENDATIONS



EQUIPMENT RECOMMENDATIONS

Fig. 1

Hose Specifications	
I.D. (in.)	3.000
Approx. O.D. (in.)	3.56
Working Pressure (psi)	150
Tube Compound	NBR
Reinforcing Material	Spiral steel wire helix(es) between synthetic textile plies
Cover Color	Black
Low Temperature	-30°F (-34°C)
High Temperature	200°F (93°C)
Length (ft.)	100
Approx. Wt./Ft. (lbs.)	1.70
Minimum Bend Radius (in.)	900
Section/Vacuum Rating (mm)	Full vacuum
Oil Resistance	Class A (high)
Cover Construction	Black NBR/PVC RMA Class B. Oil and weather resistant

- Diaphragm Pump: Versa-Matic® bolted aluminum metal pump with "XL" elastomers; Model E3AA3X669. Include part # VKM-3 Air Line Installation Kit with flow pressure regulator (FLR), 5 FT 3/4" air line hose with swivel, muffler and nipple for air line connection.
- Air Supply: 125 psig MAX - 80 psig MIN; 100 scfm nominal.
- PSI Filter: FSPN-250-6-304-150 3"FLG double bag filter housing; 304SS construction with 150 PSI ASME symbol applied; includes 304SS support baskets, 3"FLG inlet/outlet- style 6, mild steel adjustable legs and one (1) Buna-N gasket; Displacement float 316SS; 125PSI -#2 size; EEA29004C.
- Filter bags: PEM 400 P2P SO/box. Refer to Fig.2 for operation flow diagram.
- Pipe: 3" SCH IOS EFW 304L SS A312; Buttweld; 150# Flange; 25% Glass filled Teflon® gasket; full-port ball valves; preferably insulate heat trace to prevent possible freezing.

Note: Specific brands and part numbers are suggestions only. We recommend that you check with your engineers, transporters and tank specifications.

Fig. 2: Filter Operation



- The inlet pressure gauge should not exceed 75 psi.
- Filter should be changed when pluggage of filter results in 35 psi pressure increase. Note the initial pressure transmitter reading upon installing new bag filter. When pressure transmitter reaches 35 psi greater than the initial pressure reading at the beginning of a new filter, then the filter should be changed.
- Example: Pressure is 30 psi with the installation of a new filter. After time, the pressure rises to 65 psi. The filter should now be changed since $65 - 30 = 35$ psi.

TECHNICAL SUPPORT

To request additional product information, contact your regional Road Science representative. You can also contact us at 918-960-3800 or customerservice@roadscience.net, or visit our website at www.roadscience.net.

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