Road Science is the leading supplier of asphalt additives in North America, and has been innovating additive solutions for the paving industry for more than 20 years. Our AD-Here additives have been developed to improve asphalt performance with a focus on health, safety and environment. Accordingly, the following are the recommended storage and handling guidelines for our AD-Here product line of asphalt additives.

**Storage**

**Bulk Storage Tanks:**
- Carbon steel is recommended for additive bulk storage tanks.
  - AD-Here additives impart a minimal corrosion rate of less than 0.001 in/yr to carbon steel storage tank walls at recommended storage temperatures.
- 300 Series stainless steel lined tanks can be used and will corrode at a lesser rate.
- If steam or hot oil is used for tank heat source, 300 series stainless steel serpentine heating coils are recommended. 316L stainless steel is recommended for all heat transfer surfaces.
- Storage tanks should be insulated to conserve heat. Only the product adjacent to the pump suction line needs to be heated to be easily pumped.

**Storage Temperature:**
- Applying heat to additives may be required for product viscosity conducive for pumping.
  - Most additives can be easily pumped at 100°F with a corresponding viscosity of less than 1000 cP.
- If an additive becomes frozen, apply heat gradually to avoid localized overheating near heat transfer surfaces.
- When applying heat to totes or IBC’s, a cartridge immersion heating element inserted into the tote access hole is recommended.
  - The heating element should be low wattage and all immersed metal components made of 300 series stainless steel.
  - Heating element dimensions of approximately 3-feet in length and 1-inch in diameter are recommended.
- For applying heat to metal drums, electric drum band heaters are recommended.

**Transfer Lines**
- Lines should be heat traced and insulated to minimize additive storage temperature.
- Carbon steel is recommended for lines.
- 300 series stainless steel can be used and will corrode at a lesser rate.
- Lines should be welded construction and not threaded.

⚠️ **DO NOT** use copper, copper alloys, aluminum, brass, bronze or galvanized steel for storage tanks and transfer lines as these types of metals will corrode rapidly.
Gasket Materials

- Metal reinforced graphite, spiral wound graphite and polytetrafluoroethylene (PTFE) are recommended.
- Standard rubber compounds are not recommended as they will swell, possibly causing leaks.

Pumps

- Gear pumps facilitate the pumping of viscous material, thereby allowing reduced additive storage temperatures.
- Carbon steel or stainless steel positive displacement gear pumps are recommended.
- 300 series stainless steel can be used and will corrode at a lesser rate.
- Teflon seals and teflon-based bushings are recommended for maximum pump life.
- Additive storage temperature and viscosity should be considered when determining proper pump size and horsepower required.
- Temperature-viscosity curves are available upon request for all AD-here additives.

⚠️ DO NOT use pump components constructed of copper, copper alloys, brass, aluminum, bronze or galvanized steel as these types of metals will corrode rapidly.

Always handle additives in accordance with Safety Data Sheet (SDS) and proper safety procedures.