



DETONATION LIQUID INOCULANT

Transportation, Storage, Transference, Bottling, Formulating, Stabilization
Last Updated: May 1, 2021

TRANSPORTATION

- When transporting in summer months be sure to watch weather forecasts and avoid shipping product when temperatures are to exceed 90°F.
- If product is exposed to excessive heat during transportation the contents may expand
- If this occurs release pressure by covering lid with a towel and slowly opening bung on top of tote to release pressure
- Once pressure is released secure bung tightly
- When transporting in winter months be sure to watch weather forecasts and avoid shipping product when temperatures are to fall below 32°F. Do not allow product to freeze as microscopic ice crystals can puncture cell membrane of organism during thawing phase and compromise product. Do not store below 32°F.
- When transporting be sure to schedule freight early in the week so product does not sit over the weekend in truck or non-climate controlled distribution point

STORAGE PARTICULARS

- Product should be stored between 32°F - 90°F
- Ideal storage temperature is 34 - 38°F
- Do not allow liquid inoculant to freeze
- Product should not be exposed to direct sunlight for any length of time
- Product should be stored in original container with bung / lid / cap tightly sealed

TRANSFERENCE PARTICULARS

- When transferring product from tote use valve to dispense product
- Tote contains seal to inhibit contamination of internal portion of valve
- Clean external portion of valve with isopropyl alcohol and rinse thoroughly with water prior to transference process
- If you attach hose, pump or flow meter to tote valve make sure they are decontaminated or clean steam, or isopropyl alcohol and free of pathogens and organic based material (proteins, carbohydrates, lipids). When using isopropyl alcohol be sure to rinse any residuals prior to use.
- Transference should occur under aseptic conditions

BOTTLING PARTICULARS

- Bottling should occur under aseptic conditions
- Bottling machine should be decontaminated with steam or isopropyl alcohol thoroughly prior to bottling.
- If caustic or anti-microbial agents are utilized to decontaminate machine be sure to rinse system thoroughly with clean water to remove any residual. Residual can negatively impact microbial system.
- Make sure bottling equipment is free from pathogenic contamination
- Make sure bottling equipment is free from organic contaminants such as proteins, carbohydrates & lipids
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- Make sure bottles are free from organic contaminants such as proteins, carbohydrates & lipids
- Proteins, carbohydrates and lipids can be utilized as food source by microbial system and cause excessive microbial growth within confines of bottle. Excessive microbial growth in bottle will cause gases to build up and bottle may swell. Vented caps should be used to assure swelling will not occur.

FORMULATING PARTICULARS

- If you are utilizing the liquid inoculant as a raw material (mixing with other materials) be sure to contact The Sanctuary to discuss details. We will require SDS / samples of other raw ingredients/ formula so we can run shelf stability study prior to implementation

PRODUCT STABILIZATION

- Our Quality Control Protocol includes stabilizing each inoculant to ensure shelf stability for 24 months from date of production. The stabilization process includes balancing the tote via pH adjustment as well as the inclusion of an organic preservative. Exposure of product to excessive heat and or organic based contaminants (carbohydrates, proteins, lipids) can throw the product out of homeostatic balance and lead to shelf instability (swelling, reduction in cfu counts).
- If homeostasis is compromised additional preservatives may be warranted