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Universal Seaming Adhesive

Operational Procedure

Universal Seaming Adhesive is formulated to be used as a true adhesive for the seaming of shrink sleeves. ***USA*** is designed to be used on PVC and PETG shrinkable substrates. Unlike existing seaming solvents that melt the film, and the actual substrate itself, ***USA*** forms a true mechanical bond which allows both edges of the finished tube to be glued to each other.

There are several advantages of using an adhesive over conventional solvents in the market today. The biggest advantage is that the adhesive forms a mechanical bond and ***USA*** will never migrate through a substrates layers. This avoids sticking inside or outside of finished tube and also eliminates the lifting of ink on inside of tube. Eliminating the migration defect is highly important as converters strive to down gauge substrates and remain competitive in the market.

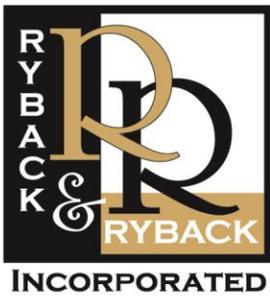
USA also offers a **30% to 40% higher yield rate per gallon** than conventional seaming solvent when applied at the recommended flow rates. ***USA*** only requires a minimum quantity to create acceptable bond strength.

USA is also more environmentally friendly than existing seaming solvent. The formula used in ***USA*** contains **80% VOC exempt** ingredients where existing seaming solvents are almost all formulated with ingredients that are **100% VOC recordable**.

Existing delivery and application methods utilized for solvent application will function flawlessly when using ***USA*** and operators will notice no major operational changes. Bond strength and seam clarity is equal to, and in most cases exceeds, finished shrink sleeve industry standards.

Procedure

1. The operator must follow company policy for correct PPE procedures prior to using any of any flammable liquid.
2. If pouring ***USA*** into a container or tank, be certain the vessel is clean and no residual solvent or contaminates are present.



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3. Viscosity and color of **USA** will be similar to that of existing seaming solvent except for a slightly milder odor.
4. Once container is filled with **USA**, the system must be purged to ensure no residual liquid remains in system. During the purging process make sure all air bubbles are eliminated from lines and delivery system. Attach needle or wick for adhesive application. This will be determined by converters preference. If either application method requires calibration of device it should be performed at this time.
5. Attach needle or wick for adhesive application. This will be determined by converters preference. If either application method requires calibration of device it should be performed at this time.
6. Establish flow rate using 0 to 10mm measuring device supplied.
 - a. Benchmark flow rate on solvent seamer – 4.5ml per minute at 200mpm
7. Today's solvent seaming machines have proportional flow devices. Once the benchmark flow is properly set, this number will incrementally change as speed is adjusted by operator.
8. The width of adhesive bead after nip will be approximately 3 to 3.5 mm wide. If converter requires a different width of finished seam the benchmark number can be adjusted incrementally.
9. Initial bond strength off the seaming machine should be in the range of 125gms using the peel test method. The seam is typically a destruct bond at 24 hours.
10. **USA** can be left in the solvent delivery system without harm to the system and is not prone to any change in results due to environmental conditions. We do recommend **USA** remain in a sealed container to keep foreign contaminants from entering the liquid itself.
11. Recommended shelf life of **USA** is 6 months under ideal storage conditions.

The information and recommendations contained on the Operational Data sheet, as well as technical advise otherwise given by representatives of our Company, whether verbally or written, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing substrates and other materials vary. For the same reason our products are sold without warranty and are on condition that users shall make their own tests to satisfy themselves that they will meet fully their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Operational Data sheet out of date and users are requested to ensure they follow current recommendations.