

Technical Bulletin

Silicone Mister Systems in PSA applications

PSA (pressure sensitive adhesive) and duct like each other way too much: they tend to stick together whenever they meet. This creates challenges to companies conveying scrap PSA through a pneumatic waste handling system.

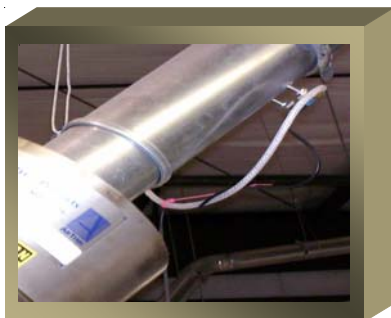
When used in the proper manner, pure silicone is the best agent to solve this issue. However, in today's economy, companies may be tempted to look for short term "cheaper" alternatives. In the long run these will ultimately cost more.

Case History No. 1

A large Southwestern printer/ converter of PSA paper, poly and film used a diluted form of silicone cut with naphtha. It was cheaper per bucket than the pure silicone. However, they were experiencing regulator leakage and system performance problems. An investigation identified naphtha as the destroyer of the seals in the regulator adjustment creating the leak.

Plus, the concentration of silicone per volume in the mixture was so low that more than an equivalent amount of pure silicone was used, yet the waste handling system still had performance problems. When the company began using the recommended pure, food grade silicone in conjunction with the correct mister applicator, their issues were eliminated.

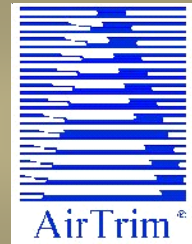
Installed
Model
2000
Silicone
Mister
System



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Case History No. 2

A large, international company located in a Mid-Atlantic state was using standard vegetable oil spray to convey their PSA chopped trim pieces through their duct into their separator. However, they reported using **(55) Gallons of oil every 3-4 weeks** and still their separator, duct and components were coated with a mixture of dust, dirt, small trim pieces and oil, rendering the separator and system unusable. The vegetable oil putrefied, clogging the separators and duct. The silicone mister system that replaced their oil mist system uses approximately **(5) Gallons of silicone every 3-5 months**, depending on production runs - **a reduction of approximately 98%**.



Summary

AirTrim's research into pressure sensitive adhesive applications started in 1999. In perfecting the Matrix Removal Systems, AirTrim experimented with almost everything from soapy water to silicone plus a wide variety of application and delivery methods.

The results show that the most reliable, highest performing and economical system is AirTrim Model 2000 applicator coupled with pure dimethylpolysiloxane or silicone at 350 centistokes (the FDA testing level that is certified food grade).

AT182-09-2