

Technical Services NOCOLOK[®] **Flux Product Range (SFD-AN)** Hans-Böckler-Allee 20 · D-30173 Hannover Telefon: +49 / 511 / 857-3329 · Telefax: +49 / 511 / 857-2166

NOCOLOK[®] Flux – TECHNICAL INFORMATION

NOCOLOK[®] Flux Powder Transport – Bulk Handling Systems

The following text provides some general information on powder transport (conveying) systems for handling NOCOLOK[®] Flux in bulk quantities. These recommendations are based on the experience from Solvay's flux production.

The first, and most important factor to consider, is the distance the powder needs to be conveyed. For short distances, 0.3 - 3 meters (1 - 10 feet), a screw conveyor can be used. It is advisable to keep a screw conveyor as short as possible! This equipment should be made of 316L SS and will see some abrasion over time. 316 SS has molybdenum as an alloying element, which helps to extend the life of the screw and trough. Also, lining the trough with UHMWPE (Ultra High Molecular Weight Polyethylene) sheet will reduce friction and wear.

For longer distances, i.e., up to 60 meters (up to 200 feet), a *dilute phase vacuum* pneumatic transport system works well. There are many manufactures of pneumatic transport systems world wide. It is simple and cost effective. Because it is dilute and *not* dense phase, 304L SS pipes can be used from one point to the other. Such a system is set up as follows:



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The vacuum filter receiver is an air/ solids separation device. Such a system requires little maintenance. The piping needs to be of sufficient diameter to minimize wear and abrasion (7.5 - 10 cm; 3 - 4 inch). The elbows need to be long radius or sweeps. Such sweeps will need to be cleaned out every few years (depending on amount transported through the pipe, humidity, etc.) and may need to be replaced over longer periods of time (7 - 10 years) due to abrasion wear.

18th October 2000

SFD-AN (HSy)