FILLERS AND POTTING COMPOUNDS

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DEVELOPMENT DIVISION

OCTOBER - DECEMBER 1971

Normal Process Development
Endeavor No. 201

MASTER

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This project is a continuing review of materials and process techniques.

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Acct. No. 22-2-44-01-201

Section B

FILLERS AND POTTING COMPOUNDS

ABSTRACT

The work this period concentrated on packaging RTV silicone fluids in a commercially purchased package-bag. The samples will be stored for a period of six months at ambient temperature.

DISCUSSION

The TRA-CON^a Bipax Package consisted of a polyethylene bag with a plastic clip inserted near the center with both ends being open (Fig. 1). These packages may be purchased in various sizes; however, only the packages listed below were investigated.

Size #1

- Width 3-1/2 inches
- Overall length 8-1/2 inches
- Length of end of bag to clip 3 inches
- Amount of resin 100 g
- Amount of catalyst 10 g

Size #2

- Width 3-1/2 inches
- Overall length 10 inches
- Length of end of bag to clip 3-1/2 inches
- Amount of resin 200 g
- Amount of catalyst 20 g

LOADING PROCESS

The desired amount of 93-119 resin was placed into the larger compartment of the bag. At this point one must use caution so that none of the resin touches the upper edge of the bag that is to be sealed. The edge of the bag is placed in the jaw of the heat sealer to receive the seal. The same procedures were observed while filling the opposite end (smaller compartment) with catalyst.

HEAT SEALING PROCESS

The sealing equipment used in this study was the "Vertrud Thermal Impulse Heat Sealer," Model 12-MG. The dwell was set to zero (0) and the heat to ten (10). The heat sealer was placed on a work bench in a horizontal position, so that the bag could be held in a vertical position while its edge was being placed in the jaw of the sealer. Because the bag consisted of such a heavy and rigid gauge of film, three pressings (seals) had to be applied in order to get an impervious seal. It was also noticed that after sealing eight or ten packages the sealing

^aTrade name

jaws became overheated and melted the seal. To compensate for this heat variance, the dwell was moved forward in increments of 1 unit on the dwell meter until the sealer failed to produce a tight seal, then the sealer was shut-off and allowed to cool for 15 - 20 minutes.

The diffusion and proper sealing of the bag walls did not occur where either resin or catalyst came in contact with its side.

STORAGE

The silicone filled packages will be stored for six months (ambient temperature), and during this time the packages will be observed for leakage and cured material in the area of the clip. These samples will be stored lying flat, therefore, those samples on the bottom will be the ones most susceptible to leakage.

CONCLUSION

Because of the rigid film of the Bipax Bag, it is doubtful that this method of packaging silicones will develop into an acceptable process. To enhance this process, a more pliable bag should be incorporated into the packaging system.

Fig. 1. TRA-CON Bipax Package