

REPORT

2006 / 2

News about

EPOXY
CHEMISTRY

COMPOSITE
PROCESSES

FABRICATORS

PRO-SET® Updates

The complete PRO-SET literature packet is now available on CD. The CD contains information on all of the PRO-SET products, including the newest standard products. A section also includes data sheets for all of the current Custom Product combinations. All of the Product Data Sheets are in PDF format, so they can be opened and viewed on virtually any computer with a web browser or a PDF reader.

The CD contains a selection of photos of our customers' products. There are planes, sail and power boats, and even a spaceship included in the photos.

The CD uses the same format as the web site, so navigation to the desired information is simple and quick. The Technical Data Sheets are in PDF format and are compatible with both PC and Macintosh computers. Call us at 888-377-6738 or email us at info@prosetepoxy.com for your copy.



Also, if you haven't been to our PRO-SET website in awhile, you are in for a pleasant surprise! We have given the website a much-needed upgrade.

This easy-to-navigate style should help viewers figure out nearly everything you've ever wanted to know about our many PRO-SET product combinations. Hovering your cursor over the navigation bar at the top makes various drop-down menus become visible. From there, you can get into the specifics on our Standard & Custom products. Our technical information section even has a price-per-mixed-pound calculator. . . just plug in the price and weight and the spreadsheet does the rest. www.prosetepoxy.com

Editor
Kay Harley

Design
Jennifer J. Weaver

©2006 by Pro-Set Inc.
Reproduction in any form, in whole or in part, is expressly forbidden without the written consent of the publisher.

PRO-SET REPORT is published by Pro-Set Inc.
PO Box 656
Bay City, MI, 48707 USA
1-888-377-6738
www.prosetepoxy.com

PRO-SET is a registered trademark of Pro-Set Inc.

ISO 9001:2000 certified

000-220

Dust From Sanding or Machining Epoxy

Glenn House, Health & Safety Manager

Sometimes it is necessary, whether it be our own impatient nature or to keep a project on schedule, to quickly proceed to sanding or machining your epoxy project once it is hard. Epoxy that is not yet completely cured, but hard enough to sand or machine and become airborne in the form of a dust particle, is referred to as "green epoxy." When dust from green epoxy is airborne, it is necessary to protect against inhalation and from allowing the dust to settle on unprotected skin. The unreacted material in the airborne dust particles may still have the capability of causing an allergic respiratory reaction or severe respiratory irritation if inhaled. Allowing it to settle directly on unprotected skin (especially when the skin is sweaty with open pores) can likewise cause allergic skin reactions.

Of course, use of disposable gloves is always recommended, even for dust. A simple, approved dust mask can be effective respiratory protection. Sometimes it is possible to filter the air in your workshop to remove the dust, but if that is not feasible, a lightweight body-covering is recommended - even if it is a protective barrier cream. Depending on your specific conditions, a tight fitting pair of safety glasses or safety goggles may also be needed to keep dust from getting into the eyes. Once the epoxy has been allowed to cure for 10-14 days at room temperature or has gone through post cure conditioning (depending on the cure system), the health concerns from the dust are significantly reduced and may pose no more of a health hazard than any other inert respirable dust.

Bulk Adhesive Dispensing Machine

Lynn Sours, GS Manufacturing

As the composites industry continues to advance into new technologies, the demand for turnkey meter-mix dispensing systems for epoxy resins and adhesives has equipment suppliers now offering a variety of systems for the fabricator. The range of the product line from epoxy material manufacturers necessitates that today's dispensing systems will handle a wide range of epoxy products for numerous applications.

Conventional pneumatic-on-electric-drive gear pumping systems are sometimes adequate for resin dispensing, but more sophisticated metering units could be required for adhesives, mainly due to the higher viscosities of the material. Most equipment suppliers offer fixed or variable ratio double-acting piston/extrusion metering systems. These units are all pneumatic, with a single air motor driving the dual proportioning pump fluid sections. Material transfer to the unit is achieved via transfer pumps/ram assemblies for pails or drum usage. Divorced supply hoses feed a pneumatic or manual dispensing valve with a static mixing nozzle for a positive mix of the adhe-

sive. Slower curing material will allow the use of disposable mixers or an air/solvent purge assembly can be added for the cleaning and re-use of these mixers.

In the late 1990s GS Manufacturing, Costa Mesa, CA developed a simple operator-friendly meter-mix dispensing system designed for low or ultra high flow rates when using high viscosity adhesives. A single pneumatic drive motor powers dual gerotor (GEnERATED ROTOR) pumps that are connected to the drive assembly via gears and chain. This allows the fabricator to make small ratio adjustments, if required, by changing a gear on one of the gerotor pumps. Overall flow rates are initially controlled by the gear combination on the drive assembly. This unit is sold for virtually all epoxy resin and adhesive applications, with a variety of transfer/feed combinations available. Accurate, continuous, uninterrupted flow with no pulsation of adhesive and hardener and precise mixing with high flow capability are the key features of this proportioning unit.



Each metering system is custom designed for the particular application required by the fabricator. The modular dispensing valves equipped on the GS system allow the use of a variety of mixers for various flow rates and materials, giving the option of material bead size from 1/6" to 2". Control of the material back-pressure from the pumping system through the hoses, valve, and mixer have been addressed to minimize any lead-lag of adhesive or hardener when laying down material. The operator can easily perform ratio checks by attaching the GS ratio head on the front end of the dispensing valve for accurate monitoring of material ratio at actual system operating pressures.

This pump can be specified and purchased directly through GS Manufacturing (www.gsmfg.com, 949-642-1500) or from Pro-Set Inc., 888-377-6738.

NOTE: If you would prefer to receive future issues of the PRO-SET REPORT digitally, send an email to JJW@prosetepoxy.com. Type PRO-SET REPORT in the subject line, and list all of your contact information (name, company, mailing address, email address) in the text of the email. Including all of your information will ensure that we locate, and remove, your contact information from our mailing database.

Pro-Set Inc.
P.O. Box 656
Bay City, MI 48707

PRO-SET