



*NASSCO Environmental Instruction #6:*

# Environmental Requirements for Polyester Resin and Fiberglass Work

The use of polyester resins and associated solvent usage are very closely regulated by the San Diego Air Pollution Control District. Since these operations are subject to strict local and federal laws, polyester resin usage at NASSCO is required to be carefully controlled at all times to ensure compliance. Furthermore, operations that generate fiberglass-containing dust, such as sanding, grinding, cutting, must also be controlled. For questions about these or any other NASSCO environmental requirements, call 619-544-7506.

## Before You Begin

### **NASSCO Approval**

Your company may not perform fiberglass layup, use polyester resins, or perform operations which create fiberglass dust at any NASSCO facility without first applying for and obtaining approval from the Environmental Engineering Department to conduct this activity. Separate approval must be obtained for each polyester resin job conducted (one per ship). To apply for approval, a completed and signed copy of "[NASSCO Environmental Form #6: Request for Authorization to Use Polyester Resins or Fiberglass Work](#)" to the NASSCO Environmental Engineering Department at [Envreports@nassco.com](mailto:Envreports@nassco.com) or fax to 619-744-1088. You may not begin this activity until approval has been received from the Environmental Engineering Department.

### **Permits**

Most polyester resin application activities require a permit from the San Diego Air Pollution Control District (SDAPCD). Your company is responsible for obtaining and maintaining a valid permit for polyester resin application, as required by the SDAPCD. For more information about permit requirements, contact SDAPCD at 858-586-2600, or visit [www.sdapcd.org](http://www.sdapcd.org)

Before beginning polyester resin application at NASSCO, you are required to provide a copy of your current, unexpired SDAPCD permit to the Environmental Engineering Department. Some polyester resin applications do not require a permit. If your activities have been determined to be exempt from the requirement to obtain a permit, you are responsible for maintaining any documentation required by SDAPCD to demonstrate that the exemption applies.

If your company proposes to establish a designated workstation for machining of fiberglass within NASSCO's facility, you are required to contact SDAPCD to determine if a permit will be required, and if so, obtain the permit before beginning these activities. Small, incidental fiberglass trimming, grinding, cutting, and sanding operations (using hand tools) conducted aboard vessels and outside of designated workstations will not require a permit, however, the dust emissions from these operations must be controlled.

## Air Pollution Regulations

Whether or not your polyester resin activity requires a permit, your activities must comply with the applicable rules established by the SDAPCD. SDAPCD Rule 67.17 requires that containers and waste drums holding VOC-containing material must remain closed when not actively adding or removing material. SDAPCD Rule 67.12 contains specific conditions designed to limit emissions of Volatile Organic Compounds (VOC) from polyester resin operations; this rule also establishes material handling and recordkeeping requirements. For most products, the APCD has limited the amount of monomer (styrene, for example) that can be used, as summarized below:

Material	SDAPCD Rule 67.12
Polyester Resin Material	Monomer content must not exceed 35 percent by weight <b>OR</b> ; Use a vapor suppressed resin such that the weight loss from VOC emissions does not exceed 60 grams per square meter of exposed surface area during resin polymerization
Pigmented Gel Coats	Monomer content must not exceed 45 percent by weight
Clear Gel Coats	Monomer content must not exceed 50 percent by weight
Corrosion-resistant or Fire Retardant Resin	Monomer content must not exceed 50 percent by weight
Cleaning Materials (Solvents)	If more than 0.5 gallons per day of this material is used, one of the following must be true: <ul style="list-style-type: none"><li>• Material contains less than 200 gram/liter of VOC</li><li>• Material has an initial boiling point of &gt;190°C</li><li>• A VOC reclamation system is in use</li></ul>

Your company is responsible for complying with these rules by purchasing products that comply with the VOC and/or monomer limits and for training employees in the proper use of materials and recordkeeping requirements.

## Material Safety Data Sheet Product Review

Before any chemical product (including resins, gel coats, cleaning materials, and solvents) can be brought into NASSCO, the product must be reviewed and approved by the NASSCO Safety Department. This is accomplished by submitting a Material Safety Data Sheet (MSDS) and Review Form to the Safety Department. The product must not be brought on-site until you have received confirmation that the Safety Department has approved the product. For more information, contact NASSCO's Safety Department at 544-8444.

## Work Practices

You are responsible for educating your employees and subcontractors on the applicable environmental requirements associated with polyester and fiberglass operations, including the following:

## **Closed Containers**

SDAPCD Rule 67.12 requires the use of self-closing containers for storage of polyester resin materials. To minimize emissions of VOCs, SDAPCD Rule 67.17 and NASSCO policy requires that any container holding resins, gel coats, solvents, wastes, or other VOC-containing material be kept closed unless a person is in the act of adding or removing material. All "in-use" containers must be within line of site of the person using the container. All persons who handle paints, solvents or other VOC-Containing material must be trained on NASSCO's Paint and Solvent Container, Best Management Practice #202.

## **Container Management**

All containers of resin, gel coats, solvents, and other hazardous materials are required to be clearly and correctly labeled as to contents at all times, according to Best Management Practice #401 on Container Labeling. Should a container become damaged such that it can no longer be sealed properly or risks release of vapors of material, it must be removed from service. The contents can be transferred to an appropriate secondary container and labeled with a new product safety label (available from the Safety Department). All secondary containers must be capable of being completely sealed and compatible with the material being stored. Intentional damage to containers, such as puncturing the lids, is prohibited. Empty containers shall be sent to the hazardous waste collection area.

## **Fiberglass Machining**

If your company is performing fiberglass machining (cutting, drilling, sanding, etc.) at a fixed location, your company is required to adhere to the conditions of your SDAPCD permit, which will likely require that these operations be conducted in a sealed enclosure equipped with air pollution control equipment. If your company is performing incidental fiberglass machining using hand tools aboard a vessel, you are required to use a controlled process to prevent the release of dust from these activities. This may be accomplished by enclosing the operation and using vacuum devices or water sprays, or other techniques designed to prevent release of dust.

## **Recordkeeping**

Daily records must be maintained of the amount and type of each material used, as well as the VOC, monomer, and CFC content, and any other records necessary to demonstrate compliance with Rule 67.12.

## **Waste Management**

Waste resins, gelcoats, solvents, and contaminated work materials (paint brushes, rags, consumables, etc.) must be disposed of properly; it is prohibited to discard these materials into the trash. In most cases, NASSCO will provide hazardous waste drums and labels to its direct subcontractors to allow for proper disposal. Your company is required to follow all applicable laws as well as NASSCO procedures for handling, transportation, and disposal of hazardous waste. For additional information regarding hazardous waste disposal, refer to "*Environmental Instruction #7: Generation, Disposal, or Transportation of Hazardous Waste.*"

## **Spills or Environmental Releases**

Spills and releases of chemicals, including resins, gel coats, and solvents, must be immediately reported to NASSCO Security 619-544-8401 according to NASSCO's spill reporting policy, as outlined in NASSCO's Best Management Practice #102.

### **Compliance Certification and Monthly Usage Reporting**

At the end of each month, all contractors performing polyester resin application are required to certify as to their compliance status using a "Title V Monthly Air Compliance Certification Form." Additionally, a summary of polyester resin material usage must be submitted to NASSCO using the reporting form provided (or approved equivalent). The signed forms must be sent to Environmental Engineering at [envreports@nassco.com](mailto:envreports@nassco.com) or faxed to 619-744-1088.