Job Placement and Medical Service.

Employees should be screened before they are placed on epoxy resin work to exclude those who are known to have sensitivity or allergy to irritants as well as those who are prone to acne or eczema.

Whenever dermatitis develops due to epoxy resin exposure, the employee should be sent immediately to the nurse or plant physician with a note to indicate there has been exposure to epoxy resin. The decision regarding whether the employee should be placed on temporary or permanent restriction away from epoxy should be left to the physician.

To summarize, basic resins, reactive curing agents, diluents, and modifiers are mild to strong summary skin irritants. Some have sensitizing properties.

Volatile materials given off during compounding, handling, and curing operations irritate the eyes, nasal passage and lungs, if excessive.

Certain fillers used in epoxy mixers are skin irritants and may have harmful effects on the lungs if the exposure is excessive.

Experience has shown that the incidence of dermatitis and systematic injury can be satisfactorily controlled through (1) good engineering, (2) education of the supervisor and worker, (3) good housekeeping, (4) protective equipment and clothing, and (5) job placement and medical service.

Hazards Associated With the Use of Organic Solvents.

Twenty-five years ago there were only a few dozen organic solvents commonly used in industry.

Today, hundreds of different solvents and solvent blends are in use not only in industrial plants but in commercial establishments, laboratories, offices, and the home. Typical applications include degreasing metal parts; extraction of fats, oils, and waxes; dry cleaning; formulation of paints, varnishes, and lacquers; paint removers; adhesives, and manufacture of synthetic fabrics, insecticides and cosmetics.

The use of organic solvents presents three potential hazards:

1) *Health*
2) *Skin Irritation* (Dermatitis)
3) *Fire and Explosion*

Health Hazards.

The extent of the health hazard depends on several factors: relative toxicity of the material, how it is to be used, how the worker is exposed and vapor concentration.

Toxicity refers to the harmful systemic effects resulting from the inhalation of vapors or from absorption through the skin. These include effects on the upper respiratory passages, lungs, and the nervous and digestive systems.

All organic solvents are potentially injurious to the health of workers unless used with proper and adequate controls.

"Threshhold limit values" recommended by the American Conference of Governmental Industrial Hygienists are the generally accepted guide to toxicity. The threshhold limit value for a particular solvent indicates the maximum vapor in air concentration to which most workers can be repeatedly exposed day after day without ill effects.

Following are threshhold limits for some commonly used solvents:

Solvent	*Parts Per Million*
Acetone-Ethyl alcohol	1000
Petroleum naphtha-Stoddard Solvent	500
Methyl chloroform	350
Coal tar naphtha-Methyl alcohol-Toluene	200
Trichlorethylene-Perchlorethylene-Turpentine	100
Carbon disulfide	20
Carbon tetrachloride	10

Since threshhold limit values may be based on various effects including discomfort, respiratory irritation, narcosis, as well as acute poisoning, they should not be used for a direct comparison of toxicity.

Short exposure to some solvent vapors can produce eye and respiratory irritation, drowsiness, dizziness, nausea, headache, and lack of muscular coordination, but cause no lasting and harmful systemic effects.

Others, such as carbon tetrachloride and benzol, may seriously affect or damage the blood, lungs, liver, kidneys, and gastro-intestinal tract and may cause permanent damage.

Acute solvent poisoning results from breathing high concentrations of solvent vapors for a short period of time. Such exposures may result from accidental spil-