

4. PRODUCTION, IMPORT, USE, AND DISPOSAL

4.1 PRODUCTION

Stoddard solvent is a chemical mixture containing hydrocarbons that range from C₇ to C₁₂ with the majority of hydrocarbons in the C₉-C₁₁ range (Air Force 1989b; Rothman and Emmett 1988). The hydrocarbons composing Stoddard solvent are 30-50% alkanes, 30-40% cycloalkanes, and 10-20% aromatics (Air Force 1989b; McDermott 1975). Stoddard solvent is considered to be a form of mineral spirits, white spirits, and naphtha; however, not all forms of mineral spirits, white spirits, or naphtha are considered to be Stoddard solvent. Stoddard solvent is produced from straight-run distillate of paraffinic or mixed base crude oil (Air Force 1989b; Rothman and Emmett 1988) and must meet the specifications of the American Society for Testing and Materials designation for Type I mineral spirits (Stoddard solvent) (ASTM 1988, 1992). In 1990, the production volume of Stoddard solvent was 38,325,834 pounds, down from a volume of 74,851,222 pounds in 1986 (EPA 1992). The U.S. companies that produce and/or distribute Stoddard solvent are Ashland Chemical, Inc.; R.E. Carroll, Inc.; Chemcentral Corporation; Coyne Chemicals; Holtrachem, Inc.; MacArthur Petroleum and Solvent Company, Inc.; TEXACO Chemical Co.; Unocal Chemicals; and Van Waters and Rogers, Inc. (Hunter et al. 1992; Van and Deyrup 1992). Since Stoddard solvent is not required to be reported under SARA Section 313, there are no data for this compound in the 1990 Toxics Release Inventory (TRI90 1992).

4.2 IMPORT/EXPORT

No information regarding the import or export of Stoddard solvent was located.

4.3 USE

Stoddard solvent is a multipurpose petroleum solvent (McDermott 1975). Industrial uses include paint vehicles; thinning agent for paints, coatings, and waxes; printing inks; adhesives; and as a solvent in liquid photocopier toners (Air Force 1989b; McDermott 1975). Stoddard solvent is commonly used at air fields as a degreaser for precision engine parts in machine shops and in automotive repair applications.

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4.4 DISPOSAL

Disposal of Stoddard solvent should be in accordance with government regulations for the disposal of petroleum distillates (IRPTC 1985; MSDS-CCOHS 1992). Stoddard solvent has been designated as a hazardous waste by the Department of Transportation and, as such, should not be poured down domestic sewage drains. Carefully controlled incineration is one recommendation for proper disposal. Authorized disposal services should perform or oversee the reclamation procedure (MSDS-CCOHS 1992). Recycling, of course, is an alternative to disposal, and since recycling is a suggested waste management technique for petroleum distillates, it should apply to Stoddard solvent as well (IRPTC 1985).