

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 16 1987

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Sylgard - Requested New Uses
EPA Registration No. 34292-3 (Dow Corning
Sylgard Antimicrobial Treatment 42% ai in
50% Methanol) - Amended Statement of Use

Caswell No. 892B

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*DBK
12/29/86
11/16/87*

Background:

Dow Corning Company has previously obtained registration of Dow Corning 5700, Sylgard for various uses which include carpets, draperies, basement walls, and upholstery.

The new uses requested include ceilings, roofs, siding, patios, ceramic driveways.

Recommendation and Comments:

1. Toxicology Branch (TB) defers to the Exposure Assessment Branch with regard to possible ground water, sewer, river, and stream contamination from the requested new uses.

Note: Further environmental degradation information may be necessary to support these additional uses.

2. TB has received homeowner complaints concerning the irritating properties of the solvents (vapors) following use of these products in the home. Whether use directions were strictly followed or not was not determined in these cases.

However, TB calculations of possible methanol concentrations in room air following a 1% w/w of 50% methanol were found to exceed OSHA standards for the workplace, i.e.,

Volume of room:

14' x 24' x 8'

37 yd² x 8 ft ceiling = approx. 100 m³

100,000 liters = 100 m³

Estimation of methanol:

Carpeting weights ranged from 35 oz to 50 oz/yd²;
therefore 35 oz x 37 yd² = 1295 oz = 81 lb

50 oz x 37 yd² = 115 lb

1 percent = .81 lb - 1.15 lb x approx. 1 pint/lb

Therefore, at 1 percent treatment, methanol could be present at 367 g to 522 g in the room at 3.67 mg/L to 5.22 mg/L.

$$\text{ppm} = (\text{mg/L}) \frac{(24450)}{(32 \text{ g/mole wt})}$$

The resulting solvent/methanol vapors could range as high as 2800 to 3980 ppm in the room. These values are outside the realm of toxicologically acceptable levels. Therefore, active means (fans) must be used to eliminate the methanol or other solvent vapors following treatment of carpeting or from other registered uses in the home, or enclosed environments.

3. Provided the above two concerns (1,2) are satisfactorily addressed, TB does not foresee a concern at this time.