

Production of Carbitol

INTRODUCTION

Carbitol or Diethylene glycol ethyl ether (DEGEE) is colorless liquid with faint, sweet, pleasant odor and bitter taste. Its boiling point is relatively high and vapor pressure and evaporation rate low. Like most glycol ethers, DEGEE has very good solubility and mixes completely with water and with both polar and non-polar solvents.

In 1993 DEGEE was registered as an ingredient in 178 Swedish chemical products, and estimated annual use was just under 500 tons of pure substance. The major area of use was as solvent, but the substance was also used in paint, varnish, cleaners and binders. In Sweden DEGEE is not used in pharmaceuticals or non-prescription diet supplements, but does occur in cosmetics and skin care products (personal communication, Cecilia Ulleryd, Swedish Medical Products Agency, Nov. 15, 1996).

In the United States, DEGEE was reported to occur in 80 cosmetic preparations in 1981. The substance, under the name Transcutol®, is used in skin medications and it has also been found in chemical air fresheners for consumer use. The use of DEGEE in Sweden increased rapidly from 1985 to 1992, and in the following year as well. DEGEE, along with mono-(EGBE) and diethylene glycol butyl ether (DEGBE), have been identified as the solvents most widely used in water-based paints and varnishes . Global use in 1993 was estimated to be 31,000 tons.

Some of the common names for carbitol

SYNONYMS:	
1. Aethyldiaethylenglycol (German)	13. 2 - (2 - Ethoxyethoxy) ethanol
2. Carbitol	14. Ethyl carbitol
3. Diethylene glycol ethyl ether	15. Ethyl diethylene glycol
4. Diethylene glycol monoethyl ether	16. Ethyl digol
5. Diglycol monoethyl ether	17. Ethylene diglycol monoethyl ether
6. 3,6 - Dioxa - 1 - octanol	18. Karbitol (Czech)
7. 3,6 - Dioxa - 1 - oktanol (Czech)	19. Losungsmittel APV
8. Dioxitol	20. Monoethyl ether of diethylene glycol
9. Dowanol 17	21. PM 1799
10. Dowanol DE	22. Poly - Solv DE
11. Ektasolve DE	23. Solvolsol
12. Ethoxy diglycol	24. Transcutol