

(14) 3,3-dimethyl-2-butanol, C₆H₁₄O
CAS No. 464-07-3
HS No. 29.05.19.00
NIOSH/RTECS No. EL2276000

Synonyms: Pinacolin alcohol, pinacolyl alcohol,
methyl t-butylcarbinol

Physical Characteristics: MW: 102, mp: 5.6°, b.p: 121°,
n²⁰_D1.4150, d._{0.812}, S Form (1517-67-5) [a]_D²⁰ + 7.71, sparingly
soluble in water.

Synthesis: Prepared by the reduction of pinacolone
(3,3-dimethyl-2-butanone; 75-97-8) that is readily available by
the dehydration of pinacol hydrate (Coll. Org. Syn. Vol. 1 pp.
459 and 462, John Wiley and Sons, N.Y., 1964). It can also be
prepared by the grignard reaction of acetaldehyde and t-butyl
magnesium bromide (R.H. Pickard et. al, J. Chem. Soc., 105, 1120,
1914).

Toxicology: No detailed information available.

Uses: No substantial industrial use at present.

Suppliers: Two suppliers are listed, one in the United States
(1) and the other in Germany (1).

Literature Survey: A literature review was presented to the
Conference on Disarmament in 1989 as CD/CW/WP.259. The survey of
Chemical Abstracts covered the period 1975-1988 and it produced
134 references from 24 countries. About 12% resulted from
industrial research and 5% of the references were patent
applications. The bulk of the research, 40%, originated in the
United States as did half of the patent applications. Major
potential interests involve the petrochemical and pharmaceutical
industries.