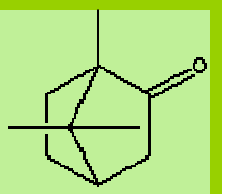
CAMPHOR



PRODUCT IDENTIFICATION	
CAS NO.	76-22-2
EINECS NO.	200-945-0
FORMULA	$C_{10}H_{16}O$
MOL WT.	152.24
H.S. CODE	2914.21
TOXICITY	
SYNONYMS	2-Camphanone; 2-camphonone; 2-Bornanone; 1,7,7-Trimethylbicyclo[2.2.1]-2-heptanone; 1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one; Caladryl; 2-Kamfanon; 2-Keto-1,7,7-trimethylnorcamphane; 2-Oxobornane; Huile de camphre (French); Kampfer ([German); 1,7,7-Trimethylnorcamphor;
DERIVATION	pinene
CLASSIFICATION	

PHYSICAL AND CHEMICAL PROPERTIES	
PHYSICAL STATE	White crystals
MELTING POINT	174 - 179 C
BOILING POINT	204 C
SPECIFIC GRAVITY	0.992
SOLUBILITY IN WATER	Insoluble
pH	
VAPOR DENSITY	5.24
AUTOIGNITION	870 C
NFPA RATINGS	
REFRACTIVE INDEX	
FLASH POINT	
STABILITY	Stable under ordinary conditions

GENERAL DESCRIPTION & APPLICATIONS

Camphor is a white crystalline bicyclic saturated terpene ketone with a characteristic pungent odor and taste,that is flammable and volatile; melting at 176 C, boiling at 204°C and specific gravity 0.992. It is insoluble in water but soluble in alcohol, ether, chloroform, Benzene, carbon disulphide and other solvents. Camphor was formerly obtained from the wood of the Taiwanese camphor laurel tree (cinnamomum camphora), but now is synthesized from pinene which is obtained by refining crude turpentine oil. It is used as a plasticizer in the manufacture of celluloid film and some lacquers. It is used as an insect repellent and in pyrotechnics. It provides cooling effect when applied to the skin. It is applied topically to the skin as well as in pharmaceuticals as an antipruritic and anti-infective. It is used for rubefacient preparations in medicine to relieve mild pain and itching. Other rubefacients include benzyl nicotinate, methyl and ethyl salicylate, glycol salicylate, methyl nicotinate, capsaicin and capsicum oleoresin. Camphor is also an ingredient in cough remedies, ear drops, and preparations for the removal of corns and verrucas. Camphor similar compounds include:

Anethole (Anise Camphor): a white crystals anise oil similar odur; melting point 22.5 C; slightly soluble in water; light sensitive. It is btained from anise and fennel oils and other sources, or prepared synthetically. It is used in perfumes and flavors and as a flavoring agent for drugs. It is used as a sensitizer in color-bleaching processes in color photography.

Menthol (Peppermint Camphor):) a white crystalline compound with a characteristic pungent odor; freely soluble in alcohols, ether, and chloroform. It is obtained from mint oils (mainly peppermint) or made synthetically from coal tar. It exists in levo or dextro isomer forms. Menthol imparts a tingling sensation to the skin and used in skin fresheners like after-shave and suntan lotions. It has a local anesthetic property for short-term relief of minor sore throat and minor muscle aches. It is used in medicines and perfumes, and as a mint flavoring agent. End applications include toothpaste, cough drops, ice cream, chewing gum, shampoo, medical plaster.

Thymol (Thyme Camphor): a white crystals with camphor like odor, is a phenolic compound obtained naturally from thyme oil (or other volatile oils) or prepared synthetically. It is very slightly soluble in water; soluble in paraffin oil and alcohol. It is used as a stabilizer in pharmaceutical and as a topical antiseptic, antibacterial, and anti-fungal agent. It is also used as a flavoring agent for drugs (camphor, herbal, wintergreen,disinfectants, origanum)

SALES SPECIFICATION	
TECH GRADE	
APPEARANCE	white crystals
CONTENT	96.0% min
MELTING POINT	168 - 179 C
NONVOLATILES	0.5% max
BP/USP	
APPEARANCE	white crystals
CONTENT	96.0% min
OPTICAL ROTATION	-1.5 ~ +1.5 °
MELTING POINT	172 - 180 C
TRANSPORTATION	
PACKING	25kgs in cardboard
HAZARD CLASS	4.1 (Packing group: III)
UN NO.	2717

OTHER INFORMATION

Hazard Symbols: XI F, Risk Phrases: 11-20/21/22-36/37/38, Safety Phrases: 16-26-36

GENERAL DESCRIPTION OF TERPENE

A class of naturally occurring compounds mainly in plants as constituents of essential oils whose carbon skeletons are composed exclusively of isoprene C5 units ($CH_2=C(CH_3)-CH=CH_2$). Most terpenes are hydrocarbons having molecular formula $(C_5H_8)_n$ in a cyclic or acyclic, saturated or unsaturated structure, while the terpenoids are oxygen-containing analogues of the terpenes such as alcohols, aldehydes or ketones containing hydroxyl groups or carbonyl groups. Several vitamines, hormones, flavour and flagrances and latex are terpenoids. Terpenes containing 30 or more carbons are usually formed by the fusion of two terpene precursors in a regular pattern, usually head-to-tail appears to be violated. They are differ from one another not only in functional groups but also in their basic carbon skeletons. Terpenes are employed mainly the fragrance and flavour purpose, as well as in the pharmaceutical and chemical industries. They are classified by the number of isoprene units: