PROPIOPHENONE

PRODUCT IDENTIFICATION

CAS NO. 93-55-0
EINECS NO. 202-257-6
FORMULA C₆H₅COC₂H₅

MOL WT. 134.18 H.S. CODE 2914.39

TOXICITY

SYNONYMS Ethyl phenyl ketone;

1-Phenyl-1-propanone; Phenyl ethyl ketone; Propionylbenzene;

DERIVATION CLASSIFICATION

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE clear to pale yellow liquid

MELTING POINT

BOILING POINT

SPECIFIC GRAVITY

SOLUBILITY IN WATER

16 - 18 C
214 - 218
1.01
Insoluble

На

VAPOR DENSITY AUTOIGNITION

NFPA RATINGS Health: 2; Flammability: 1; Reactivity: 0

REFRACTIVE INDEX

FLASH POINT 85 C

STABILITY Stable under ordinary conditions

GENERAL DESCRIPTION & APPLICATIONS

Phenylethyl is a structural skeleton found in sympathomimetic amines that have important physiological functions within the body as neurotransmitters in the central nervous system and hormones in the blood circulation. Phenyl ketone structure is found in keto alkaloids such as cathinone, a contributor of stimulant effect. Phenyl ketone is a fuel in the brain.

Propiophenone (Phenyl ethyl ketone) is a useful intermediate to prepare nervous system drugs (anxiolytic and hypnotic drugs). Bupropion is an example which has propiophenone moiety. Bupropion is an aminoketone class antidepressant. Propiophenone is used in the synthesis of ketoamphetamines such as cathinone and methcathinone. Propiophenone can also be converted to synthetic aryl alkenes such as cinnamic acids. some propiophenone derivatives such as paroxypropione (4-hydroxypropiophenone) is a drug called adrenergic beta-antagonist which bind to but do not activate beta-adrenergic receptors thereby blocking the actions of betaadrenergic agonists. Adrenergic beta-antagonists are used for treatment of hypertension, cardiac arrhythmias, angina pectoris, glaucoma, migraine headaches, and anxiety. Propiophenone is a constituent of synthetic perfumes, flavouring agents, and of paints to stabilize other ingredients. Ketones can be made by the oxidation of secondary alcohols and the destructive distillation of certain salts of organic acids. In addition to as polar solvents, ketones are important intermediates in the syntheses of organic compounds such as alkoxides, hydroxyalkynes, imines, alcohols (primary, secondary as well as tertiary), acetals, thioacetals, phosphine oxides, geminal diols, hydrazones, organic sulfite and cyanohydrins. Propiophenone is a clear liquid that is insoluble in water, but miscible with methanol, ethanol, diethyl ether, benzene and toluene.

Butyrophenone is the basic structure of antipsychotic drugs such as droperidol, azaperone, trifluperidol, bromperidol, and haloperidol. Chemical structure of Neuroleptic agents are diverse; including phenothiazines, thioxanthenes, butyrophenones, dibenzoxazepines, dibenzodiazepines, dihydroindolones, and diphenylbutylpiperidines. Antipsychotic agents control agitated psychotic behavior, alleviate acute psychotic states, reduce psychotic symptoms, and exert a quieting effect. They are used in schizophrenia, senile dementia, transient psychosis following surgery or myocardial infarction, etc. These drugs are often referred to as neuroleptics alluding to the tendency to produce neurological side effects, but not all antipsychotics are likely to produce such effects. Many of these drugs may also be effective against nausea, emesis, and pruritus. Some vermicides have hydroxy or methoxy butyrophenone (Desaspidin).

SALES SPECIFICATION	
APPEARANCE	clear to pale yellow liquid
PURITY	98.0% min
MELTING POINT	16 - 18 C
WATER	0.5% max
TRANSPORTATION	
PACKING	200kgs in Drum
HAZARD CLASS	
UN NO.	
OTHER INFORMATION	
Hazard Symbols: XN, Risk Phrases: 22-36, Safety Phrases: 26	