Camlab Limited – Material Safety Data Sheet

1. Identification

Product Code **CC/0127-DH**

Product Name **BUTANONE pure**

Molecular Formula $C_2H_5COCH_3$ =72.11

CAS Number **78-93-3**

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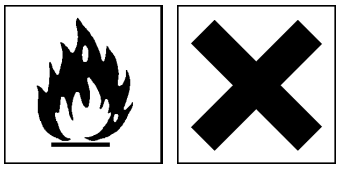
2. Composition

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Methyl ethyl ketone	78-93-3	201-159-0	> 99.0%	F Xi : R11,R36,R66,R67	WEL

3. Hazards Identification



Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

4. First Aid Measures

Eyes: Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.

Skin: Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. If discomfort persists OBTAIN MEDICAL ATTENTION.

Inhalation: Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

Ingestion: If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

5. Fire Fighting Measures

Hazards: Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. Vapour-air mixtures are explosive.

Extinguishing Media: Water spray, foam, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool.

Unsuitable Media: Do not use water jet.

6. Accidental Release Measures

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots.
Enviromental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with copious amounts of water.

7. Storage & Handling

Handling Precautions	Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing. Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions	Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Keep well separated from oxidising agents.

8.1 Workplace Exposure Limits

Workplace Exposure Limits	Long Term (8hr TWA):	200.0	ppm	600.0	mg m-3
	Short Term (15min Period):	300.0	ppm	899.0	mg m-3

8.2 Personal Protection

Respiratory	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.
Hands	Use solvent resistant gloves.
Eyes	Use chemical splash proof glasses or goggles.
Skin	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

9. Physical & Chemical Properties

Appearance	Clear colourless liquid.
Odour	Pungent.
pH	Not available
Boiling point	79.6 °C
Melting point	85.9- °C
Flash point	1.0- °C(Closed cup)
Upper Flammable Limit	11.0 %
Lower Flammable Limit	1.9 %
Auto Ignition	516.0 °C
Explosive properties	Severe in confined spaces.
Oxidising Properties	No.
Vapour Presure	71.2 mmHg @ 20,C
Relative Density	0.8061
Water Solubility	25%

10. Stability & Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
Materials to Avoid	Strong oxidising agents.

10. Stability & Reactivity (continued)

Hazardous Decomposition Products	None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide.

11. Toxicological Information

Eyes	Both the vapour and liquid may, produce conjunctival irritation and corneal damage.
Skin	Both the vapour and liquid may, be an irritant on brief or occasional exposure. Repeated or prolonged contact may defat the skin producing irritation and dermatitis.
LD50 Skin	Rabbit 13g/Kg
Ingest	Low order of acute toxicity. Ingestion of large amounts will produce gastrointestinal irritation. and central nervous system depression, leading to unconsciousness. Aspiration during swallowing or vomiting may injure lungs.
LD50 Ingest	Oral Rat 3400 mg/Kg
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes and respiratory tract. High concentrations of vapour may produce central nervous system depression and unconsciousness.
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	Some evidence for foetoxicity and tetragenecity has been observed in experimental animals
Other Information	Odour is noticeable at 25ppm and intensely irritating at 350ppm.

12. Ecological

Bio-oxidation as a % of Theoretical O2 Demand (ThOD) - ThOD 2.44 gm/gm : Fresh water 5 days 76%, 20 days 89% : Salt water 5 days 32%, 20 days 69%. Unlikely to bio-accumulate. Material is practically non-toxic to fish on an acute basis (LC50 > 100mg/l.

13. Disposal Considerations

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems due to high risk of explosion.
Contaminated Packaging	Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion.

14. Transport Information

Proper Shipping Name	Methyl Ethyl Ketone
UN Number	1193
UN Classification	3 Flammable liquid
Subsidiary Risk	None
Flash Point	1.0- °C(Closed cup)
Packing Group	II
Transport Category	2
Marine pollutant	No
ADR Hazard ID	33

15. Regulatory Information

Labelling Classification	Highly Flammable, Irritant.
Label Symbols	F

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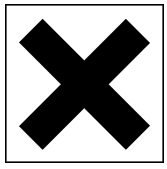

15. Regulatory Information (continued)

Risk & safety Phrases	Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness. Keep out of reach of children. Keep container in a well ventilated place. Keep away from sources of ignition - No Smoking.
EEC Number	201-159-0

16. Other Information

Document Information	This document has been prepared in accordance with directive 88/379/EEC. The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. Revision Date: 20/03/06. Data reviewed and PDF file generated: 17/03/10.