

Samuel Banner & Co. Ltd.

SAFETY DATA SHEET

METHYL ETHYL KETONE

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

PRODUCT NAME: METHYL ETHYL KETONE
PART No.: 0368
APPLICATIONS: Solvent
SUPPLIER: SAMUEL BANNER & Co Ltd
 HAMPTON COURT
 TUDOR ROAD, MANOR PARK
 RUNCORN WA7 1TU
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EMERGENCY TELEPHONE(S): 0207 405 5375 (24 HOUR)

2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	EINECS No.	CAS No.	CONTENTS	SYMBOL	RISK (R No.)
BUTANONE	201-159-0	78-93-3	99-100 %	F, Xi	11, 36, 66, 67

The full text for all R-phrases are shown in section 16

EU INDEX No.: 606-002-00-3
FORMULA: C₄H₈O
CAS No: 78-93-3

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

INHALATION: Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention.
INGESTION: Rinse mouth thoroughly. DO NOT induce vomiting. Get medical attention immediately.
SKIN: Remove affected person from source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention promptly if symptoms occur after washing.
EYES: Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

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5 FIRE FIGHTING MEASURES

- EXTINGUISHING MEDIA:** Alcohol resistant foam. Carbon dioxide (CO₂) Dry chemicals, sand, dolomite etc
- SPECIAL FIRE FIGHTING PROCEDURES:** Keep run-off water out of sewers and water sources. Dike for water control. Cool containers exposed to flames with water until well after the fire is out. Move container from fire area if it can be done without risk. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. If risk of water pollution occurs, notify appropriate authorities. Fires in closed or confined spaces should be tackled by trained personnel who should wear breathing apparatus. Prevent fire run-off water from entering drains, sewers or natural water courses.
- UNUSUAL FIRE & EXPLOSION HAZARDS:** May explode in a fire. May develop highly toxic or corrosive fumes if heated. May travel considerable distance to source of ignition and flash back. Vapour explosion and poison hazard indoors outdoors and in sewers. Vapours may give explosive mixture with air at temperatures below normal room temperature. Run off to sewer may cause a fire or explosion hazard.
- PROTECTIVE MEASURES IN FIRE:** Wear suitable respiratory protection when dealing with a fire.

6 ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS DURING SPILL:** Wear appropriate protective clothing and respiratory protection
- PRECAUTIONS TO PROTECT ENVIRONMENT:** Do not let the product or washing down water enter natural water courses or the sewers. Inform relevant authorities if this occurs
- SPILL CLEANUP METHODS:** Clean-up personnel should use respiratory and/or liquid contact protection. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Runoff or release to sewer, waterway or ground is forbidden. Collect with absorbent, non-combustible material into suitable containers. Do not contaminate water sources or sewer. Spray vapour or mist can be a potential fire or explosion hazard. Use personal protective equipment

7 HANDLING AND STORAGE

- USAGE PRECAUTIONS:** Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well. Avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Avoid acids, moisture, and combustible materials
- USAGE DESCRIPTION:** Storage tanks must be positioned within bunded area
- STORAGE PRECAUTIONS:** Flammable/combustible - Keep away from oxidizers, heat and flames. Keep in cool dry, ventilated storage and closed containers. Protect from light, including direct sun rays. Ground container and transfer equipment to eliminate static electric sparks
- STORAGE CRITERIA:** Flammable liquid storage

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENT NAME	CAS No	STD	LT EXP (8 hrs)	ST EXP (15 min)
BUTANONE	78-93-3	OES	200 ppm(Sk)	300 ppm(Sk)

PROTECTIVE EQUIPMENT:



- PROCESS CONTROL MEASURES:** Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. Wash all splashes from the skin immediately.
- VENTILATION:** Provide adequate general and local exhaust ventilation.
- RESPIRATORS:** CCROVF, CCR with organic vapour respirator and full facepiece
- PROTECTIVE GLOVES:** Use protective gloves made of: Butyl rubber. P.T.F.E (Teflon). Ensure gloves are manufactured/tested in accordance with BS EN 374. Determined penetration times carried out in accordance with EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time corresponding to 50% of the penetration time is recommended.

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EYE PROTECTION:	Wear approved chemical safety goggles where eye exposure is reasonably probable
OTHER PROTECTION:	Use engineering controls to reduce air contamination to permissible exposure level Provide eyewash station. Wear appropriate clothing to prevent any possibility of skin contact
HYGIENIC WORK ROUTINES:	Promptly remove non-impervious clothing that becomes contaminated DO NOT SMOKE IN WORK AREA! Eating smoking and water fountains prohibited in immediate work area No eating or drinking while working with this material Wash at the end of each work shift and before eating, smoking and using the toilet.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid	COLOUR:	Colourless
ODOUR/TASTE:	Pleasant, agreeable. Acetone, ketone		
SOLUBILITY DESCRIPTION:	Soluble in water Miscible with: Organic solvents (most)		
SOLUBILITY VALUE (g/100g H₂O/20°C):	26.3% wt	MOL WEIGHT (AT WT):	72.12
BOILING POINT (°C):	79 - 81 @ mBar	MELTING POINT (°C):	-86
SPECIFIC GRAVITY (Water=1):	0.81 @ 20 °C	VAPOUR DENSITY (air=1):	2.42
VAPOUR PRESSURE:	9.99kPa @ 20 °C	EVAPORATION RATE:	6.00
ODOUR THRESHOLD (lower):	25.00ppm	ODOUR THRESHOLD (upper):	ppm
FLASH POINT (°C):	-5		
FLASH POINT METHOD:	TCC (Tag closed cup)		
AUTO IGNITION TEMPERATURE (°C):	515	FLAMMABILITY LIMIT (lower %):	1.80
FLAMMABILITY LIMIT (upper %):	11.50		

10 STABILITY AND REACTIVITY

STABILITY:	Avoid: Heat, sparks flames. Moisture Light
CONDITIONS TO AVOID:	May form explosive peroxides Strong oxidising agents Avoid heat, flames and other sources of ignition
MATERIALS TO AVOID:	TRICHLOROMETHANE, CHLOROSULPHONIC ACID, HYDROGEN PEROXIDE NITRIC ACID, OLEUM, POTASSIUM-tert-BUTOXIDE

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE1- LD50:	3400.00mg/kg (oral rat)
TOXICOLOGICAL INFORMATION:	CHRONIC:- There is no evidence that exposure to MEK alone causes progressive or irreversible neurotoxic effects. However simultaneous over-exposure to MEK and n-Hexane can potentiate the known irreversible effects of n-Hexane. There is no reported human evidence that these neurotoxic effects occur when exposure to both chemicals is maintained below established EH40 OES limits
HEALTH WARNINGS:	Gas or vapour is harmful on prolonged exposure or in high concentration. This chemical may cause skin/eye irritation and burns (corrosive) Irritant of eyes and mucous membranes CNS depressant Repeated exposure may cause chronic eye irritation. Acute eczematous dermatitis, contact type erythema oedema, papules, vesicles bullae crusts desquamation) Swallowing concentrated chemical may cause severe internal injury Unconsciousness. death.
ROUTE OF ENTRY:	Inhalation Ingestion Skin and/or eye contact
TARGET ORGANS:	Central nervous system Eyes Gastro-intestinal tract. Respiratory system, lungs Skin
MEDICAL SYMPTOMS:	Extreme irritation of eyes and mucous membranes, including burning and tearing Dilated pupils Rhinitis (inflammation of the nasal mucous membranes) Upper respiratory irritation. General respiratory distress unproductive cough May cause suffocation Severe skin irritation. Nausea vomiting Unconsciousness, possibly death. Central nervous system depression Drowsiness, dizziness, disorientation, vertigo Behavioral changes Hypotension (low blood pressure). Dizziness.
MEDICAL CONSIDERATIONS:	Skin disorders and allergies Convulsive disorders CNS problems

12 ECOLOGICAL INFORMATION

DEGRADABILITY:	This substance is expected to biodegrade rapidly and be biodegradable according to OECD guidelines
WATER HAZARD CLASSIFICATION:	This substance is relatively volatile and will evaporate from water and soil over the course of a few days

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13 DISPOSAL CONSIDERATIONS

GENERAL/CLEANING: Contaminated packages must be completely emptied before sending away for laundering and re-use

DISPOSAL METHODS: Absorb in vermiculite or dry sand, dispose in licensed special waste Confirm disposal procedures with environmental engineer and local regulations.

WASTE CLASS: Special Waste

14 TRANSPORT INFORMATION

LABEL FOR CONVEYANCE:



ROAD:

UN No:	1193	ADR CLASS No:	3
ADR PACK GR:	3b	HAZCHEM CODE:	2YE
CEPIC TEC(R) No:	88		
PROPER SHIPPING NAME I:	ETHYL METHYL KETONE		

RAIL:

RAIL TRANSPORT CLASS No:	3	RID PACK GR:	3b
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SEA:

SEA TRANSPORT CLASS No:	3.2	SEA PACK GR:	II
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AIR:

AIR TRANSPORT CLASS No:	3	AIR PACK GR:	II
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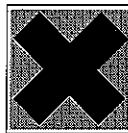
15 REGULATORY INFORMATION

EEC (EINECS) No.: 201-159-0

LABEL FOR SUPPLY:



HIGHLY FLAMMABLE



IRRITANT

RISK PHRASES:

R-11	Highly flammable
R-36	Irritating to eyes
R-66	Repeated exposure may cause skin dryness or cracking
R-67	Vapours may cause drowsiness and dizziness

SAFETY PHRASES:

S-16	Keep away from sources of ignition - No Smoking
S-2	Keep out of reach of children.
S-9	Keep container in a well ventilated place

UK REGULATORY REFERENCES: Highly Flammable Liquid Regulations 1972
Health and Safety at Work Act 1974
The Control of Substances Hazardous to Health Regulations 1988.
Chemicals (Hazard Information & Packaging) Regulations CHIP 3

16 OTHER INFORMATION

USER NOTES:

INFORMATION SOURCES: For further Health and Safety information contact: Health and Safety Officer
Dangerous Properties of Industrial Chemicals 6 edition, N Sax, 1984
OSHA Air Contaminants - Permissible Exposure Limits (Title 29)
Hazardous Materials, Emergency Response Guidebook, DOT-P 5800 3 1984
NIOSH/OSHA Pocket Guide to Chemical Hazards, 1978

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Manufacturer's/Supplier's Health and Safety Literature
REVISION COMMENTS: Amendment to section/s :- (1), (2), (3), (15), (16) Classification, Packaging and Labelling of Chemicals: CHIP 3
REVISION DATE: 12/09/02
REVISION No. /REPLACES SDS ISSUED: 04-06/07/98
R-PHRASES (Full Text):
R-11 Highly flammable
R-36 Irritating to eyes
R-66 Repeated exposure may cause skin dryness or cracking
R-67 Vapours may cause drowsiness and dizziness
SAFETY DATA SHEET STATUS: Approved
DATE: 12/09/02
SIGNATURE: DDalton

DISCLAIMER

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