

Revision Date: 26.07.2010

Revision: 01



SAFETY DATA SHEET BUTANONE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name	BUTANONE
Synonyms, Trade Names	METHYL ETHYL KETONE , MEK, ETHYL METHYL KETONE, BUTAN-2-ONE, MS-3
REACH Registration Number	01-2119457290-43
CAS-No.	78-93-3
EU Index No.	606-002-00-3
EC No.	201-159-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Industrial Solvent
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1.3. Details of the supplier of the safety data sheet

Supplier:	Univar
	Aquarius House
	6 Midpoint Business Park
	Thornbury
	Bradford
	BD3 7AY
	+44 1274 267300
	+44 1274 267306
	sds@univareurope.com

1.4. Emergency telephone number

Emergency Contact Number (Office Hours)	+44 1274 267346
	+44 1274 267346
Emergency Contact Number (Outside Office Hours)	+441865 407333
	+441865 407333
Sds No.	587

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Flam. Liq. 2 - H225
Human health	EUH066; Eye Irrit. 2 - H319; STOT Single 3 - H336
Environment	Not classified.

Classification (67/548/EEC) F; R11 Xi; R36 R66 R67

The Full Text for all R-Phrases and Hazard Statements is Displayed in Section 16

2.2. Label elements

EC No.	201-159-0
Label In Accordance With (EC) No. 1272/2008	

BUTANONE



Signal Word	Danger	
Hazard Statements	H225	Highly flammable liquid and vapour.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
Precautionary Statements	P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P304+341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P311	Call a POISON CENTER or doctor/physician.
Supplemental Label Information (EU)	EUH066	Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Product Name	BUTANONE
REACH Registration Number	01-2119457290-43
CAS-No.	78-93-3
EU Index No.	606-002-00-3
EC No.	201-159-0

Composition Comments

The data shown are in accordance with the latest EC Directives.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures**Inhalation.**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion

Provide rest, warmth and fresh air. Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention.

Skin Contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

Eye Contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention immediately. Continue to rinse.

4.2. Most important symptoms and effects, both acute and delayed

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Inhalation.

Vapours may cause drowsiness and dizziness.

Ingestion

May cause discomfort if swallowed.

Skin Contact

Prolonged contact may cause redness, irritation and dry skin.

Eye Contact

May cause severe irritation to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing Media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable Extinguishing Media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous Combustion Products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Specific Hazards

Oxides of: Carbon.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Dike and collect extinguishing water. Water spray should be used to cool containers.

Protective Measures In Fire

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Follow precautions for safe handling described in this safety data sheet. Do not smoke, use open fire or other sources of ignition. Take precautionary measures against static discharges. Provide adequate ventilation.

6.2. Environmental precautions

Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Absorb with inert, damp, non-combustible material, then flush area with water. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Avoid inhalation of vapours and spray mists. Provide good ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed. Keep in original container. Keep away from heat, sparks and open flame.

Storage Class

Flammable liquid storage.

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7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
BUTANONE	WEL	200 ppm(Sk)	600 mg/m3(Sk)	300 ppm(Sk)	899 mg/m3(Sk)	

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

DNEL	Industry	Dermal	Long Term	1161 mg/kg/day
DNEL	Industry	Inhalation.	Long Term	600 mg/m3
DNEL	Consumer	Dermal	Long Term	412 mg/kg/day
DNEL	Consumer	Inhalation.	Long Term	106 mg/m3
DNEL	Consumer	Oral	Long Term	31 mg/kg/day
PNEC	Freshwater	55.8	mg/l	
PNEC	Marinewater	55.8	mg/l	
PNEC	STP	709	mg/l	
PNEC	Sediment	284.7	mg/kg	
PNEC	Soil	22.5	mg/kg	

8.2. Exposure controls

Protective Equipment



Engineering Measures

Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.

Respiratory Equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

Hand Protection

Butyl rubber gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye Protection

Wear approved safety goggles.

Other Protection

Wear rubber apron. Wear rubber footwear.

Hygiene Measures

Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes wet or contaminated. Wash promptly if skin becomes wet or contaminated. Wash contaminated clothing before reuse. Eating, smoking and water fountains prohibited in immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid
Colour	Colourless
Odour	Pungent
Solubility	Soluble in water.

BUTANONE

Initial Boiling Point and Boiling Range:	79 - 81
Melting Point (°C)	-86
Relative Density	0.805 @ 20
Bulk Density	804 - 806 kg/m ³
Vapour Density (Air=1)	>1
Vapour Pressure	9.3 kPa @ 20
Evaporation Rate	6
Viscosity	0.52 cSt @ 25
Solubility Value (G/100G H₂O@20°C)	26.3
Flash Point (°C)	-4
Auto Ignition Temperature (°C)	>450
Flammability Limit - Lower(%)	1.8
Flammability Limit - Upper(%)	11.5

9.2. Other information

Mol. Weight	72
Volatile Organic Compound (VOC)	YES

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reaction with: Strong oxidising agents.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid excessive heat for prolonged periods of time. Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances.

10.6. Hazardous decomposition products

Oxides of: Carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute Toxicity (Oral LD50)	> 2193 mg/kg Rat OECD 423
Acute Toxicity (Dermal LD50)	> 5000 mg/kg Rabbit OECD 402

Inhalation

Vapour may irritate respiratory system or lungs. Vapours may cause drowsiness and dizziness.

Ingestion.

May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

Skin Contact

Irritating to skin. Repeated exposure may cause skin dryness or cracking.

Eye Contact

Irritating to eyes.

SECTION 12: ECOLOGICAL INFORMATION

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Ecotoxicity:

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Acute Fish Toxicity

Not considered toxic to fish.

LC 50, 96 Hrs, Fish mg/l 1690

EC 50, 48 Hrs, Daphnia, mg/l 5091

12.2. Persistence and degradability

Degradability:

The product is easily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative Potential:

No data available on bioaccumulation.

12.4. Mobility in soil

Mobility:

The product is soluble in water.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB Substances.

12.6. Other adverse effects

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

General Information

Do not puncture or incinerate even when empty. Rags and the like, moistened with flammable liquids, must be discarded into designated fireproof bucket. Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

General Full protective clothing should be worn when handling this product.

14.1. UN number

Un Number Road 1193

UN No. (IMDG) 1193

UN No. (ICAO) 1193

14.2 UN Proper shipping name

Proper Shipping Name ETHYL METHYL KETONE (METHYL ETHYL KETONE)

14.3 Transport hazard class(es)

ADR/RID/ADN Class 3

ADR/RID/ADN Class Class 3: Flammable liquids.

ADR Label No. 3

IMDG Class 3

ICAO Class/Division 3

Transport Labels

BUTANONE

14.4. Packing group

ADR/RID/ADN Packing group	II
IMDG Packing group	II
ICAO Packing group	II

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS	F-E, S-D
Emergency Action Code	•2YE
Hazard No. (ADR)	33
Tunnel Restriction Code	(D/E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Statutory Instruments**

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Approved Code Of Practice

Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply. DSEAR

Guidance Notes

CHIP for everyone HSG(108). Workplace Exposure Limits EH40.

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision Date	26.07.2010
Revision	01
SDS No.	587
Safety Data Sheet Status	Approved.
Date	26.07.2010
Signature	Jitendra Panchal

BUTANONE

Risk Phrases In Full

R11	Highly flammable.
R36	Irritating to eyes.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Hazard Statements In Full

H319	Causes serious eye irritation.
H225	Highly flammable liquid and vapour.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.