Elite Advanced Materials Sdn Bhd

SAFETY DATA SHEET

According to Regulation (EC) No 453/2010

Version 1.2
Revision Date: 09.12.2016
Printing Date: 09.12.2016

www.eamaterials.com

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

1.1 Product identifier

Product name : **Acetone**

Included product code : ACE010-2.5, ACE010-4.0, ACE012-2.5, ACE012-4.0, ACE011-2.5P, ACE011-25P, ACE011-25M, ACE011-200M, ACE008-2.5P, ACE008-25P, ACE008-25M, ACE008-200M, ACE006-2.5P, ACE006-25P, ACE006-25M, ACE006-200M

1.2 Relevant identified uses of the substance or mixture

Identified uses : Laboratory chemicals, Manufacture of substances

Uses advised against : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : Elite Advanced Materials Sdn Bhd
Lot 34, Jalan RP2, Rawang Perdana Industrial Estate, 48000 Rawang, Selangor, Malaysia

E-mail address : enquiry@eamaterials.com

1.4 Emergency telephone number

Emergency phone : +60 3-6091 4200 (Local business hours only)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flammable liquids	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure) Target Organs - Central nervous system (CNS).	Category 3

Specific target organ toxicity (single exposure) Target Organs - Kidney, Liver, spleen, Blood.	Category 2

2.2 Label elements

Labeling in compliance to Regulation (EC) No. 1272/2008 [CLP/GHS]

Hazard pictograms

GHS02

GHS07

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
P233	Keep container tightly closed.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for

extinction.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

Repeated exposure may cause skin dryness or cracking.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Synonyms : Dimethyl Ketone, Propan-2-one

Formula : C_3H_6O

Molecular Weight : 58.08 g/mol

CAS-No. : 67-64-1

Component	Identity	Classification Code	H-Code	Concentration (by wt)
Acetone	CAS-No. : 67-64-1 EC-No. : 200-662-2 Index-No. : 606-001-00-8	Flam. Liq. 2; Skin Irrit. 2; STOT CNS 3; STOT SE 2	H225 H319 H336	<=100 %

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid measures

General information
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water for at least 15 minutes. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and delayed symptoms and effects

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment

No data available.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide (CO_2) is required to extinguish flames.

Unsuitable extinguishing media
None

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Combustible.
Vapours are heavier than air and may spread along floors.
Forms explosive mixtures with air at ambient temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for fire-fighters

Wear full protective clothing and self-contained breathing apparatus if necessary. Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Use water spray to cool unopened containers. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment is required during handling. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Do not discharge into drains or waterways. Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precaution for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use

No further relevant information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component	CAS-No	Value	Control parameters	Basis
Acetone	67-64-1	TWA	500 ppm 1,187 mg/m3	Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

8.2 Exposure control

Personal protection measures, such as personal protective equipment
Never eat, drink or smoke during handling the chemical. Ensure that there is adequate ventilation, especially in confined areas.

Eye/ face protection
Face shield and safety glasses is required during handling. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Discard of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact*
Material: butyl-rubber
Minimum layer thickness: 0,3 mm
Break through time: 480 min
Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact*
Material: butyl-rubber
Minimum layer thickness: 0,3 mm
Break through time: 480 min
Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

*Source – Sigma Aldrich, 2015

Body protection
Impervious clothing, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	:	Liquid, clear
Color	:	colorless
Ordor	:	Not determined
Ordor threshold	:	Not determined
pH - value	:	Not determined
Melting point / Range	:	-94 °C
Boiling point / Range	:	56 °C at 1.013 hPa
Flash point	:	-16.99 °C [closed cup]
Evaporation rate	:	5.6 (Butyl Acetate = 1.0)
Flammability limit - LEL	:	2 % (V)
Flammability limit - UEL	:	13 % (V)
Vapour pressure	:	533.3 hPa at 39.5 °C 245.3 hPa at 20.0 °C
Vapor density (air = 1)	:	2
Density	:	0.791 g/cm^3 at 25.0 °C
Bulk density	:	Not determined
Solubility(ies)	:	Not determined
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water:		log Pow: -0.24
Auto-ignition temperature	:	465.0 °C
Decomposition temperature	:	Not determined
Viscosity	:	0.32cP at 25°C
Explosive properties	:	Not determined
Oxidising properties	:	Not determined

9.2 Other information

Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Vapours may form explosive mixture with air

10.2 Chemical stability

Sensitive to light

Sensitive to air

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

Chromosulfuric acid, chromyl chloride, ethanolamine, fluorine, strong oxidising agents, strong reducing agents, nitric acid, chromium (IV) oxide

Risk of explosion with:

Non-metallic oxyhalides, halogen-halogen compounds, chloroform, nitrating acid, nitrosyl compounds, hydrogen peroxide, halogen oxides, organic nitro compounds, peroxide compounds

Exothermic reaction with:

Bromine, alkali metals, alkali hydroxides, halogenated hydrocarbon, sulphur dichloride, phosphorous oxychloride

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Bases, oxidizing agents, reducing agents. Acetone reacts violently with phosphorous oxychloride.

10.6 Hazardous decomposition products

Other decomposition products - No data available

SECTION 11: TOXICOLOGY INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Component	LD50 Oral	LD50 Dermal	NIOSH IDLH
Acetone	5,800 mg/kg (Rat)	> 15,800 mg/kg (rabbit) > 7,400 mg/kg (rat)	76 mg/L/4h (rat)

Skin corrosion/irritation

Skin - rabbit

Remarks: Mild skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - rabbit

Remarks: eye irritation – 24 h

Respiratory or skin sensitisation
Guinea pig - Does not cause skin sensitisation.

Germ cell mutagenicity
No data available

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	Causes serious eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: AL3150000

SECTION 12: ECOLOGY INFORMATION

12.1 Ecotoxicity

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 5.540 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 8.800 mg/l - 48 h
Toxicity to algae	Remarks: No data available

12.2 Persistence and degradability

Biodegradability	Result: 91 % - Readily biodegradable Method: OECD Test Guideline 301B

12.3 Bioaccumulative potential
Does not bioaccumulate.

12.4 Mobility in soil
No data available

12.5 Other adverse effects
No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment method

Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 1090 IMDG: 1090 IATA-DGR: 1090

14.2 UN proper shipping name

ADR/RID: ACETONE

IMDG: ACETONE

IATA-DGR: ACETONE

14.3 Transport hazard class(es)

ADR/RID: 3	IMDG: 3	IATA-DGR: 3

14.4 Packaging group

ADR/RID: II	IMDG: II	IATA-DGR: II

14.5 Environmental hazards

ADR/RID: no	IMDG Marine pollutant: no	IATA-DGR: no

14.6 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

14.7 Special precautions for user

No data available

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

SECTION 16: OTHER INFORMATION

This information is based on present level of our knowledge, however, this shall not constitute a guarantee product features and shall not establish a legally valid contractual relationship.

Abbreviations:

ADR : European agreement concerning the international carriage of dangerous goods by road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association

ICAO : International Civil Aviation Organization

RID : Regulations concerning the International Carriage of Dangerous goods by rail.

Notice to reader

The information contained in this Safety Data Sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the products and should not be construed as any guarantee of technical performance or suitability for particular application.

The information contained in this Safety Data Sheet comes from sources believed to be accurate or otherwise technically correct. However, no representation, warranty or

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