Material Safety Data Sheet
DIACETONE ALCOHOL

Section 1 - Product Identification

Synonyms : 4-Hydroxy-4-methylpentan-2-one
Molecular Weight : 116.16 g/mol
Chemical Formula : C6H12O2
Company Identification : Tradeasia International Pte. Limited
Address : 133 Cecil Street # 12-03 Keck Seng Tower, Singapore
Tel: +65-6227 6365
Fax: +65-6225 6286
Email: contact@chemtradeasia.com

Recommended use of the chemical and restrictions on use
The product is used in industrial manufacturing, in particular in :

- Used as coatings, as a solvent for organic peroxides and as a solvent for chemical synthesis.

Section 2 – Composition/Information on Ingredients

The product contains greater than 99.9 percent (%) DAA -

Chemical Name	EC No/CAS No	Purity, %
4-Hydroxy-4-methylpentan-2-one	123-42-2	min. 99.9

Section 3 – Hazards Identification

3.1. Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 3), H226
Eye irritation (Category 2), H319

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Xi Irritant R36

3.2. Label elements
Labelling according Regulation (EC) No 1272/2008

Signal word Warning
Hazard statement(s)
H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statement(s)
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 4 – First-Aid Measures

4.1. Description of first aid measures

General advice

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

If inhaled

If breathed in, move people into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. 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. Indication of any immediate medical attention and special treatment needed

No data available

Section 5 – Fire Fighting Measures

5.1. Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2. Special hazards arising from the substance or mixture Carbon oxides
5.3. Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
5.4. Further information Use water spray to cool unopened containers.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment, and emergency procedures: Restrict access to the area. Workers should use appropriate protective gear and avoid contact with the eyes or skin or inhalation. Remain upwind and avoid low-lying areas.
6.2. Environmental precautions: Exercise care to ensure that the substance is not discharged into a stream or river so as to avoid any adverse environmental impact.
6.3. Recovery and neutralization: Sweep the released product into an empty container. Take care not to cause dust.
6.4. Methods and materials for containment and cleaning up: If it can be done safely, block off the source of the leak to stop the release.
6.5. Prevention of secondary hazards: Ventilate closed areas before entering. Keep the product out of drains, sewers, basements, and closed areas.

Section 7 – Handling and Storage

7.1. Handling
Technical measures: Perform the engineering measures described below, using protective gear.
Local exhaust and general ventilation: Perform local exhaust and general ventilation as described in
Precautions for safe handling: Use protective gear to avoid inhalation of the product or contact with the eyes or skin. Wash hands and gargle thoroughly after handling.
7.2. Storage
Technical measures: Install windows, lighting, and ventilation equipment as necessary in storage locations to ensure safe storage or handling of hazardous substances.
Storage conditions: Store so that the substance is prevented from absorbing moisture. Store in a dry, well ventilated place. Keep the product away from oxidants, reducing agents, acids, and alkaline substances.
Safe storage containers: Glass, polyethylene, polypropylene, etc.

Section 8 – Exposure Controls/Personal Protection

8.1. Control limits: N/D
8.2. Engineering controls: When using in an indoor workplace, seal the source of the substance or install a local ventilation system. Install a face-washing station and safety shower close to areas where the substance will be handled and indicate their locations clearly.
8.3. Personal protective equipment
Respiratory protection: Use a dust mask.
Hand protection: Use impermeable gloves, for example made of rubber, as warranted.
Eye protection: Use protective glasses or safety goggles.
Skin and body protection: Use impermeable protective clothing, for example a rubber apron, boots, and other protective gear, as warranted.
Hygiene measures: Do not eat, drink, or smoke when handling.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties
Appearance : Clear liquid
Odour : Odorless
Odour threshold : N.A.
pH @ 20°C : 8.3 (3% solution), 7.6 (10% solution)
Melting point : N.A.
Boiling point : 158 - 162 °C
Flash point : 58 °C
Evaporation rate : N.A.
Flammability : N.A.
Upper/lower flammability or explosive limits : N.A.
Vapor pressure: N.A.
Specific gravity/density: 0.937 -0.940
Relative density : N.A.
Solubility in water : > 1000 g/l at 20°C

Partition coefficient: n-octanol/water : N.A
Auto-ignition temperature : N.A.
Decomposition temperature : H_2O @ 120°C
Viscosity : N.A.
Molecular weight : 116.16 g/mol

Section 10 – Stability and Reactivity

10.1. Reactivity
DAA is a stable product.
10.2. Chemical stability
Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions
No data avaiable.
10.4. Conditions to avoid:
Sunlight, heat, moisture, contact with incompatible materials

10.5. Incompatible materials
Oxidants, reducing agents, strong acids, strong bases, halides
10.6. Hazardous decomposition products
Decomposes when heated, releasing toxic fumes. Reacts with hydrogenunder some conditions, releasing a toxic gas (stibine).

Section 11 – Toxicological Information

11.1. Acute toxicity
LD50 Oral - Rat - 2.520 mg/kg Remarks: Behavioral:Tremor. Behavioral:Convulsions or effect on seizure threshold. Liver:Other changes.
LC50 Inhalation - Rat - 4 h - > 10 mg/l LD50 Dermal - Rabbit - 13.500 mg/kg

11.2. Skin corrosivity
No data available.

11.3. Germ cell mutagenicity
No data available.

11.4. Carcinogenicity
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.

11.5. Reproductive toxicity
No data available.

11.6. Target organ/systemic toxicity (single exposure)
No data available.

11.7. Target organ/systemic toxicity (repeated exposure)
No data available.

Section 12 – Ecological Information

Aquatic hazard (acute): Toxicity to fish LC50 - Lepomis macrochirus (Bluegill) - 420 mg/l - 96 h Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 9.000 mg/l - 24 h other aquatic invertebrates

Section 13 – Disposal Considerations

13.1. Disposal methods
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.Handle empty containers with care because residual vapours are flammable.

Section 14 – Transport Information

14.1. UN number : N.A.
14.2. UN proper shipping name : N.A
14.3. Transport of hazard classes : N.A
14.4. Packing group : N.A
14.5. Environmental hazards : N.A.
14.6. Special precautions for user : N.A
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: N.A.

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available

15.2. Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

Section 16 : Additional Information

16.1. Mainly changes made to the previous version of this Material Safety Data Sheet (MSDS):
• This MSDS complies with ISO 11014; the requirements of UN-GHS

Revision No	Revision content
04	• This SDS is updated in accordance with the GHS (Rev.6) (2015)-Guidance on the Compilation of Safety data Sheets. • This SDS is updated in line with Eti Maden Corporate identity.

16.2. List of abbreviation and acronyms used in this MSDS

SDS : Safety Data Sheets
Index N° : atomic number of the element most characteristic of the properties of the substance
CAS No : Chemical Abstracts Service number
EC No : EINECS Number : European Inventory of Existing Commercial Substances
Repr. Cat. 2 : Substance presumed human reproductive toxicant
Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.
GHS : Globally Harmonised System of Classification and Labelling
LD_{50} : Median Lethal Dose
LC_{50} : Lethal Concentration, 50%
N.A. : Not Applicable
OSHA : Occupational Safety & Health Administration
Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)
PEL : Permissible Exposure Limits
ACGIH : American Conference of Governmental Industrial Hygienists
TLV : Threshold Limit Value
Japanese MITI : Japanese Ministry of International Trade and Industry
EC_{50} : Half maximal effective concentration
UN : United Nations
U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the autority of the Environmental Protection Agency
Canadian DSL: Canadian Domestic Substances List

16.3. List of relevant hazard statements and precautionary statements used in this MSDS

Hazard Statement

H361 d: Suspected of damaging the unborn child
H319: Causes serious eye irritation
H303: May be harmful if swallowed

Precautionary Statements

Prevention

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P264: Wash eyes thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P308 + P313: If exposed or concerned: get medical advice/attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.

Storage

P405: Store locked up.

Disposal

P501: Dispose of contents/container to in accordance with local regulations.

16.4. References

1. Litovitz T L, Norman S A, Veltri J C, Annual Report of the American Association of Poison Control Centers Data Collection System. Am. J. Emerg. Med. (1986), 4, 427-458

2. Denton SM (1996). Final report. Report no.: 1341/7-1032.
3. National Toxicology Program (NTP) – Technical Report Series No. TR324, NIH Publication No. 88 2580 (1987), PB88 213475/XAB
4. Fail et al., Fund. Appl. Toxicol. (1991) 17, 225-239
5. Heindel et al., Fund. Appl. Toxicol. (1992) 18, 266-277
6. Birge W J, Black J A, EPA-560/-76-008 (April 1977) PB 267 085
7. Scialli AR, Bonde JP, Brüske-Hohlfeld I, Culver D, Li Y, Sullivan FM; ELSEVIER 2009
8. Robbins WA, Xun L, Jia J, Kennedy N, Elashoff DA, Ping L. ;ELSEVIER 2009;(Reproductive Toxicology)
9. Hansveit and Oldersma, 2000; TNO Nutrition and Food Research Institute. Report No. V99.157.
10. Gersich, FM (1984a). Environ.Toxicol.Chem., 3 #1, 89-94 (1984)

16.5. Disclaimer of Liability

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