Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

   Product identifier:
   - Product name: Acetone
   - Product code (SDS NO): 0030E-1

   Details of the supplier of the safety data sheet
   - Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
   - Address: 3-1, Honmachibashi, Chuo-ku, Osaka 540-0029, JAPAN
   - Division: Safety Management Dept. of Chemicals
   - Telephone number: +81-6-6946-8061
   - FAX: +81-6-6946-1607
   - e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification

   GHS classification and label elements of the product
   Classification of the substance or mixture
   - Physical and chemical hazards
     - Flammable liquids: Category 2
   - HEALTH HAZARDS
     - Serious eye damage/eye irritation: Category 2B
     - Reproductive toxicity: Category 2
     - Specific target organ toxicity – single exposure: Respiratory tract irritation Category 3
     - Specific target organ toxicity – single exposure: Narcosis Category 3
     - Specific target organ toxicity – repeated exposure: Category 1 (CNS; respiratory system; digestive apparatus/alimentary system)
   (Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

   Label elements

   Signal word: Danger
   HAZARD STATEMENT
   - Highly flammable liquid and vapor
   - Causes eye irritation
   - Suspected of damaging fertility or the unborn child
   - May cause respiratory irritation
   - May cause drowsiness or dizziness
   - Causes damage to organs through prolonged or repeated exposure

   PRECAUTIONARY STATEMENT
   - Prevention
     - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
     - Keep container tightly closed.
     - Ground/bond container and receiving equipment.
     - Use explosion-proof electrical/ventilating/lighting equipment.
     - Use only non-sparking tools.
     - Take precautionary measures against static discharge.
     - Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash contaminated parts thoroughly after handling.
Wear protective gloves and face protection.
Do not eat, drink or smoke when using this product.

Response
In case of fire: Use appropriate media other than water for extinction.
Get medical advice/attention if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Storage
Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal
Dispose of contents/container in accordance with local/national regulation.

Physical and Chemical hazards
Highly flammable liquid. Vapor/air mixture may explode.

3. Composition/information on ingredients
Mixture/Substance selection:
Substance
Ingredient name: Acetone
Content(%): 99(min)
Chemical formula: C₃H₆O
Chemicals No, Japan: 2-542
CAS No.: 67-64-1
MW: 58.08
ECNO: 200-662-2
Note: The figures shown above are not the specifications of the product.

4. First-aid measures
Descriptions of first-aid measures
General measures
Get medical attention/advice if you feel unwell.
IF INHALED
Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN (or hair)
Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation or rash occurs: Get medical advice/attention.
IF IN EYES
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF SWALLOWED
Rinse mouth.
Call a POISON CENTER or doctor/physician if you feel unwell.
5. Fire-fighting measures
   Extinguishing media
   Suitable extinguishing media
   Use appropriate extinguishing media suitable for surrounding facilities.
   Specific hazards arising from the substance or mixture
   Containers may explode when heated.
   Fire may produce irritating, corrosive and/or toxic gases.
   Advice for firefighters
   Specific fire-fighting measures
   Evacuate non-essential personnel to safe area.
   Special protective equipment and precautions for fire-fighters
   Wear fire/flame resistant/retardant clothing.
   Wear protective gloves/protective clothing/eye protection/face protection.
   Firefighters should wear self-contained breathing apparatus with full face peace operated positive pressure mode.

6. Accidental release measures
   Personnel precautions, protective equipment and emergency procedures
   Ventilate area after material pick up is complete.
   Wear proper protective equipment.
   Methods and materials for containment and cleaning up
   Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.
   Preventive measures for secondary accident
   Collect spillage.

7. Handling and storage
   Precautions for safe handling
   Preventive measures
   (Exposure Control for handling personnel)
   Do not breathe dust/fume/gas/mist/vapors/spray.
   (Protective measures against fire and explosion)
   Keep away from heat/sparks/open flames/hot surfaces. − No smoking.
   Ground/bond container and receiving equipment.
   Use explosion-proof electrical/ventilating/lighting equipment.
   Use only non-sparking tools.
   Take precautionary measures against static discharge.
   Exhaust/ventilator
   Exhaust/ventilator should be available.
   Safety treatments
   Avoid contact with skin.
   Avoid contact with eyes.
   Safety Measures/Incompatibility
   Use only outdoors or in a well-ventilated area.
   Wear protective gloves, protective clothing or face protection.
   When using do not eat, drink or smoke.
   Conditions for safe storage, including any incompatibilities
   Recommendation for storage
   Keep container tightly closed.
   Store in a cool, dry place. Do not store in direct sunlight.
8. Exposure controls/personal protection
   Control parameters
   Adopted value
   (Acetone)
   ACGIH(2014) TWA: 250ppm;
   STEL: 500ppm (URT & eye irr; CNS impair)
   OSHA–PEL
   Acetone TWA: 1000ppm, 2400mg/m3

Exposure controls
   Appropriate engineering controls
   Do not use in areas without adequate ventilation.
   Eye wash station should be available.
   Washing facilities should be available.

Individual protection measures
Respiratory protection
   Wear respiratory protection.

Hand protection
   Wear protective gloves.

Eye protection
   Wear eye/face protection.

Safety and Health measures
   Wash … thoroughly after handling.
   Do not eat, drink or smoke when using this product.

9. Physical and Chemical Properties
   Information on basic physical and chemical properties

Physical properties
   Appearance: Liquid
   Color: Colorless
   Odor: Characteristic odor

Phase change temperature
   Initial Boiling Point/Boiling point: 56°C
   Melting point/Freezing point: -95°C
   Decomposition temperature data N.A.
   Flash point: (Acetone)(C.C.) -18°C
   Auto-ignition temperature: 465°C

Explosive properties: Flammability or explosive limit
   Lower limit: 2.2 vol %
   Upper limit: 13 vol %
   Vapor pressure: 24 kPa (20°C)
   Vapor density data N.A.
   Relative Vapor Density (Air = 1): 2
   Relative density of the Vapor/air–mixture at 20°C (Air = 1): 1.2
   Specific gravity/Density: 0.8

Solubility
   Solubility in water: Miscible
   n-Octanol /water partition coefficient: log Pow-0.24
10. Stability and Reactivity

Chemical stability
Stable under normal storage/handling conditions.

Possibility of hazardous reactions
Contact with strong oxidants such as acetic acid, nitric acid and hydrogen peroxide
generates explosive peroxides. Reacts with chloroform and bromoform under basic conditions.
This generates fire and explosion hazard. Attacks plastics. (ICSC 0087)

Conditions to avoid
Contact with incompatible materials.
Contact with fire source.

Incompatible materials
Strong oxidizing agents, Chloroform, Bromoform

Hazardous decomposition products
Explosive peroxides

11. Toxicological Information

Information on toxicological effects
No Acute toxicity data available

Irritant properties
Serious eye damage /irritation
[GHS Cat. Japan, base data]
(Acetone)
rabbit corneal epithelial destruction recover within 4 to 6 days (SIDS, 2002)

No Allergenic and sensitizing effects data available
No Mutagenic effects data available
Carcinogenicity
(Acetone)
ACGIH–A4(2014) : Not Classifiable as a Human Carcinogen

Reproductive toxicity
[GHS Cat. Japan, base data]
(Acetone)
cat.2; EHC 207, 1998
No Teratogenic effects data available

Delayed and immediate effects and also chronic effects from short- and long-term exposure
STOT
STOT–single exposure
[cat.3(resp. irrit.)]
[Japan published data]
(Acetone)
Respiratory tract irritation (ACGIH 7th, 2001)
[cat.3(drow./dizz.)]
[Japan published data]
(Acetone)
Narcosis (ACGIH 7th, 2001)

STOT–repeated exposure
[cat.1]
[Japan published data]
(Acetone)
CNS; respiratory system; digestive apparatus/alimentary system (ATSDR Addendum, 2011)

No Aspiration hazard data available
12. Ecological Information
   Ecotoxicity
   Aquatic toxicity
   Aquatic acute toxicity component(s) data
   [GHS Cat. Japan, base data]
   (Acetone)
   Fish (fat head minnow) LC50 > 100mg/L/96hr (EHC207, 1998)
   Water solubility
   (Acetone)
   100 g/100 ml (PHYSPROP Database, 2005)
   No Persistence and degradability data available
   Bioaccumulative potential
   (Acetone)
   log Pow = -0.24 (ICSC, 2009)
   No Mobility in soil data available
   Ozone depleting chemical data not available

13. Disposal considerations
   Waste treatment methods
   Dispose of contents/container in accordance with local/national regulation.

14. Transport Information
   UN number: 1090
   UN proper shipping name: ACETONE
   Transport hazard class(es): 3
   Packing group: II
   ERG GUIDE NO.: 127
   Environmental hazards
   MARPOL Annex V – Substances Harmful to Marine Environment
   Specific target organ toxicity – repeated exposure: cat.1
   Acetone
   Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code
   Noxious Liquid; Cat. Z
   Acetone
   Flammable Liquid
   Acetone

15. Regulatory Information
   Safety, health and environmental regulations/legislation specific for the substance or mixture
   US major regulations
   TSCA
   Acetone
   Other regulatory information
   Ensure this material in compliance with federal requirements and ensure conformity to local regulations.
16. Other information

GHS classification and labelling

- Flam. Liq. 2: H225 Highly flammable liquid and vapor
- Eye Irrit. 2B: H320 Causes eye irritation
- Repr. 2: H361 Suspected of damaging fertility or the unborn child
- STOT SE 3: H335 May cause respiratory irritation
- STOT SE 3: H336 May cause drowsiness or dizziness
- STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Reference Book

- Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN
- Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN
- Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
- 2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
- 2018 TLVs and BEIs. (ACGIH)
- Supplier’s data/information

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products’ properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2016).