Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking
   Product identifier:
   - Product name: N,N-Dimethylacetamide
   - Product code (SDS NO): 2454E-2
   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
   PHISICAL AND CHEMICAL HAZARDS
   - Flammable liquids: Category 4
   HEALTH HAZARDS
   - Acute toxicity (Inhalation): Category 3
   - Serious eye damage/eye irritation: Category 2B
   - Carcinogenicity: Category 2
   - Reproductive toxicity: Category 1B
   Specific target organ toxicity - single exposure: Category 3 (Narcosis)
   Specific target organ toxicity - repeated exposure: Category 1 (liver)
   Specific target organ toxicity - repeated exposure: Category 2 (respiratory apparatus/system)
   Label elements

   Signal word: Danger
   HAZARD STATEMENT
   - Combustible liquid
   - Toxic if inhaled
   - Causes eye irritation
   - Suspected of causing cancer
   - May damage fertility or the unborn child
   - May cause drowsiness or dizziness
   - Causes damage to organs through prolonged or repeated exposure
   - May cause damage to organs through prolonged or repeated exposure
   PRECAUTIONARY STATEMENT
   Prevention
   - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
   - 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.
Call a POISON CENTER or doctor/physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.

Specific Physical and Chemical hazards
Heating may cause fire.

3. Composition/information on ingredients
Mixture/Substance selection:
Substance
Ingredient name: N,N-Dimethylacetamide
Content(%): 97(min)
Chemical formula: CH₃CON(CH₃)₂
Chemicals No, Japan: 2-723
CAS No.: 127-19-5
MW: 87.12
ECNO: 204-826-4
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.
Call a POISON CENTER or doctor/physician.
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 piece operated positive pressure mode.

6. Accidental release measures
   Personnel precautions, protective equipment and emergency procedures
   Ventilate area until material pick up is complete.
   Wear proper protective equipment.
   Environmental precautions
   Prevent spills from entering sewers, watercourses or low areas.
   Methods and materials for containment and cleaning up
   Absorb spill with inert material (dry sand, earth, etc.), 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.
   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.
   Wear protective gloves and 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
(N,N-Dimethylacetamide)
ACGIH(2017) TWA: 10ppm (Liver, embryo & fetal dam; repro, renal & teratogenic eff)
Notation
(N,N-Dimethylacetamide)
Skin
OSHA–PEL
N,N-Dimethylacetamide TWA: 10ppm, 35mg/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, Clear
Odor: Characteristic odour
pH data N.A.

Phase change temperature
Initial Boiling Point/Boiling point: 165℃
Boiling range data N.A.
Melting point/Freezing point: -20℃
Decomposition temperature data N.A.
Flash point: (N,N-Dimethylacetamide)(C.C.) 63℃
Auto-ignition temperature: 490℃

Explosive properties: Flammability or explosive limit
Lower limit: 1.8 vol %
Upper limit: 11.5 vol %
Vapor pressure: 0.33 kPa (20℃)
Vapor density: 3.01
Relative Vapor Density (Air=1): 3.01
Relative density of the Vapor/air-mixture at 20℃ (Air = 1): 1.01
Specific gravity/Density: 0.94

Solubility
Solubility in water: Soluble
n-Octanol /water partition coefficient: log Pow=0.77
10. Stability and Reactivity

Reactivity
N.A.

Chemical stability
Stable under normal storage/handling conditions.

Possibility of hazardous reactions
Decomposes on heating. This produces toxic fumes. Reacts with strong oxidants. (ICSC 0259)

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

Incompatible materials
Strong oxidizing agents

Hazardous decomposition products
Carbon oxides, Nitrogen oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)
[GHS Cat. Japan, base data]
(N,N-Dimethylacetamide)
rat LD50=3000–6000mg/kg (SIDS, 2001)

Acute toxicity (Dermal)
[GHS Cat. Japan, base data]
(N,N-Dimethylacetamide)
rabbit LD50=2100–3600mg/kg (IUCLID, 2000)

Acute toxicity (Inhalation)
[GHS Cat. Japan, base data]
(N,N-Dimethylacetamide)
vapor: rat LC50=4.41mg/L/4hr (SIDS, 2001)

Irritant properties

Serious eye damage /irritation
[GHS Cat. Japan, base data]
(N,N-Dimethylacetamide)
rabbit reversible irritation (SIDS, 2001)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

Carcinogenicity

[GHS Cat. Japan, base data]
(N,N-Dimethylacetamide)
cat.2; (JBRC, 2013)
(N,N-Dimethylacetamide)
ACGIH–A3(2017) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive toxicity

[GHS Cat. Japan, base data]
(N,N-Dimethylacetamide)
cat. 1B; rat/rabbit : SIDS, 2001

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 (drow./dizz.)]
12. Ecological Information

Ecotoxicity

Aquatic toxicity

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]
(N,N-Dimethylacetamide)
Algae (Scenedesmus subspicatus) EC₅₀ > 500mg/L/72hr (SIDS, 2004)

Water solubility
(N,N-Dimethylacetamide)
miscible (ICSC, 2008)

No Persistence and degradability data available

Bioaccumulative potential
(N,N-Dimethylacetamide)
log Pow=-0.77 (ICSC, 2008)

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

Not applicable to UN No.

IMDG Code (International Maritime Dangerous Goods Regulations)
Not applicable to IMDG Code

IATA Dangerous Goods Regulations
Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances
Marine pollutants (yes/no): no

MARPOL Annex V – Prevention of pollution by garbage discharge
Reproductive toxicity: cat.1, 1A, 1B
N,N-Dimethylacetamide
Specific target organ toxicity – repeated exposure: cat.1
N,N-Dimethylacetamide
15. Regulatory Information

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

US major regulations
TSCA
N,N-Dimethylacetamide

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. 4: H227 Combustible liquid
Acute Tox. 3: H331 Toxic if inhaled
Eye Irrit. 2B: H320 Causes eye irritation
Carc. 2: H351 Suspected of causing cancer
Repr. 1B: H360 May damage fertility or the unborn child
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 20th edit., 2017 UN
Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2018 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
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 are 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
2017).