

## SAFETY DATA SHEET

Preparation Date: 5/16/2016

Revision Date: 5/16/2016

Revision Number: G1

### 1. IDENTIFICATION

**Product identifier**

**Product code:** D1023  
**Product Name:** N,N-DIMETHYLACETAMIDE, REAGENT

**Other means of identification**

**Synonyms:** Acetdimethylamide  
 Acetic acid, dimethylamide  
 Dimethylacetamide  
 N,N-Dimethylacetamide  
 Dimethylacetone amide  
 Dimethylamide acetate

**CAS #:** 127-19-5  
**RTECS #** AB7700000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Solvent.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 4

## Label elements

### Danger

#### Hazard statements

Harmful if inhaled  
Causes serious eye irritation  
May damage fertility or the unborn child  
May cause drowsiness or dizziness  
May cause damage to organs through prolonged or repeated exposure  
Combustible liquid



#### Hazards not otherwise classified (HNOC)

Not Applicable

#### Other hazards

May be harmful in contact with skin  
May be harmful if swallowed

#### Precautionary Statements - Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use only outdoors or in a well-ventilated area  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not breathe dust/fume/gas/mist/vapors/spray  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking

#### Precautionary Statements - Response

*IF exposed or concerned: Get medical advice/attention*  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.  
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 INHALED: Remove person to fresh air and keep comfortable for breathing.

#### Precautionary Statements - Storage

Store locked up  
Store in a well-ventilated place. Keep cool

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
N,N-Dimethylacetamide 127-19-5	127-19-5	100

## 4. FIRST AID MEASURES

### First aid measures

#### **General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

#### **Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

#### **Eye Contact:**

Flush eyes with water for 15 minutes. Get medical attention.

#### **Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### **Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

### **Most important symptoms and effects, both acute and delayed**

#### **Symptoms**

Causes digestive (gastrointestinal) tract irritation. Abdominal pain. Vomiting. Sweating. May cause skin irritation. Causes eye irritation. May cause irritation of respiratory tract. May cause coughing and shortness of breath. Central nervous system effects. Dizziness. Drowsiness. Headache. Fatigue. Confusion. Weakness. Hallucinations. May cause visual hallucinations. May cause depression. Personality and mood changes. May affect the liver. It may affect the blood.

### **Indication of any immediate medical attention and special treatment needed**

#### **Notes to Physician:**

Treat symptomatically

### **Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

## 5. FIRE-FIGHTING MEASURES

### **Extinguishing Media**

#### **Suitable Extinguishing Media:**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

#### **Unsuitable Extinguishing Media:**

No information available.

### **Specific hazards arising from the chemical**

#### **Hazardous Combustion Products:**

Carbon Monoxide; Carbon Dioxide; nitrogen oxides

#### **Specific hazards:**

Combustible material  
May be ignited by heat, sparks or flames  
Container explosion may occur under fire conditions or when heated

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

No information available.

#### **Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area.

#### **Incompatible Materials:**

Oxidizing agents. Halogenated compounds. Carbon tetrachloride. Hexachlorocyclohexane.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

### **National occupational exposure limits**

**U.S Occupational Exposure Limits:** Not determined

#### **United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
N,N-Dimethylacetamide 127-19-5	10 ppm TWA 35 mg/m <sup>3</sup> TWA	= 10 ppm TWA	= 10 ppm TWA	None

#### **Canada**

**Canada Occupational Exposure Limits:** Not determined

**Product code:** D1023

**Product name:** N,N-  
DIMETHYLACETAMIDE, REAGENT

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Components	Alberta	British Columbia	Ontario	Quebec
N,N-Dimethylacetamide 127-19-5	= 10 ppm TWA = 36 mg/m <sup>3</sup> TWA	= 10 ppm TWA	10 ppm TWA	10 ppm TWAEV 36 mg/m <sup>3</sup> TWAEV

### Australia and Mexico

Occupational Exposure Limits for Australia and Mexico: Not determined

Components	Australia	Mexico
N,N-Dimethylacetamide 127-19-5	36 mg/m <sup>3</sup> TWA 10 ppm TWA	= 10 ppm TWA = 35 mg/m <sup>3</sup> TWA

### Appropriate engineering controls

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available	<b>Color:</b> Colorless.
<b>Odor:</b> Amine-like. Fish-like.	<b>Taste</b> No information available	<b>Formula:</b> C4H9NO
<b>Molecular/Formula weight:</b> 87.12	<b>Flammability:</b> No information available	<b>Flashpoint (°C/°F):</b> 70°C/158 °F 66°C/150.8 °F
<b>Flash Point Tested according to:</b> Open cup Closed cup	<b>Autoignition Temperature (°C/°F):</b> 490 °C/914 °F	<b>Lower Explosion Limit (%):</b> 1.8
<b>Upper Explosion Limit (%):</b> 11.5	<b>pH:</b> No information available	<b>Melting point/range(°C/°F):</b> -20 to -18.59 °C/-4 to -1.5 °F
<b>Decomposition temperature(°C/°F):</b> No information available	<b>Boiling point/range(°C/°F):</b> 163-165 °C/325.4-329 °F	<b>Bulk density:</b> No information available
<b>Density (g/cm3):</b> No information available	<b>Specific gravity:</b> 0.94	<b>Vapor pressure @ 20°C (kPa):</b> 0.176 @ 20 deg. C. 0.266 @ 25 deg. C.
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> 3.01	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> -0.77	<b>Viscosity:</b> No information available
<b>Miscibility:</b> Miscible with water Miscible with many organic solvents	<b>Solubility:</b> Soluble in Benzene Soluble in Ether Soluble in Acetone Soluble in Alcohol	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

Violent reaction with halogenated compounds (e.g. carbon tetrachloride, hexachlorocyclohexane) when heated above 90 deg. C  
Incompatible with iron + halogenated compounds. Iron powder catalyzes the reaction so that it initiates at 71 deg. C.

### Chemical stability

**Stability:** Stable under recommended storage conditions

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials.

**Incompatible Materials:** Oxidizing agents. Halogenated compounds. Carbon tetrachloride.  
Hexachlorocyclohexane.

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide. When heated to decomposition it emits toxic fumes.  
Nitrogen oxides (NOx).

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**

Skin. Eyes. Ingestion. Inhalation.

### Acute Toxicity

### Component Information

*N,N-Dimethylacetamide* - 127-19-5

**LD50/oral/rat** = 4263 mg/kg Oral LD50 Rat

**LD50/oral/mouse** = 2600-4900 mg/kg

**LD50/dermal/rabbit** = 2240 mg/kg Dermal LD50Rabbit (LOLI)  
2100-3600 (European Chemicals Bureau IUCLID dataset)

**LD50/dermal/rat** = 7500 mg/kg

**LC50/inhalation/rat** = 8.81 mg/L Inhalation LC50 Rat 1 h  
2475 ppm 1 hr.

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = No information available

### Product Information

**LD50/oral/rat** =

**VALUE- Acute Tox Oral** = 4263mg/kg

**LD50/oral/mouse** =

**Value - Acute Tox Oral** = 2600-4900mg/kg

**LD50/dermal/rabbit**

**VALUE-Acute Tox Dermal** = 2240mg/kg

**LD50/dermal/rat**

**VALUE -Acute Tox Dermal** = 7500mg/kg

**LC50/inhalation/rat**

**VALUE-Vapor** = No information available

**VALUE-Gas** = No information available

**VALUE-Dust/Mist** = 2.2mg/l (4-hr.)

**LC50/Inhalation/mouse**

**VALUE-Vapor** = No information available

**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available

### Symptoms

**Skin Contact:** May cause skin irritation. It may be absorbed through the skin.

**Eye Contact:** Causes serious eye irritation. Causes conjunctival irritation.

**Inhalation** May cause irritation of respiratory tract. Symptoms may include coughing and shortness of breath. It may affect behavior/central nervous system (ataxia). Inhalation of vapors may cause drowsiness and dizziness. May cause weakness. It may affect the liver.

**Ingestion** Causes digestive (gastrointestinal) tract irritation. May cause vomiting. May cause abdominal pain. May cause dysphagia (difficulty swallowing; pain while swallowing). May cause excessive sweating. May cause weakness. May affect behavior/central nervous system (dizziness, headache). May affect behavior/central nervous system (lethargy, fatigue). May affect behavior/central nervous system (confusion).

**Ingestion:** May cause visual and auditory hallucinations, perceptual distortions, delusions, emotional detachment.  
May cause disorientation.  
May cause depression

**Aspiration hazard** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Prolonged or repeated inhalation may affect the liver. Prolonged or repeated ingestion may affect the liver. Prolonged or repeated ingestion may affect the blood (changes in red blood cell count). Prolonged or repeated ingestion may affect the blood (changes in white blood cell count). Chronic exposure may cause central nervous system effects. Chronic exposure may affect behavior/central nervous system (personality changes).

**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
N,N-Dimethylacetamide	Not listed	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

**Reproductive toxicity** May damage fertility or the unborn child

**Reproductive Effects:** May cause adverse developmental effects based on animal data  
**Developmental Effects:** There is limited evidence that it may damage the developing human fetus  
May cause harm to the unborn child  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** central nervous system. Nervous System.  
**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.  
**Target Organs:** Liver. Nervous system.



## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects:** Aquatic environment.

*N,N-Dimethylacetamide* - 127-19-5

**Freshwater Algae Data:** 500 mg/L EC50 *Desmodesmus subspicatus* 72 h

**Freshwater Fish Species Data:** 500 mg/L LC50 *Leuciscus idus* 96 h static 1

**Water Flea Data:** 500 mg/L EC50 *Daphnia magna* 48 h

**Persistence and degradability:** No information available

**Bioaccumulative potential:** Potential for bioconcentration in aquatic organisms is low.

**Mobility:** It is expected to have high mobility in soil.

## 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
N,N-Dimethylacetamide	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** None  
**ERG No:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** No Information available  
**Symbol(s):** No information available

### TDG (Canada)

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant:** No Information available

## 14. TRANSPORT INFORMATION

### ADR

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available

### IMO / IMDG

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant:** No information available

### RID

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

### ICAO

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

### IATA

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**ERG Code:** No information available  
**Special Provisions:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>N,N-Dimethylacetamide</i>	Present	Present KE-11114	Present	Present (2)-723	Present	Present	Present 204-826-4

### U.S. Regulations

#### *N,N-Dimethylacetamide*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0736  
**Pennsylvania RTK:** Present  
**Minnesota - Hazardous Substance List:** Present  
**California Directors List of Hazardous Substances:** Present

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Product code:** D1023

**Product name:** N,N-DIMETHYLACETAMIDE, REAGENT

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**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
N,N-Dimethylacetamide	Not Listed	developmental toxicity, 5/21/2010	male reproductive toxicity, 5/21/2010	Not Listed

**CERCLA/SARA**

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
N,N-Dimethylacetamide	None	None	None	None	None

**U.S. TSCA**

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
N,N-Dimethylacetamide	Not Applicable	08/04/199506/30/1998

**Canada****WHMIS hazard class:**

D2B Toxic materials  
B3 Combustible liquid

**N,N-Dimethylacetamide**

B3 D2B

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
N,N-Dimethylacetamide	1 %

**Inventory**

Components	Canada (DSL)	Canada (NDSL)
N,N-Dimethylacetamide	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances
N,N-Dimethylacetamide	Not listed

Components	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
N,N-Dimethylacetamide	Not listed

**EU Classification****R-phrases)**

R61 - May cause harm to the unborn child.

Product code: D1023

Product name: N,N-DIMETHYLACETAMIDE, REAGENT

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R20/21 - Harmful by inhalation and in contact with skin.

**S -phrase(s)**

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53 - Avoid exposure - obtain special instructions before use.

Components	Classification	Concentration Limits:	Safety Phrases
N,N-Dimethylacetamide	Xn; R20/21 Repr.Cat.2; R61	25%≤C: T; R20/21-61 5%≤C<25%: T; R61	S53 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

Xn - Harmful.

Xn



**16. OTHER INFORMATION**

**Preparation Date:** 5/16/2016  
**Revision Date:** 5/16/2016  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**