

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

**SECTION 1. IDENTIFICATION**

Product name : Dimethyl Acetamide

Number : 000000011356

Product Use Description : Solvent

Manufacturer or supplier's details : Honeywell International Inc.  
1953 South Harvey Street  
Muskegon, MI 49442

For more information call : 1-800-368-0050  
+1-231-726-3171  
  
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**  
: **Transportation (CHEMTREC): 1-800-424-9300 or**  
: **+1-703-527-3887**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid, clear

Color : colourless

Odor : weak ammoniacal

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

**Classification of the substance or mixture**

Classification of the substance or mixture : Flammable liquids, Category 4  
Acute toxicity, Category 4, Inhalation  
Eye irritation, Category 2A  
Reproductive toxicity, Category 1B

**GHS Label elements, including precautionary statements**

Symbol(s)



Signal word

: Danger

Hazard statements

: Combustible liquid.  
Causes serious eye irritation.  
Harmful if inhaled.  
May damage fertility or the unborn child.

Precautionary statements

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

**Response:**  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## Dimethyl Acetamide

### 071-1L

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

IF exposed or concerned: Get medical advice/ attention.  
 If eye irritation persists: Get medical advice/ attention.  
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

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

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : DMAC, N,N-Dimethylacetamide

Formula : C<sub>4</sub>H<sub>9</sub>NO

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
N,N-Dimethylacetamide	127-19-5	100.00 %

### SECTION 4. FIRST AID MEASURES

General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If

## Dimethyl Acetamide

### 071-1L

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

- breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or persists.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician.

#### Notes to physician

- Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Foam
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Combustible.  
Vapours may form explosive mixtures with air.  
Vapours are heavier than air and may spread along floors.  
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.  
In case of fire hazardous decomposition products may be produced such as:  
Ammonia  
Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Wear personal protective equipment.  
Immediately evacuate personnel to safe areas.  
Keep people away from and upwind of spill/leak.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Do not swallow.  
Avoid breathing vapours, mist or gas.  
Avoid contact with skin, eyes and clothing.

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains.  
Discharge into the environment must be avoided.  
Do not flush into surface water or sanitary sewer system.  
Do not allow run-off from fire fighting to enter drains or water courses.

Methods and materials for containment and cleaning up : Ventilate the area.  
No sparking tools should be used.  
Use explosion-proof equipment.  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Additional advice : Suppress (knock down) gases/vapours/mists with a water spray jet.

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

**SECTION 7. HANDLING AND STORAGE****Handling**

Precautions for safe handling : Wear personal protective equipment.  
Use only in well-ventilated areas.  
Keep container tightly closed.  
Do not smoke.  
Do not swallow.  
Avoid breathing vapours, mist or gas.  
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.  
Take precautionary measures against static discharges.  
Ensure all equipment is electrically grounded before beginning transfer operations.  
Use explosion-proof equipment.  
Keep product and empty container away from heat and sources of ignition.  
No sparking tools should be used.  
No smoking.

**Storage**

Conditions for safe storage, including any incompatibilities : Store in area designed for storage of flammable liquids. Protect from physical damage.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Keep away from heat and sources of ignition.  
Keep away from direct sunlight.  
Store away from incompatible substances.  
Container hazardous when empty.  
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Further information on storage conditions : Keep containers tightly closed in a cool, well-ventilated place.  
Containers should be protected against falling down.

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

Avoid product residues in/on containers.  
Do not leave vessels/containers open  
Store in a place accessible by authorized persons only.  
Keep under nitrogen.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
- Engineering measures : Use with local exhaust ventilation.  
Prevent vapour buildup by providing adequate ventilation during and after use.
- Eye protection : Do not wear contact lenses.  
Wear as appropriate:  
Safety glasses with side-shields  
If splashes are likely to occur, wear:  
Goggles or face shield, giving complete protection to eyes
- Hand protection : Solvent-resistant gloves  
Gloves must be inspected prior to use.  
Replace when worn.
- Skin and body protection : Wear as appropriate:  
Solvent-resistant apron  
Flame retardant antistatic protective clothing.  
If splashes are likely to occur, wear:  
Protective suit
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.  
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.  
Use NIOSH approved respiratory protection.
- Hygiene measures : When using, do not eat, drink or smoke.  
Wash hands before breaks and immediately after handling the product.  
Keep working clothes separately.

## Dimethyl Acetamide

### 071-1L

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

Remove and wash contaminated clothing before re-use.  
Do not swallow.  
Avoid breathing vapours, mist or gas.  
Avoid contact with skin, eyes and clothing.

#### Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
N,N-Dimethylacetamide	127-19-5	TWA : Time weighted average	(10 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
N,N-Dimethylacetamide	127-19-5	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2008	ACGIH:US. ACGIH Threshold Limit Values
N,N-Dimethylacetamide	127-19-5	REL : Recommended exposure limit (REL):	35 mg/m3 (10 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
N,N-Dimethylacetamide	127-19-5	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
N,N-Dimethylacetamide	127-19-5	PEL : Permissible exposure limit	35 mg/m3 (10 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)



## Dimethyl Acetamide

### 071-1L

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

N,N-Dimethylacetamide	127-19-5	SKIN_DES : Skin designation:	Can be absorbed through the skin.	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
N,N-Dimethylacetamide	127-19-5	TWA : Time weighted average	35 mg/m3 (10 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
N,N-Dimethylacetamide	127-19-5	SKIN_FINAL : Skin designation (Final Rule Limit applies):	Can be absorbed through the skin.	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid, clear
Color	: colourless
Odor	: weak ammoniacal
Odor threshold	: Note: no data available
pH	: Note: Not applicable
Freezing point	: -20 °C
Boiling point/boiling range	: 166 °C

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

Flash point : 158 °F (70 °C)  
Method: open cup

Evaporation rate : Note: no data available

Lower explosion limit : 1.8 %(V)

Upper explosion limit : 11.5 %(V) at 99 °C

Vapor pressure : 2.0 hPa  
at 20 °C(68 °F)

Vapor density : 3.0

Density : 0.942 g/cm<sup>3</sup> at 20 °C  
0.937 g/cm<sup>3</sup> at 25 °C

Water solubility : Note: soluble

Partition coefficient:  
n-octanol/water : log Pow: -0.77

Ignition temperature : 490 °C

Molecular weight : 87.12 g/mol

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

**SECTION 10. STABILITY AND REACTIVITY**

Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur. Spray mist may be flammable at temperatures below the flash point.
Conditions to avoid	: Heat, flames and sparks. Keep away from direct sunlight.
Incompatible materials	: Oxidizing agents Acids Halogenated solvents in the presence of iron Plastic materials can be attacked.
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Ammonia Carbon dioxide (CO <sub>2</sub> ), carbon monoxide (CO), oxides of nitrogen (NO <sub>x</sub> ), dense black smoke.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity	: LD50: ca. 5,830 mg/kg Species: Rat
Acute inhalation toxicity	: LC50: 8.8 mg/l , vapour Exposure time: 1 h Species: Rat
Acute dermal toxicity	: LD50: 2,100 mg/kg Species: Rabbit

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

- Skin irritation : Species: Rabbit  
Result: slight irritation  
Exposure time: 24 h
- Eye irritation : Species: Rabbit  
Result: Moderate eye irritation
- Sensitisation : Species: Guinea pig  
Result: Did not cause sensitisation on laboratory animals.
- Repeated dose toxicity : Species: Rat  
Application Route: Oral  
Exposure time: 24 Months  
NOAEL (No observed adverse effect level): 300 mg/kg/d  
Note: Spleen
- : Species: Rat  
Application Route: Inhalation  
Exposure time: 2 Years  
NOEL: 25 ppm  
Note: Liver damage Kidney damage
- : Species: Mouse  
Application Route: Inhalation  
Exposure time: 2 Years  
NOEL: 25 ppm  
Note: Liver damage
- : Species: Rat  
Application Route: Inhalation  
Exposure time: 6 Months  
Note: Respiratory irritation
- : Species: Dog  
Application Route: Dermal  
Exposure time: 6 Weeks  
NOEL: 299 mg/kg

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

	Note: Liver damage
Genotoxicity in vitro	: Note: In vitro tests did not show mutagenic effects
Genotoxicity in vivo	: Note: In vivo tests did not show mutagenic effects
Carcinogenicity	: Species: Rat Method: Animal testing did not show any carcinogenic effects. Note: Did not show carcinogenic effects in animal experiments.
Reproductive toxicity	: Species: Rat Method: Animal testing did not show any effects on fertility.
Teratogenicity	: Species: Rat Application Route: Oral Dose: NOEL – 65 mg/kg Method: Exposure by pregnant animals resulted in maternal and foetal toxicity.

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

Toxicity to fish	: flow-through test LC50: $\geq$ 1,500 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)
	: LC50: 13,300 mg/l Exposure time: 96 h Species: Gambusia affinis (Mosquito fish)
	: static test LC50: > 500 mg/l

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

Exposure time: 96 h  
Species: Leuciscus idus (Golden orfe)  
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : static test  
EC50: > 500 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)

Toxicity to algae : EC50: > 500 mg/l  
Exposure time: 72 h  
Species: Desmodesmus subspicatus (green algae)

**Elimination information (persistence and degradability)**

Biodegradability : aerobic  
Result: Inherently biodegradable.  
Value: 96 %  
Note: Exposure Time: 5d

**Further information on ecology**

Additional ecological information : Accumulation in aquatic organisms is unlikely.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

**DOT** UN/ID No. : NA 1993  
Proper shipping name : Combustible liquid, n.o.s.  
(N,N-Dimethylacetamide)

**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

Class	CBL
Packing group	III
Hazard Labels	NONE
Required only for US-DOT Bulk Shipments	

**TDG** Not dangerous goods**IATA** Not dangerous goods**IMDG** Not dangerous goods**SECTION 15. REGULATORY INFORMATION****Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory

## Dimethyl Acetamide

### 071-1L

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019


New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

#### National regulatory information

**SARA 302 Components** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

**California Prop. 65** :  **WARNING:** This product can expose you to chemicals, listed below, known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

N,N-Dimethylacetamide 127-19-5

**Massachusetts RTK** : N,N-Dimethylacetamide 127-19-5

**New Jersey RTK** : N,N-Dimethylacetamide 127-19-5

**Pennsylvania RTK** : N,N-Dimethylacetamide 127-19-5

#### SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	2
Flammability	: 2	2



**Dimethyl Acetamide****071-1L**

Version 2.1

Revision Date 08/10/2018

Print Date 10/17/2019

Physical Hazard : 0  
Instability : 0

\* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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