

SAFETY DATA SHEET

Version 6.6
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Product Number Aldrich - 274135

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- a. Product name : *N,N*-Dimethylacrylamide
- Product Number : 274135
- Brand : Aldrich
- b. Recommended use of the chemical and restrictions on use : **Identified uses**
Laboratory chemicals, For research use only.
- c. Company : 씨그마알드리치코리아(유)
서울특별시 강남구 테헤란로 508,
3층 (대치동, 해성2빌딩)
- Sigma-Aldrich Korea
3F Haesung-2-building Teheran-ro 508 Gangnam-gu,
SEOUL 06178
SOUTH KOREA
- Telephone : +82 -2-2185-1700
- Fax :
- Emergency Phone # : 080 880 0468 (CHEMTREC) +82 2 2185
3800 영업시간 - 09:00~18:00, 월요일 -
금요일 (공휴일 제외)

SECTION 2: Hazards identification**a. GHS Classification**

Acute toxicity, Oral (Category 3)
Acute toxicity, Dermal (Category 3)
Serious eye damage/eye irritation (Category 1)

b. GHS-Labeling

Pictogram



Signal word Danger

Hazard statement(s)

H301 Toxic if swallowed.
H311 Toxic in contact with skin.

H318 Causes serious eye damage.

Precautionary statement(s)

Prevention

P264 Wash the contact area thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents and container according to wastes control act.

c. Other hazards which do not result in classification

none

SECTION 3: Composition/information on ingredients

3a Substances

Formula : C₅H₉NO
Molecular weight : 99.13 g/mol
CAS-No. : 2680-03-7
EC-No. : 220-237-5

Component	Classification	Concentration
N,N-dimethylacrylamide		
CAS-No. 2680-03-7 EC-No. 220-237-5	Acute Tox. 3; 1; H301, H311, H318	>=95 - <= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

a. In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

b. In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

c. If inhaled

After inhalation: fresh air.

d. If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

e. Most important acute symptoms/effects

No data available

Most important delayed symptoms/effects

No data available

f. Notes to physician

No data available

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

SECTION 5: Firefighting measures**a. Suitable extinguishing media**

Carbon dioxide (CO₂) Foam Dry powder

Extinguishing media which shall not be used for safety reasons

For this substance/mixture no limitations of extinguishing agents are given.

b. Specific hazards arising from the chemical

Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

c. Special protective actions for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures**a. Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

b. Environmental precautions

Do not let product enter drains.

c. Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

SECTION 7: Handling and storage

a. Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

b. Conditions for safe storage

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Light sensitive.

c. Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

SECTION 8: Exposure controls/personal protection

a. Control parameters

Contains no substances with occupational exposure limit values.

b. Appropriate engineering controls

No data available

c. Personal protective equipment

Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Hand protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin and body protection

protective clothing

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

a. Appearance

Form liquid

Color colorless

b. Odor No data available

c. Odor Threshold No data available

d. pH 7 - 10 (200 g/l at)

e. Melting point -40 °C

f. Initial boiling point 80 - 81 °C at 27 hPa - lit.

g. Flash point 70 °C

h. Evaporation rate No data available

i. Flammability
(solid, gas) No data available

j. Lower explosion
limit 0.68 %(V)

k. Vapor pressure 0.65 hPa at 20 °C - OECD Test Guideline 104

l. Water solubility 152 g/l at 25 °C - OECD Test Guideline 105 - miscible

m. Relative vapor
density No data available

n. Density 0.962 g/cm³ at 25 °C - lit.

o. Partition
coefficient: n-
octanol/water log Pow: -0.3 at 23 °C - OECD Test Guideline 107 - Bioaccumulation is not expected.

p. Autoignition
temperature 352 °C at 1,013.25 hPa - Regulation (EC) No. 440/2008, Annex, A.15

q. Decomposition
temperature No data available

r. Viscosity, dynamic 1.19 mPa.s at 20 °C - OECD Test Guideline 114
0.89 mPa.s at 40 °C - OECD Test Guideline 114

Viscosity, kinematic No data available

s. Molecular weight 99.13 g/mol

SECTION 10: Stability and reactivity

a. Chemical stability

No data available

b. Possibility of hazardous reactions

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

Violent reactions possible with:

Strong bases

Strong oxidizing agents

c. Conditions to avoid

May polymerize on exposure to light.

Strong heating.

d. Incompatible products

No data available

e. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x)

Other decomposition products - No data available

Thermal decomposition

No data available

Contains the following stabilizer(s):

hydroquinone monomethyl ether (0.05 %)

SECTION 11: Toxicological information

a. Information on likely routes of exposure

No data available

b. Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

Acute toxicity estimate Oral - 100 mg/kg

LD50 Oral - Rat - male and female - > 215 - 464 mg/kg

LC50 Inhalation - Rat - male and female - 1 h - > 3.16 mg/l - vapor

Remarks: (ECHA)

Acute toxicity estimate Dermal - 519 mg/kg

LD50 Dermal - Rabbit - 519 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Tremor.

Liver:Other changes.

(RTECS)

Skin corrosion/irritation

Skin - Rabbit - Mild skin irritation - 24 h - OECD Test Guideline 404

Serious eye damage/eye irritation

Eyes - Rabbit - Risk of serious damage to eyes. - OECD Test Guideline 405

Respiratory or skin sensitization

Maximization Test - Guinea pig - negative - OECD Test Guideline 406

Carcinogenicity

No data available

Germ cell mutagenicity

Genotoxicity in vitro

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vitro

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Genotoxicity in vivo

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Oral

Method: OECD Test Guideline 474

Result: negative

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

c. Numerical measures of toxicity

No data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 5 mg/kg

Repeated dose toxicity - Rat - male and female - Dermal - 13 Weeks - NOAEL (No observed adverse effect level) - 10 mg/kg - LOAEL (Lowest observed adverse effect level) - 75 mg/kg

SECTION 12: Ecological information

a. Ecotoxicity effects

Toxicity to fish static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 120 mg/l

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The life science business of Merck operates as MilliporeSigma in the US and Canada



	- 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 120 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 400 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

b. Elimination information (persistence and degradability)

Biodegradability aerobic - Exposure time 28 d
Result: 0 % - Not readily biodegradable.
(OECD Test Guideline 301C)

c. Bioaccumulative potential

No bioaccumulation is to be expected (log Pow <= 4).

d. Mobility in soil

No data available

e. Other adverse effects

No data available

SECTION 13: Disposal considerations

a. Disposal methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

IMDG

UN number: 2810 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (N,N-dimethylacrylamide)

IATA

UN number: 2810 Class: 6.1 Packing group: III
Proper shipping name: Toxic liquid, organic, n.o.s. (N,N-dimethylacrylamide)

SECTION 15: Regulatory information

a. Regulation under the Occupational Safety and Health Act

Harmful Substances Required Permission for Manufacture - Not applicable

Harmful Substances Prohibited from Manufacturing - Not applicable

Harmful Agents to be kept below Occupational Exposure Limits - Not applicable

Controlled Substances Subject to Environment Monitoring - Not applicable

Controlled Substances Subject to Health Examination - Not applicable

Hazardous substances requiring management - Not applicable

Special Management Materials - Not applicable

b. Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

Toxic Chemicals - Not applicable
Restricted Chemicals - Not applicable
Prohibited Chemicals - Not applicable
Accident Precaution Chemicals - Not applicable

c. Dangerous Substances Safety Management Act

Flammable liquids, Type 3 petroleum - Water insoluble liquid

d. Waste Control Act

Follow article 13 of the act to dispose the product waste

e. Other regulations

KECI Number

On the inventory, or in compliance with the inventory

SECTION 16: Other information

a. List of references

b. Issuing date: 2018.05.26

c. Version: 6.6 Revision Date 2022.02.17

e. Further information

Text of H-code(s) and R-phrase(s) mentioned in Section 3

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H318	Causes serious eye damage.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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