
1. PRODUCT AND COMPANY IDENTIFICATION

Product name	N,N- Dimethylformamide
Synonyms	DMF, Dimethylformamide, DMFA
Grade	ACS, HPLC, Dehydrous
Company	Anaqua Chemicals Supply
	1510 Eldridge Parkway, Suite 110-268 Houston, TX 77077, USA
Telephone	(281)-668-0032
Fax	(281)-668-0033

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Formula	HCON(CH ₃)
CAS-No.	68-12-2
Index-No.	616-001-00-X
Ec-No.	200-679-5
Concentration	> 95 %

3. HAZARDS IDENTIFICATION

Properties Affecting Health Cause eyes irritation. May cause harm to the unborn child. Harmful by inhalation and in contact with skin.

GHS Classification

Flammable liquid	Category 3
Eye irritation	Category 2
Reproductive toxicity	Category 1B
Acute toxicity, Inhalation	Category 4
Acute toxicity, Dermal	Category 4

4. FIRST AID MEASURES

Inhalation	If breathed in, move to fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Rinse mouth with water. Consult a physician immediately.
Skin Contact	Immediately wash off with plenty of water for at least 15 minutes. Consult a physician.
Eye Contact	Rinse through with plenty of water for at least 15 minutes. Consult a physician.
Note to Physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during fire fighting	Combustible material. Container may explode when heated. Vapors may form explosive mixtures with air at ambient temperature.
Special protective equipment for fire-fighters	Wear self contained breathing apparatus for fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective clothing and ventilation equipments. Avoid breath in vapors, mist or gas. Ensure adequate ventilation.
Environmental precautions	Do not release into drains.
Methods for cleaning up	Soak up with inert absorbent material and dispose in suitable, closed containers.

7. HANDLING AND STORAGE

Handling	Wear personal protective equipments. Avoid breath in vapors, mist or gas. Avoid contact with skin and eye. Keep away from hot surface, open fire and any sources of ignition. Take measures against electrostatic charge.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from source of ignition.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Occupational exposure controls

Engineering Measures	Ensure that eye washer and emergency showers are close to the work place. Ensure adequate ventilation. Work under hood.
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Personal protective Equipment

Respiratory protection	Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
Hand protection	Wear appropriate protective gloves.
Eye protection	Tightly fitting safety glasses.
Skin and body protection	Protective clothes should be selected specifically for the work place according to concentration and quantity of the chemical handled.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and at the end of working day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Color	Colorless
pH	6.7
Oxidizing properties	No data available
Melting point	-61 °C (-77.8 °F)
Boiling point	153 °C (307.4 °F)

Flash point	58 °C (136.4 °F)
Ignition temperature	445 °C
Lower explosion limit	2.2 % (V)
Upper explosion limit	16 % (V)
Vapor pressure	3.77 hPa (28.0 mmHg) at 20.0 °C (68.0 °F)
Density	0.944 g/mL
Water solubility	Soluble
Partition coefficient: n-octanol/ water	log Pow: -0.85
Molecular weight	73.09

10. STABILITY AND REACTIVITY

Storage stability	Stable under recommended storage conditions
Conditions to avoid	Sources of ignition. Excess heat.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute toxicity	LD50 Oral 2,800 mg/kg (Rat) LD50 Dermal 1,500 mg/kg (Rabbit) LC50 Inhalation 9-15 mg/l (Rat) 4 h
Skin irritation	Mild skin irritation (Human) 24 h
Eye irritation	Moderate eye irritation (Rabbit)
Sensitization	No data available
Specific target organ toxicity – single exposure (GHS)	No data available
Specific target organ toxicity – repeated exposure (GHS)	No data available

12. ECOLOGICAL INFORMATION

Persistence and degradability	No available information
Ecotoxicity	
Toxicity to fish	LC50 6,300 mg/l (Bluegill sunfish) 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 15,700 mg/l (Daphnia magna) 48 h
Toxicity to algae	IC50 >500 mg/l (Green algae) 96 h
Mobility	No available information

13. DISPOSAL CONSIDERATIONS

Product	Chemical should be disposed of in accordance with local environmental regulations. Contact a licensed professional waste disposal service to dispose of this chemical.
Packaging	Empty containers should be disposed of in accordance with local environmental regulations and taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

IATA

UN-Number: 2265 Class: 3 Packing group: III

Proper shipping name: N,N-Dimethylformamide

IMDG

UN-Number: 2265 Class: 3 Packing group: III

Proper shipping name: N,N-Dimethylformamide

EMS-No. F-E, S-D

ADR/RID

UN-Number: 2265 Class: 3 Packing group: III

Proper shipping name: N,N-Dimethylformamide

15. REGULATORY INFORMATION

Hazard statements

H226: Flammable liquid and vapor

H312: Harmful in contact with skin

H319: Causes serious eye irritation

H332: Harmful if swallowed

H360D: May damage the unborn child

Precautionary statements

P201: Obtain special instructions before use

P302+P352: If on skin: Wash with plenty of soap and water

P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313: If exposed or concerned: Get medical advice/attention.

OSHA Hazards

Flammable liquid, Target organ effect, Irritant, Harmful by skin absorption

DSL Status

All components of this product are on the Canadian DSL list.

GHS-Labeling

Pictogram



Signal word *Danger*

Labeling according to EC Directive

Symbol(s): T-toxic

R-phrase(s): 61-20/21-36

Possible risk of harm to the unborn baby. Irritating to eyes. Harmful by inhalation and in contact with skin.

S-phrase(s): 53-45

Avoid exposure-obtain special instructions before use. In case of accident or if you feel, seek medical advice immediately.

16. OTHER INFORMATION

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