



Centre Anti-Poison pour le Québec: (800) 463-5060

Tél. (Qc): (418) 660-8666 / 800-890-8666


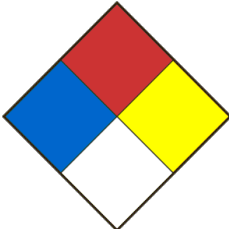
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## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier N,N-DIMETHYLFORMAMIDE		Product Use Laboratory use	
Chemical formula HCON(CH <sub>3</sub> ) <sub>2</sub>		Product code DR-0126; DH-0104	Molar weight 73,1
Chemical name / Commercial name / Synonymous N,N-DIMETHYLFORMAMIDE, DIMETHYLFORMAMIDE, N-FORMYLDIMETHYLAMINE, DMF, DMFA			
Supplier's name Laboratoire MAT		Address-Street 610, Adanac Street	
City Québec		Province Québec	
Postal code G1C 7B7	Internet www.labmat.com	Phone number 418-660-8666 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666 CENTRE ANTI-POISON DU QUÉBEC 800-463-5060		
Date SDS 6/26/2019	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

## SECTION 02 - HAZARDS IDENTIFICATION

<b>Classification WHIMS / GHS</b>	<p>Flammable liquids category 3</p> <p>Acute toxicity - Inhalation category 4</p> <p>Acute toxicity - Dermal category 4</p> <p>Serious eye damage/ Eye irritation category 2A</p> <p>Reproductive toxicity category 1B</p>
<b>Signal Word</b>	DANGER
<b>Hazards statements (H)</b>	<p>H226 Flammable liquid and vapour.</p> <p>H312 Harmful in contact with skin.</p> <p>H319 Causes serious eye irritation.</p> <p>H332 Harmful if inhaled.</p> <p>H360 May damage fertility or the unborn child.</p>
<b>Precautionary statements (P)</b>	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P240 Ground/bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical/ventilating/lighting equipment.</p> <p>P242 Use only non-sparking tools.</p> <p>P243 Take precautionary measures against static discharge.</p> <p>P261 Avoid breathing dust / fume / gas / mist / vapours / spray.</p> <p>P264 Wash the areas of the body that have been in contact with the product after handling.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P337 + P313 If eye irritation persists: Get medical advice/attention.</p> <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.</p> <p>P362 + P364 Take off contaminated clothing and wash it before reuse.</p> <p>P370 + P378 In case of fire: Use water spray or alcohol-resistant foam, or dry powder or carbon dioxide for extinction.</p>
<b>PICTOGRAMS</b>	
<b>Other dangers</b>	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Significant; 4=Extreme)
	<p><b>Health</b> 2</p> <p><b>Fire</b> 2</p> <p><b>Reactivity</b> 0</p> <p><b>Special danger</b></p>

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
N,N-Diméthylformamide	68-12-2	<=100

## SECTION 04 - FIRST AID MEASURES

<b>Eye contact</b>	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
<b>Skin contact</b>	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
<b>Inhalation</b>	If breathing is difficult, give oxygen. If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Ingestion</b>	If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Most important symptoms and effects (acute and delayed)</b>	Ref. section 11.
<b>Immediate medical attention and special treatment, if necessary</b>	In case of medical consultation, keep this sheet available.
<b>General advice</b>	Show this safety data sheet to the doctor in attendance.

## SECTION 05 - FIREFIGHTING MEASURES

<b>Flammability</b>	No
<b>Ignition conditions</b>	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	Data not available.
<b>Hazardous combustion / decomposition products</b>	Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx).
<b>Special fire and explosion hazards</b>	Combustible liquid. Moderate fire hazard in the presence of heat or flame. Closed containers exposed to fire can explode. Contact with strong oxidizing agents may cause fire. N, N-Dimethylformamide mixed with triethylaluminium may explode if heated. Reacts violently with nitric acid, chromic anhydride, bromine, chlorine, carbon tetrachloride, benzene hexachloride (above 65 ° C), copper, tin and its alloys, iron mixture + halogenated hydrocarbons, magnesium nitrate, potassium permanganate, hydride and sodium borohydride.
<b>Special protective equipment and precautions for firefighters</b>	Wear self contained breathing apparatus for fire fighting if necessary.

## SECTION 06 - ACCIDENTAL RELEASE MEASURES

<b>Methods and materials for containment and cleaning up / Personnel precautions, protective equipment</b>	Evacuate personnel to safe areas. Cut off all sources of ignition. Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Use breathing apparatus if necessary. Avoid breathing vapours, mist or gas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Do not let product enter drains.
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## SECTION 07 - HANDLING AND STORAGE

<b>Conditions for safe storage</b>	Store in a cool, dry place. Keep container tightly closed and store away from oxidizing agents, heat, moisture and incompatible products. Protect from the sun's rays. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Handle and store under inert gas.
<b>Methods of handling</b>	Always open containers slowly to allow any excess pressure to vent. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

## SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
N,N-Dimethylformamide	68-12-2	TWA	10.000000 ppm	Canada. British Columbia OEL
Remarks	Contributes significantly to the overall exposure by the skin route.			
		TWAEV	10.000000 ppm 30.000000 mg/m3	Canada. Ontario OELs
	Skin			
		TWA	10.000000 ppm 30.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin			
		TWAEV	10 ppm 30 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		TWAEV	10.000000 ppm 30.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		TWA	10 ppm 30 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin			
		TWA	10 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	10.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich.
Ventilation	Fan.
Respiratory	If work under the hood is not possible, or if the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
Gloves	Handle with gloves.
Eyes	Safety goggles with safety shutters. Face shield (20 cm minimum).
Shoes	Safety shoes.
Clothing	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

## SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Appearance	claire.
Odour	Type amine.
Odour threshold	20ppm
pH	Solution aqueuse 0.5M = pH 6.7.
Melting point / Freezing point	-61°C
Initial boiling point	153°C
Boiling range	Data not available
Flash point	57°C
Evaporation rate	0.17%
Flammability	No
Lower flammable / Explosive limit	2.2%
Upper flammable / Explosive limit	15.2%
Vapour pressure	2.65 mm @ 20°CmmHg
Vapour density	Data not available
Relative density	0.944g/ml
Solubility	Miscible avec l'eau en toutes proportions.
Partition coefficient water/n-octanol	7.4-
Auto-ignition temperature	445°C
Decomposition temperature	Data not available
Viscosity	Data not available

## SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Non-reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Stable under normal conditions. May react violently with incompatible substances.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid moisture and excessive heat. Avoid contact with incompatible materials and extreme temperatures.
Incompatible material	Oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), reducing agents (potassium, sodium, hydrides of metals), acid chlorides, chloroformates, halogens, halogenated hydrocarbons, rubber, leather, methylene diisocyanate, hydride and sodium borohydride, carbon tetrachloride, heat and moisture.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Toxic vapors of nitrogen oxides, monoxide and carbon dioxide.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### N,N-DIMETHYLFORMAMIDE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and may cause inflammation of the conjunctiva.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Nervous disorders, chest pain, cough, dyspnoea, headache, dizziness, erythema, diaphoresis, nausea and vomiting, asthenia and may lead to unconsciousness.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Nervous disorders, gastrointestinal disorders, liver and kidney damage, cramps, diarrhea, headache, dizziness, nausea and vomiting, diaphoresis, erythema, alcohol intolerance (after delay), convulsions and hypertension.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, nervous disorders, liver and kidney damage, chest pain, cough, dyspnoea, laryngitis, headache, dizziness, erythema, alcohol intolerance, asthenia, irritability, weight loss and loss of appetite, nausea and vomiting. May cause malformations of the fetus.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 2,800 mg/kg. LD50 Dermal - Rabbit - 1500 mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4 h - 9 - 15 mg/l.

## SECTION 12 - ECOLOGICAL INFORMATION

Available ecological information	No
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## SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

## SECTION 14 - TRANSPORT INFORMATION

UN Number	2265
UN Proper shipping name	N,N-DIMÉTHYLFORMAMIDE
Transport hazard class(es)	3 Flammable liquids
Packing group	III
Limited quantity index	5L
ERAP Index	-
Special precautions	-

## SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Flammable liquids category 3 Acute toxicity - Inhalation category 4 Acute toxicity - Dermal category 4 Serious eye damage/ Eye irritation category 2A Reproductive toxicity category 1B
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## SECTION 16 - OTHER INFORMATION

### Further information

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. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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