



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

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


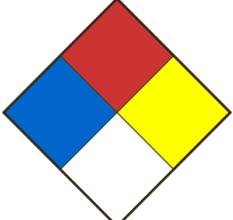
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier DNPH REAGENT		Product Use Laboratory use	
Chemical formula -		Product code RS-0024	Molar weight
Chemical name / Commercial name / Synonymous -			
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 1/15/2019	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	<p>Flammable liquids category 2</p> <p>Specific Target Organ Toxicity - Single exposure category 1</p> <p>Serious eye damage/eye irritation - Serious eye damage category 1</p> <p>Acute toxicity - Inhalation category 3</p> <p>Skin corrosion/irritation - Skin corrosion category 1</p>
Signal Word	<p>DANGER</p>
Hazards statements (H)	<p>H225 Highly flammable liquid and vapour.</p> <p>H370 Causes damage to organs..</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p> <p>H331 Toxic if inhaled.</p>
Precautionary statements (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>P260 Do not breathe 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>P270 Do no eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</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 + P311 IF exposed or concerned: Call a POISON CENTER or a doctor.</p> <p>P321 Specific treatment (see section 4 of the SDS and on this label).</p> <p>P370 + P378 In case of fire: Use water spray or alcohol-resistant foam, or dry powder or carbon dioxide for extinction.</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>P261 Avoid breathing dust / fume / gas / mist / vapours / spray.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P311 Call a POISON CENTER or doctor/physician.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p>
PICTOGRAMS	
Other dangers	<p>NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)</p>
	<p>Health 2</p> <p>Fire 3</p> <p>Reactivity 2</p> <p>Special danger</p>

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Éthanol	64-17-5	45
Acide sulfurique	7664-93-9	26
Méthanol	67-56-1	7
2,4-Dinitrophénylhydrazine (DNPH)	119-26-6	3
Acétate d'éthyle	141-78-6	1
Eau	7732-18-5	<1

SECTION 04 - FIRST AID MEASURES

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
Inhalation	If breathed in, move person into fresh air. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	Ref. section 11.
Immediate medical attention and special treatment, if necessary	In case of medical consultation, keep this sheet available.
General advice	Show this safety data sheet to the doctor in attendance.

SECTION 05 - FIREFIGHTING MEASURES

Flammability	Yes
Ignition conditions	Strong oxidizing agents, heat, sparks and open flame. 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.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Do not use a heavy water stream.
Hazardous combustion / decomposition products	Hazardous decomposition products formed under fire conditions. Carbon oxides. - nitrogen oxides (NOx), Sulphur oxides Hydrogène sulfide. To our knowledge, the products of combustion and decomposition have not been fully studied.
Special fire and explosion hazards	May react violently with incompatible products (Ref Section 10).
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up / Personnel precautions, protective equipment	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. Clean and rinse with water. 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 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Ethanol	64-17-5	TWAEV	1000 ppm 1900 mg/m ³	Canada. Ontario OELs
		TWA	1000 ppm 1880mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		VEMP	1000 ppm 1880mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEL	1000 ppm	Canada. British Columbia OEL
		TWA	1000 ppm	Canada. British Columbia OEL
Components	CAS-No.	Value	Control parameters	Basis
Methanol	67-56-1	TWA	200.000000 ppm 262.000000 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Substance may be readily absorbed through intact skin			
	STEL 250.000000 ppm 328.000000 mg/m ³ Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)			
	Substance may be readily absorbed through intact skin			
		TWA	200.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		STEL	250.000000 ppm	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route.			
		TWAEV	200.000000 ppm 262.000000 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		STEV	250.000000 ppm 328.000000 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	Skin (percutaneous)			
		TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	250.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Components	CAS-No.	Value	Control parameters	Basis
Ethyl acetate	141-78-6	TWA	400.000000 ppm 1,440.000000 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWA	150.000000 ppm	Canada. British Columbia OEL
		TWAEV	400.000000 ppm 1,440.000000 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	400.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Components	CAS-No.	Value	Control parameters	Basis
Sulfuric acid	7664-93-9	TWA	0.2 mg/m ³	Canada. British Columbia OEL
Remarks	ACGIH 'A2' applies to those substances that are considered suspected human carcinogens. IARC '1' applies to substances categorized as carcinogenic to humans, and used when there is sufficient evidence of carcinogenicity in humans.			
		TWAEV	0.2 mg/m ³	Canada. Ontario OELs
		STEV	3 mg/m ³	Canada. Ontario OELs
		STEL	3 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	1 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	1 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEL	3 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich (Millipore Sigma)
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.
Shoes	Safety shoes.
Clothing	Labcoat.
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	incolore-
Odour	Aromatique.
Odour threshold	Data not available
pH	Donnée non disponible.
Melting point / Freezing point	Data not available
Initial boiling point	Data not available
Boiling range	Data not available
Flash point	Donnée non disponible. Estimé entre 23-60°C.-
Evaporation rate	Data not available
Flammability	Yes
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	Data not available
Solubility	Miscible avec l'eau, les alcools et l'éther, acétone.
Vapour density	Data not available
Relative density	1.009g/ml
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	Data not available
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. Vapours may form explosive mixture with air. May react violently with incompatible substances.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid contact with incompatible materials and extreme temperatures. Heat, flames, sparks.
Incompatible material	When pure, the products react with the following products: Acids, Oxidants, Acid Chlorides, Acid Anhydrides, Alkali Metals, Reducing Agents. Water, metals, alcohols, reducing agents, bases, organic and combustible materials, azides, bromates, carbides, chlorates, chromates, cyanides, ferrocyanides, fulminates, glycerides, halides, nitrates, nitrites, permanganates, perchlorates, picrates, sulphides, hydrogen peroxide, nitromethane, phosphorus, heat and moisture.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides. - nitrogen oxides (NOx). Hydrogen sulfide To our knowledge, the products of decomposition have not been fully studied.

SECTION 11 - TOXICOLOGICAL INFORMATION

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and tearing.
- Skin	Irritation. May cause an allergic and inflammatory reaction of the skin in the form of localized erythema.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Nervous disorders, cough, dyspnea, headache, vertigo, methemoglobinemia and cyanosis.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Gastrointestinal disorders, cramps, diarrhea, headache, dizziness, sweating, salivation, convulsions, methemoglobinemia and cyanosis.
Chronic exposure effects / symptoms	Burning sensation, skin allergy, nervous disorders, chest pain, cough, dyspnea, headache, dizziness, confusion, irritability, fatigue, erythema, methemoglobinemia, cyanosis, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Data not available. LD50 Dermal: Data not available
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

SULFURIC ACID

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Severe burns and corrosion of ocular tissue that may lead to corneal ulceration and blindness.
- Skin	Severe burns and tissue ulcerations. May be fatal, if the extent of the burns is considerable.
- Inhalation	Spasms, irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death.
Acute toxicity (Ingestion)	Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall. Dysphagia, kidney damage, abdominal pain, cramps, diarrhea, melena, hematemesis, anuria, possible perforation of the esophagus and stomach, convulsions, salivation, stupor, circulatory collapse, unconsciousness, coma and can lead to death .
Chronic exposure effects / symptoms	Burning sensation, dermatitis and dyschromia, conjunctivitis, lung and eye damage, chest pain, digestive disorders, tooth abrasion, cough, dyspnea, laryngitis, emphysema, tracheobronchitis, headache, dizziness, fever, salivation tremors, paleness, muscle weakness, weight loss and loss of appetite, seizures, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 2,140 mg/kg LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 Inhalation - Mouse - 4h - 850 mg/m3

Routes of exposure	Ingestion.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and tearing.
- Skin	May cause skin irritation.
- Inhalation	May cause respiratory tract irritation.
Acute toxicity (Ingestion)	Euphoria, a feeling of intoxication, followed by central nervous system depression, which may include headache, nausea, dizziness, incoordination, speech disturbance, mental confusion and of narcosis.
Chronic exposure effects / symptoms	Cirrhosis of the liver and various diseases affecting the gastrointestinal, cardiovascular, nervous, hematological and respiratory systems.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 7000 mg/kg LD50 Dermal - Rabbit - > 2,000 mg / kg
CL50 (specify species and route of entry)	LC50 Inhalation - Mouse - 1h - 60000 ppm.

METHANOL

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	May cause eye irritation.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects, chest pain, cough, dyspnea, headache, dizziness, watery eyes, paresthesia, nystagmus, drowsiness, confusion, nausea and vomiting.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Narcotic effects, liver, kidney and eye damage, abdominal pain, cramps, diarrhea, headache, dizziness, paresthesia, nystagmus, drowsiness, incoordination, acidosis, nausea and vomiting, seizures, hypotension, respiratory collapse, loss of consciousness , coma and can lead to death. Acute absorption of methanol can cause blindness. Damage to: liver, kidneys, eyes, heart, central nervous system.
Chronic exposure effects / symptoms	Headache, dizziness, nausea, visual disturbances, decreased visual acuity, liver and kidney damage.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 1187 mg/kg LD50 Dermal - Lapin-15840 mg/kg
CL50 (specify species and route of entry)	LC50 Inhalation - Rat: 64000 ppm/4 h. LC50 Inhalation - Rat 115.9-130.7mg/L air / 4h.

ETHYL ACETATE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and conjunctivitis. May cause opacification of the cornea.
- Skin	Irritation and dermatitis.
- Inhalation	Irritation of the mucous membranes and respiratory tract. Narcotic effects, cough, dyspnea, headache, dizziness, drowsiness, paresthesia, nystagmus, nausea and vomiting, convulsions and may result in unconsciousness.
Acute toxicity (Ingestion)	Irritation of the mucous membranes. Narcotic effects, liver and kidney damage, gastrointestinal disorders, cramps, diarrhea, headache, dizziness, drowsiness, tremors, convulsions, nausea and vomiting.
Chronic exposure effects / symptoms	Chronic poisoning can result in anemia and the appearance of leukocytosis. Burning sensation, dermatitis, conjunctivitis, narcotic effects, liver and kidney damage, chest pain, cough, dyspnea, laryngitis, headache, dizziness, somnolence, paresthesia, nystagmus, muscle weakness, weight loss, and loss of weight. appetite, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 5620 mg/kg LD50 Dermal - Rabbit - > 2000 mg/kg
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 4h - 4000 ppm. LC50 Inhalation - Mouse - 4h - 1500 ppm

SUMMARY

Acute exposure effects / Symptoms:	By exposure routes below.
Ingestion	To our knowledge, the product has not been fully evaluated
Inhalation	To our knowledge, the product has not been fully evaluated
Skin	To our knowledge, the product has not been fully evaluated
Eyes	To our knowledge, the product has not been fully evaluated
Chronic exposure effects / Symptoms:	To our knowledge, the product has not been fully evaluated
ETA Mix (Estimated Acute Toxicity)	LD50 Oral: 4010 mg/kg - Rat LD50 Dermal: >5000 mg/kg - Rabbit LC50 Inhalation: 652 ppm - 4h - Undefined species

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	3286
UN Proper shipping name	LIQUIDE INFLAMMABLE, TOXIQUE, CORROSIF, N.S.A.
Transport hazard class(es)	3 Flammable liquids 6.1 Toxic substances 8 Corrosive substances
Packing group	II
Limited quantity index	1L
ERAP Index	-
Special precautions	16 (ÉTHANOL, MÉTHANOL, ACIDE SULFURIQUE)

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Flammable liquids category 2 Specific Target Organ Toxicity - Single exposure category 1 Serious eye damage/eye irritation - Serious eye damage category 1 Acute toxicity - Inhalation category 3 Skin corrosion/irritation - Skin corrosion category 1
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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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