

SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name: BM-7000 Chemical Autoclave Solution

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use(s): Used with chemical autoclaves

Details of the supplier of the safety data sheet

Manufacturer:	N.A.K.P Foto Inc. 2575 De Miniac Ville Saint Laurent, Quebec H4S 1E5 Canada	Distributor:	B.M. Group Inc. 5890 Monkland Avenue, Suite 16 Montreal Quebec H4A 1G2 Canada
Website:	www.nakpfoto.com	Website :	http://www.bmcanada.ca
Email:	paul@nakpfoto.com	Email:	info@bmcanada.ca
Tel (514) 932-8057		Tel: (514) 738-5200 Toll Free 1-800-561-9818	
Fax (514) 932-8057		Fax: (514) 738-2290	

Emergency telephone number

Emergency contact: 1-800-463-5060 Poison Control Center in Quebec, Canada

Canutec: 613-996-6666

Notes:

While this product is sold in 4L format to consumers who generally purchase small quantities, this SDS also contains valuable information critical to the safe handling and proper use of the product for large production plants, industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product.

Section 2. Hazards identification

Classification of the substance or mixture

GHS Classification for mixture:

Specific target organ toxicity - single exposure - Category 3 (Narcotic)
Hazardous to the aquatic environment, short-term (Acute) - Category 3
Specific target organ toxicity - single exposure - Category 3 (Respiratory)
Specific target organ toxicity - single exposure - Category 2
Serious eye irritation - Category 2
Skin irritation - Category 2
Acute Toxicity Oral - Category 4
Flammable Liquids - Category 2

Label elements

Pictograms:



Signal Words:

Danger

Hazard Statements:

Highly flammable liquid and vapour.

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

May cause drowsiness or dizziness.

May cause damage to organs. Route(s) of exposure: Unknown. Affected organ(s): Unknown.

Harmful to aquatic life.

Precautionary Statements:

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Keep cool.

Ground and bond container and receiving equipment.

Use explosion-proof electrical, ventilating, lighting equipment.

Use non-sparking tools.

Take action to prevent static discharges.

Do not breathe vapors, spray.

Avoid breathing vapors, spray.

Wash your hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Wear protective gloves, protective clothing, eye protection, face protection.

Response

Call a doctor.

If exposed or concerned: Call a POISON CENTER.

Call a POISON CENTER, doctor if you feel unwell.

IF SWALLOWED: Call a POISON CENTER if you feel unwell.

If skin irritation occurs: Get medical advice.

Rinse mouth.

If eye irritation persists: Get medical advice.

IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes.

IF ON SKIN: Wash with plenty of water.

IF ON SKIN (or hair): Rinse skin with water or shower

IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Take off contaminated clothing. And wash it before reuse.

In case of fire: Use Use dry chemical, water spray, carbon dioxide or alcohol-resistant foam to extinguish.

Storage

Store in a well-ventilated place.

Store locked up.

Disposal

Dispose of contents as per local regulations. Dispose of container as per local regulations.

Section 3. Composition/information on ingredients

Substances

No available data for this section.

Mixtures

Identifiers	Ingredients	Percentage	Classification
64-17-5	Ethanol	71%	
67-56-1	Methanol	9%	
141-78-6	Ethyl acetate	0.4%	

Section 4. First-Aid Measures

Description of First Aid Measures

In the event of splashes or contact with eyes

Immediately flush with clean, low-pressure water for several minutes. Hold eyelids open to ensure adequate flushing. Seek medical attention if irritation, redness, or any other symptom develops.

In the event of splashes or contact with skin

Wash contaminated areas thoroughly with water. If redness or other symptoms occur, seek medical attention.

In the event of ingestion

Rinse mouth with water. DO NOT INDUCE VOMITING. Call a poison center, a doctor, or medical service. In case of ingestion of large quantities immediately take the exposed person to hospital.

In the event of inhalation

Remove person to fresh air and keep at rest in a position comfortable for breathing. If respiratory problems occur consult a doctor/medical service.

Most important symptoms and effects, both acute and delayed

No available data for this section.

Indication of any immediate medical attention and special treatment needed

No available data for this section.

Section 5. Firefighting Measures

Extinguishing media

Suitable Extinguishing Media

For large fires: Water spray. Fog. Alcohol-resistant foam. Use water spray to cool fire-exposed containers.

For small fires: Dry chemical. Water spray. Carbon dioxide. Alcohol-resistant foam.

Unsuitable Extinguishing Media

Straight streams of water. Water (may be ineffective).

Special hazards arising from the substance or mixture

Specific Hazards Arising from Combustion of Products

Direct fire hazard: Highly Flammable. Gas/vapour flammable with air within explosion limits.

Fire / decomposition hazards: A mixture of flammable gases and vapors.

Indirect fire hazard: May be ignited by sparks. Gas/vapour spreads at floor level.

Combustion Products

Carbon dioxide (CO₂). Carbon monoxide (CO).

Advice for firefighters

Protective Measures for Fire-Fighting

Wear full protective clothing.

Special Protective Actions for Fire-Fighters

Evacuate the people from the area. Move containers from the fire area if it is possible to do so without risk to personnel. Do not scatter the agent. Use water spray or fog; do not use straight streams. Dike area to prevent runoff and contamination of water sources.

Other Information for Fire Fighters

No available data for this section.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Eliminate all sources of heat and ignition. Wear protective gloves, clothing, and protective goggles to prevent contact with skin and eyes.

Environmental precautions

Avoid release to the environment.

Methods and material for containment and cleaning up

Absorb with earth, sand, or other non-combustible material.

Reference to other sections

No available data for this section.

Section 7. Handling and Storage

Precautions for safe handling

No smoking or open flame in storage, use, or handling areas. Wear protective gloves, clothing, and protective goggles to prevent contact with skin and eyes.

Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage

Keep away from: Direct sunlight. Heat. Open flame. Sparks.

Keep container tightly closed. Store in a cool, dry, well-ventilated area away from incompatible substances (See section 10).

Suitable Packaging

Compatible container / packaging material: Aluminum. Copper. Glass containers. Iron. Nickel. Polyethylene. Polypropylene. Stainless steel 304.

Incompatible Materials

Strong bases. Strong acids. Oxidizing materials.

Specific end use(s)

No available data for this section.

Section 8. Exposure Controls / Personal Protection

Control parameters

Control Parameters / Limits for Product

No available data for this section.

Control Parameters / Limits for Component

Ethanol

OSHA PEL (TWA)	1000 ppm. 1900 mg/m3.
ACGIH STEL (TLV)	1000 ppm. 1880 mg/m3.

Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants (TWA-EV)	1000 ppm. 1880 mg/m3.
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Methanol

Alberta, Canada (TWA)	200 ppm. 262 mg/m3.
Alberta, Canada (STEL)	250 ppm. 328 mg/m3.
ACGIH TLV (TWA)	400.000000 ppm.

Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants (TWA-EV)	200 ppm. 262 mg/m3.
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Ethyl acetate

Alberta, Canada (TWA)	400.000000 ppm. 1440.000000 mg/m3.
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Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants (TWA-EV)	400.000000 ppm. 1440.000000 mg/m3.
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Exposure controls**Engineering Measures**

In large plants or industrial production areas, ensure that there is sufficient ventilation of the area. Eye wash stations are recommended in areas where product is stored in large quantities. Provide adequate general and local exhaust ventilation.

Respiratory Protection

In industrial plants or large production areas, certified self-contained breathing apparatus must be available in case of emergency.

Eye/Face Protection

In large plants or industrial production areas, wear chemical goggles and face shield. Remove contact lenses. In industrial plants or large production areas, ensure eye-wash stations are available. For use in small settings or offices wear a face shield, and a procedure and training for washing eyes in a sink is recommended.

Skin and Body Protection

Wear protective gloves. Wear flame retardant antistatic protective clothing in large plants or industrial production areas.

Hand Protection

Ensure gloves are certified. Wear impermeable gloves.

Hygiene Measures

No available data for this section.

Environmental exposure controls

No available data for this section.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear
Odor	Pungent
Odor threshold	Not available
pH	Not available
Melting point	-48°C / -54.4°F
Boiling point	78°C / 172.4°F
Flash Point	20°C / 68°F ASTMD92
Evaporation rate	2.7 multiplier w/r/t butyl acetate
Flammability	Liquid Flammable Liquid and vapor
Flammability limit	3.3 to 19 %vol
Vapor pressure	50 mmHg
Vapor density	1.59 g/cm ³
Relative density	0.825 multiplier w/r/t water @20C
Solubility	100 % recovery
Solubility in other solvents	Not available
Partition coefficient	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Freezing point	Not available
Percent volatiles	100 %vol
Explosion limit (upper)	19 %vol
Explosion limit (lower)	3.3 %vol
Evaporation rate w/r/t ether	Not available
Evaporation rate w/r/t butyl acetate	2.7
Relative density w/r/t water	0.825 Conditions of Measurement: Temperature: 20°C / 68°F Pressure: 101.3kPa

Other Information

No available data for this section.

Section 10. Chemical Stability & Reactivity Information

Reactivity

No available data for this section.

Chemical Stability

This product is stable under ambient condition.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur under normal conditions.

Conditions to Avoid

Keep away from: Direct sunlight. Electrical equipment. Fire. Heat. Open flame. Sparks. Static electricity.

Incompatible Materials

Avoid contact or storage with: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products

Decomposition will Result in Production of: Carbon dioxide (CO₂). Carbon monoxide (CO).

Section 11. Toxicological Information

Information on toxicological effects

Toxicological Information for Product

No available data for this section.

Toxicological Information for Component

Ethanol

Draize Test - Eye	500 mg, Rabbit, Severe. 500 mg(24hr), Rabbit, Mild.
Draize Test - Skin	20 mg(24h), Rabbit, Moderate.
LC 50 Inhalation	39 g/m ³ (4h), Mouse. 20000 ppm(10h), rat.
LD 50 Oral	3450 mg/kg, Mouse. 6300 mg/kg, Rabbit. 7060 - 9000 mg/kg, Rat.

Methanol

LD 50 Inhalation	83.2 mg/L(4h), Rat. 64000 ppm(4h), Rat.
LD 50 Dermal	15800 mg/kg, Rabbit.
LD 50 Oral	5628 mg/kg, Rat.

Ethyl acetate

Carcinogenicity	This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
LD 50 Dermal	> 18000 mg/kg, Rabbit.
LC 50 Inhalation	45000 mg/m ³ (2h), Mouse.
LD 50 Oral	5620 mg/kg, Rat.

Irritation/Corrosion Information for Product

No available data for this section.

Irritation/Corrosion Information for Component

Ethyl acetate

Skin Sensitization: No data available.

Respiratory: No data available.

Eyes: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2).

Skin: OECD Test Guideline 404 - Rabbit, Mild Skin Irritation.

Section 12. Ecological Information

Toxicity

Ecotoxicity Values for Product

No available data for this section.

Ecotoxicity Values for Component

Ethanol

LC 50 Fish: >10000 mg/l. 12900-15300 mg/L(96hr), Rainbow trout. 11200 mg/L(24hr), Rainbow trout.

EC 50 Crustaceans: 7800 mg/l, Daphnia.

EC 50 Fingerling: 34900 mg/L(5-30min), Phytobacterium phosporeum.

Toxic Threshold concentration: >6500 mg/l, Pseudomonas putida. >5000 mg/l, Scenedesmus quadricauda. >1450 mg/l, Mycrosystis aeruginosa.

LD 50 Crustaceans: 7800 mg/l, Daphnia.

LD 50 Fish: 9000 mg/l(24h).

Ethyl acetate

LC 50 Fish: 350.00 - 600.00 mg/l(96h), Oncorhynchus mykiss (rainbow trout). 220.00 - 250.00 mg/l(96h), Pimephales promelas (fathead minnow).

EC 50 Crustaceans: 560 mg/l(48h), Daphnia magna (Water flea).

EC 50 Algae: 4300 mg/l(24h). 1800.00 - 3200.00 mg/l(72h), Selenastrum.

Methanol

EC 50 Bacteria: 43000 mg/l(5min), Photobacterium sphoreum. 40000 mg/l(15min), Photobacterium sphoreum. 39000 mg/l(25min), Photobacterium sphoreum.

LC 50 Fish: 29400 mg/L(96hr), Fathead minnow. 13 mg/l(96h), Rainbow trout. 8000 mg/l(43hr), Trout.

Persistence and degradability

OECD Test Guideline 301D: 79% - Readily biodegradable.

Bioaccumulative potential

Bioaccumulative Potential for Product

No available data for this section.

Bioaccumulative Potential for Component

Ethyl acetate

Bioaccumulation: 3 d.

Bioconcentration factor (BCF): 30.

Mobility in soil

No available data for this section.

Results of PBT and vPvB assessment

No available data for this section.

Other adverse effects

No available data for this section.

Section 13. Disposal Considerations

Waste treatment methods

Waste Disposal Regulation(s) / Operation

Dispose of according to local, state, and federal regulations.

Waste Treatment Methods

No available data for this section.

Section 14. Transportation Information

	ADR	IMDG	IATA	DOT
UN number	No available data for this section.	No available data for this section.	No available data for this section.	1986
UN proper shipping name	No available data for this section.	No available data for this section.	No available data for this section.	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (Ethanol, Methanol)
Transport hazard class(es)	No available data for this section.	No available data for this section.	No available data for this section.	3 (6.1)
Packing group	No available data for this section.	No available data for this section.	No available data for this section.	II
Environmental hazards	No available data for this section.	No available data for this section.	No available data for this section.	No available data for this section.
Special precautions for user	No available data for this section.			
Transport in bulk according to Annex II of Marpol and the IBC Code	No available data for this section.			
Other	Flammable liquid.			

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, Health and Environmental Regulations for Product

No available data for this section.

Safety, Health and Environmental Regulations for Component

Ethyl acetate

No data available.

Ethanol

DSL (Canada): Present.

TSCA: Present.

Methanol

DSL (Canada): Present.

TSCA:

Present.

Revision: 4

Chemical safety assessment

No available data for this section.

Section 16. Other Information

Disclaimer

The above information is accurate to the best of our knowledge, however since data, safety standards and government regulations change, and the conditions of handling and use or misuse are beyond our control, manufacturer and distributor, above mentioned, make no warranty either expressed or implied with respect to the completeness or continuing accuracy of information herein and disclaims all liability for reliance thereon. Do not use ingredient information and / or ingredient percentages in this SDS as a product specification.

Glossary

ACGIH: American Conference of Governmental Industrial Hygienists.

DOT: Department of Transportation, USA.

LC 50: Lethal Concentration which is lethal to 50% of the population.

LD 50: Lethal Dose which is lethal to 50% of the population.

N/A: Not applicable.

N/AV: Not available.

N/D: Not determined.

OSHA: US Occupational Safety and Health Administration, US Department of Labor.

PEL: Permissible Exposure Limit.

TLV: Threshold Limit Value.

TWA: Time Weighted Average.

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