

SECTION 1 - PRODUCT IDENTIFICATION

Product identifier/Trade name:	FORMALINE
Product code/Internal Identification:	DIN 00292303
Product use/Description:	DISINFECTANT in 20L and 186 L container
Product chemical name:	N/Ap
Chemical family:	N/Ap
MSDS preparation/review date:	March 19, 2014
Supplier identifier:	Vétoquinol N.-A Inc. 2000 Chemin Georges, Lavaltrie, Qué (Canada), J5T 3S5 Tél. (450) 586-2252
Emergency phone number:	(613) 996-6666 (CANUTEC) 1-800 463-5060 OR (418) 656-8090 (CONTROL POISON CENTER)
Manufacturer identifier:	Same as supplier
Emergency phone number:	Same as supplier
WHMIS Classification:	Refer to Section 15.

SECTION 2 - CHEMICAL COMPOSITION / HAZARDOUS INGREDIENTS

Hazardous Ingredients	CAS #	% (weight)	LD ₅₀ (route, specie)	LC ₅₀ (specie)
Formaldehyde	50-00-0	30-60 (37 %)	100 mg/kg (oral, rat) 270 mg/kg (dermal, rabbit)	250 ppm4 hrs (rat)
Methanol	67-56-1	10-30 (12-15 %)	5600 mg/kg (oral, rat)	64000 ppm 4 hrs (rat)

SECTION 3 - HAZARDS IDENTIFICATION
Emergency Overview

COMBUSTIBLE LIQUID AND VAPOUR. Vapour may spread long distances. Distant ignition and flashback are possible. During a fire, irritating/toxic smoke and fumes may be generated. TOXIC. Central nervous system depressant. High vapour concentrations may cause headache, nausea, dizziness, drowsiness, incoordination and confusion. Higher exposures may result in unconsciousness and death. May be irritating to the respiratory tract. CORROSIVE. Causes eye and skin irritation or burn. POSSIBLE REPRODUCTIVE AND CANCER HAZARD - may cause harmful effects to the fetus, based on animal evidence. May also cause cancer. Aspiration hazard. Swallowing or vomiting of the liquid may cause aspiration (breathing) into the lungs.

POTENTIAL HEALTH EFFECTS (for more details, refer to Section 11)

Primary entry route(s): Skin, eye, ingestion and inhalation.

Effects of short-term (acute) and long-term (chronic) exposure:

Inhalation: May cause central nervous system (CNS) depression. May cause headache, nausea, dizziness, vomiting and incoordination. High exposures may result in unconsciousness and death. May be irritating to the respiratory tract.

Skin: May cause a moderate irritation or burn. Repeated or prolonged contact may cause dermatitis.

Eye: Product may cause a moderate to severe eye irritation or burn. Damages can be irreversible.

Ingestion: May be fatal or cause blindness if swallowed (large amounts). Aspiration hazard. Swallowing or vomiting of the liquid may cause aspiration (breathing) into the lungs.

SECTION 4 - FIRST AID MEASURES
Inhalation:

Remove source of contamination or have victim move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention immediately.

Skin contact:

Flush contaminated area with lukewarm, gently running water for at least 20-30 minutes or until the chemical is removed. Under running water, remove contaminated clothing. If irritation persists, obtain medical advice. Completely decontaminate clothing before reuse or discard.

Eye contact:

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20-30 minutes, or until the chemical is removed, while holding the eyelid(s) open. Obtain medical attention immediately

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink two glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Repeat administration of water. Obtain medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability: COMBUSTIBLE LIQUID. Vapour may travel a considerable distance to a source of ignition and flash back to a leak or open container.

Flash point (Method): 56° C (Setaflash closed cup)

Lower flammable limit (% by volume): 7%

Upper flammable limit (% by volume): 73%

Sensitivity to mechanical impact: Probably not sensitive. Stable material.

Sensitivity to static discharge: Not sensitive

Auto-ignition temperature: 430° C

Suitable extinguishing media: Carbon dioxide, dry chemical powder and appropriate foam.

Special fire-fighting procedures/equipment:

During a fire, irritating/toxic smoke and fumes may be generated. Vapours can accumulate in confined spaces, resulting in a toxicity and flammability hazard. A self-contained breathing apparatus is required for fire-fighting personnel to protect themselves from toxic products produced during the combustion. Closed containers may explode with the pressure building from the heat. Use water to cool fire exposed containers and prevent this situation.

Hazardous combustion products:

Carbon monoxide, carbon dioxide and other irritant gases, which may include toxic constituents.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions:

Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Remove all ignition sources. Remove or isolate flammable and combustible materials. Wear adequate personal protective equipment (See Section 8). Ventilate area.

Spill response/Cleanup:

Stop the flow if it can be done safely. Keep materials which can burn away from spilled material. Prevent material from entering waterways, sewers or confined spaces. **SMALL SPILLS:** Soak up spill with dry absorbent material which does not react with spilled chemical. Put material in suitable, covered, labelled containers. Flush area with water. **LARGE SPILLS:** Contain spill with dry earth, sand, or absorbent material which does not react with spilled material. Remove liquid by explosion-proof pumps or vacuum equipment. Place in suitable, covered, labelled containers. Contact fire and emergency services and supplier for advice. Contaminated absorbent material may pose the same hazards as the spilled product.

Environmental precautions:

For large spills, notify government occupational health and safety and environmental authorities. Confine spill, preventing it from entering sewer lines or waterways. Dispose of as per local, state and federal regulations.

SECTION 7 - HANDLING AND STORAGE

Safe handling procedures:

Before handling, it is very important that engineering controls are operating and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use. Ground all drums, transfer vessels, hoses and piping. Do not use near welding operations, flames or hot surfaces. Do not remain in treated area. Well ventilate area after treatment. Inspect containers for leaks before handling. Never return contaminated material to its original container. Label containers appropriately. Keep containers closed when not in use. Assume that empty containers contain residues which are hazardous. Do not use with incompatible materials such as strong oxidizing agents.

Storage requirements:

Store in a cool, well-ventilated area, out of direct sunlight and away from heat and ignition sources. Keep storage area clear of ignition sources. Store away from incompatible materials such as strong oxidizers. Inspect all incoming containers to make sure they are properly labelled and not damaged. Store in suitable, labelled containers. Keep containers tightly closed. Empty containers may contain hazardous residues. Keep absorbents for leaks and spills readily available. Storage facilities should be made of fire resistant materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls:

Local exhaust ventilation system is recommended to maintain concentrations of contaminants below exposure limits in storage area.

Respiratory Protection:

Respiratory protection is required if the concentrations are higher than the exposure limits. Use a NIOSH approved respirator if the exposure limits are unknown.

Protective Clothing/Equipment:

Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective chemical safety goggles or in a splash environment in combination with a face shield. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area. Separate contaminated work clothes from street clothes. Launder before reuse.

Comments:

Avoid contact with skin and eyes. Avoid breathing vapours or mists. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state, colour and odour: Colourless liquid with strong odour of formaldehyde.

Odour threshold: N/Av

pH : 2.8-6.0

Melting/freezing point: -13°C

Coefficient of oil/water distribution: N/Av

Specific gravity or density (water = 1, at 4°C): 1.081

Evaporation rate: N/Av

Boiling point: 90-100°C

Vapour pressure: 27 mm Hg @ 25°C

Solubility in water: Complete

Vapour density (Air = 1): 1.04 (Formaldehyde)

% volatile by volume: 42-66 %

SECTION 10 - REACTIVITY AND STABILITY DATA

Stability and reactivity: Stable at room temperature, in normal handling and storage conditions.

Polymerisation: Hazardous polymerisation will not occur.

Conditions to avoid: Avoid STRONG OXIDIZING AGENTS, STRONG ACIDS, ALKALIS, etc... Keep away from ignition sources.

Materials to avoid: Avoid STRONG OXIDIZING AGENTS, STRONG ACIDS, ALKALIS, etc...

Hazardous decomposition products: None

SECTION 11 - TOXICOLOGICAL INFORMATION

Exposure limits: N/Av for the product.

Ingredient	OSHA PEL		ACGIH TLV		Other exposure limits
	TWA	STEL	TWA	STEL	
Formaldehyde	N/Av	N/Av	N/Av	N/Av	0.3 ppm (ACGIH TLV Ceiling)
Methanol	200 ppm	N/Av	200 ppm	250 ppm	N/Av

For more details, refer to Section 3.

Carcinogenicity: Formaldehyde is listed by IARC, ACGIH, NTP or OSHA as a carcinogen.

Teratogenicity, mutagenicity, other reproductive effects: Methanol is considered teratogenic/embryotoxic based on animal study. Formaldehyde is considered a possible mutagen.

Skin sensitization: May cause skin allergies.

Respiratory tract sensitization: N/Av

Synergistic materials: N/Av

SECTION 12 - ECOLOGICAL INFORMATION

Environmental effects: N/Av

Important environmental characteristics: N/Av

Aquatic toxicity: N/Av

SECTION 13 - WASTE DISPOSAL

Handling and storage conditions for disposal:

Store material for disposal as indicated in Handling and Storage (Section 7).

Methods of disposal:

Review federal, provincial and local government requirements prior to disposal. Disposal by controlled incineration or secure landfill may be acceptable.

SECTION 14 - TRANSPORTATION INFORMATION
Transportation of Dangerous Goods (TDG) :

TDG Classification: UN1198; FORMALDEHYDE SOLUTION, FLAMMABLE; 3 (8); III

Special case: Product can also be shipped as a LIMITED QUANTITY/CONSUMER COMMODITY according to TDG Section 1.17.

SECTION 15 - REGULATORY INFORMATION
In Canada
WHMIS information:

Product is regulated according to the Food and Drugs Act and is exempted from the Controlled Product Regulation (CPR) in Canada.

Hazardous Materials Identification System (HMIS):

HEALTH: 3 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: Section 8.

HAZARD: 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Severe

National Fire Protection Association (NFPA):

HEALTH: 3 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: Section 8.

HAZARD: 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Severe

SECTION 16 - OTHER INFORMATION
Prepared by: NSS ENTREPRISE INC. for Vétoquinol

Telephone number: (514) 239-8785 or (450) 586-2252

References:

1. Manufacturer'/suppliers' MSDS.
2. Documents provided by the «Répertoire toxicologique de la CSST».
3. Canadian Centre for Occupational Health and Safety, CHEMpendium/RTECS, 2014.

Abbreviations:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service
CFR	Code of Federal Regulations (Transportation in U.S.A.)
DOT	Department of Transport (U.S.A.)
DSL	Domestic Substance List
IARC	International Agency for Research on Cancer
LC	Lethal concentration
LD	Lethal Dosage
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program (U.S.A.)
OSHA	Occupational Safety and Health Administration (U.S.A.)
PEL	Permissible Exposure Limit
STEL	Short-term Exposure Limit
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
USEPA	United States Environmental Protection Agency
WHMIS	Workplace Hazardous Materials Information System

End of the MSDS