

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Formaldehyde 37% Solution

Other means of identification

Product Code(s) A2611

UN/ID no. 1198

Synonyms No information available

Product Use For Laboratory Research Use Only.

Supplier/Manufacturer

Biomatik Corporation
9-140 McGovern Dr.
Cambridge, Ontario N3H 4R7
Canada

Telephone Number 1-519-489-7195

E-mail Address info@biomatik.com

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity - Oral	Category 3
Acute Toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Gases)	Category 3
Skin Corrosion/Irritation	Category 1 Sub-category B
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 1
Flammable liquids	Category 4

Label elements

Emergency Overview

Danger

Hazard statements

H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H331 - Toxic if inhaled
H341 - Suspected of causing genetic defects

H350 - May cause cancer
 H370 - Causes damage to organs
 H227 - Combustible liquid



Appearance Clear

Physical State Liquid

Odor Odorless to pungent.

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing must not be allowed out of the workplace
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep cool

Precautionary Statements - Response

Specific treatment (see .? on this label)
 Immediately call a POISON CENTER or doctor
 Specific treatment (see .? on this label)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor
 Call a POISON CENTER or doctor if you feel unwell
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Immediately call a POISON CENTER or doctor
 IF SWALLOWED: Immediately call a POISON CENTER or doctor
 Rinse mouth
 Do NOT induce vomiting
 In case of fire: Use CO₂, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	EC No.	Weight %	Trade Secret
Formaldehyde	50-00-0	200-001-8	36-38	Not applicable

Methanol	67-56-1	200-659-6	10-15	Not applicable
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4. FIRST AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. If not breathing, give artificial respiration.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal protection Ensure adequate ventilation, especially in confined areas.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb with sand or vermiculite. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products Strong oxidizing agents. Strong acids. Alkalis. Phenol. Hydrochloric Acid.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Formaldehyde	-	TWA: 0.75 ppm STEL: 2 ppm	IDLH: 20 ppm Ceiling: 0.1 ppm TWA: 0.016 ppm
Methanol	250 ppm STEL TWA: 200 ppm	TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Safety glasses with side-shields.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Odorless to pungent.
Appearance	Clear	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point/freezing point		
Boiling Point/Range	approx. 100 °C	
Flash Point (High in °C)	62 °C / 144 °F	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	approx 70%(V)	
Lower flammability limit:	approx 7%(V)	
Vapor pressure	No information available	
Vapor Density	approx 1	

Specific Gravity	No information available
Water Solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition Temperature	420 °C
Decomposition Temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	No information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

May further react at high temperatures to form methanol, formic acid or methylals. At low temperatures will self-polymerize to form paraformaldehyde.

Conditions to Avoid

Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials

Strong oxidizing agents. Strong acids. Alkalis. Phenol. Hydrochloric Acid.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation	Toxic by inhalation.
Eye Contact	May cause irreversible damage to eyes.
Skin Contact	Causes burns. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Toxic in contact with skin.
Ingestion	Toxic if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formaldehyde	= 100 mg/kg (Rat)	= 270 mg/kg (Rabbit)	= 0.578 mg/L (Rat) 4 h
Methanol	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h

Information on toxicological effects**Symptoms** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

Sensitization

No information available.

Mutagenic Effects

No information available.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Formaldehyde	A2	Group 1	Known	X
Methanol	-	-	-	-

Reproductive Toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Chronic Toxicity

Suspected carcinogen.

Target Organ Effects

Kidneys, Eyes.

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION**Ecotoxicity**

12.5% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Toxicity to Fish	Crustacea
Formaldehyde	-	1510: 96 h <i>Lepomis macrochirus</i> µg/L LC50 static 22.6 - 25.7: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 23.2 - 29.7: 96 h <i>Pimephales promelas</i> mg/L LC50 static 41: 96 h <i>Brachydanio rerio</i> mg/L LC50 static 0.032 - 0.226: 96 h <i>Oncorhynchus mykiss</i> mL/L LC50 flow-through 100 - 136: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	2: 48 h <i>Daphnia magna</i> mg/L LC50 11.3 - 18: 48 h <i>Daphnia magna</i> mg/L EC50 Static
Methanol	-	28200: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 18 - 20: 96 h <i>Oncorhynchus mykiss</i> mL/L LC50 static 13500 - 17600: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 100: 96 h <i>Pimephales promelas</i> mg/L LC50 static 19500 - 20700: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through	-

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical Name	Partition coefficient
Formaldehyde	0.35
Methanol	-0.77

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde	-	-	-	-
Methanol	-	Included in waste stream: F039	-	Ignitable waste

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Formaldehyde	-	-	-	-
Methanol	-	-	-	-

Chemical Name	California Hazardous Waste Status
Formaldehyde	-
Methanol	Toxic; Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no. 1198
 Proper shipping name FORMALDEHYDE SOLUTION, FLAMMABLE
 Hazard Class 3
 Subsidiary class 8
 Packing Group III

IATA

UN/ID no. 1198
 Proper shipping name FORMALDEHYDE SOLUTION, FLAMMABLE
 Hazard Class 3
 Subsidiary hazard class 8
 Packing Group III

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL/NDL Complies
 EINECS/ELINCS Complies
 ENCS Does not Comply
 IECSC Complies
 KECL Complies
 PICCS Complies
 AICS Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	SARA 313 - Threshold Values %
Formaldehyde	-
Methanol	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde	-	-	-	-
Methanol	-	-	-	-

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Formaldehyde	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ
Methanol	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	California Prop. 65
Formaldehyde	Carcinogen
Methanol	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Formaldehyde	X	X	X
Methanol	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet