



Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

FORMALDEHYDE SOLUTION 37% AR

PRODUCT CODE : B-3037

CAS No : 50-00-0

FORMULA : 30.03 g/mol

UN No : 2209

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

FORMALDEHYDE SOLUTION 37% AR



MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product Name** : FORMALDEHYDE SOLUTION 37% AR
Synonyms : Methylaldehyde solution, methanal solution, Formalin solution; Formol; Methylene Oxide; Morbucid
CAS No. : 50-00-0
HS Code : 2912 11 00
Chemical Formula : HCHO
Molecular Weight : 30.03 g/mol
Product Code : B-3037
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 3), H301
 Acute toxicity, Inhalation (Category 3), H331
 Acute toxicity, Dermal (Category 3), H311
 Skin corrosion (Category 1B), H314
 Skin sensitisation (Category 1), H317
 Germ cell mutagenicity (Category 2), H341
 Carcinogenicity (Category 1B), H350
 Specific target organ toxicity - single exposure (Category 1), H370
 Specific target organ toxicity - single exposure (Category 3),
 Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H301 + H311 + H331

H314

H317

H335

H341

H350

Toxic if swallowed, in contact with skin or if inhaled
 Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause respiratory irritation.

Suspected of causing genetic defects.

May cause cancer.

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

FORMALDEHYDE SOLUTION 37% AR



MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

H370	Causes damage to organs.
Precautionary statement(s)	
P201	Obtain special instructions before use.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/doctor.
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Methylaldehyde solution, methanal solution, Formalin solution.
Formula	: HCHO
Molecular weight	: 30.03 g/mol
CAS-No.	: 50-00-0
EC-No.	: 200-001-8
Index-No.	: 605-001-00-5

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Formaldehyde CAS-No. 50-00-0 EC-No. 200-001-8 Index-No. 605-001-00-5	Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Muta. 2; Carc. 1B; H301, H331, H311, H314, H317, H341, H350 Concentration limits: $\geq 25\%$: Skin Corr. 1B, H314; $5 - < 25\%$: Skin Irrit. 2, H315; $5 - < 25\%$: Eye Irrit. 2, H319; $\geq 5\%$: STOT SE 3, H335; $\geq 0.2\%$: Skin Sens. 1, H317	$\geq 30 - < 50\%$
	Flam. Liq. 2; Acute Tox. 3; STOT SE 1;	$\geq 10 - < 20\%$

Methanol CAS-No. 67-56-1 EC-No. 200-659-6 Index-No. 603-001	H225, H301, H331, H311, H370Concentration limits: $\geq 10\%$: STOT SE 1, H370; 3 - $< 10\%$: STOT SE 2, H371;	
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For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour). Do not attempt to neutralise

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Mixture with combustible ingredients.

Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system

MATERIAL SAFETY DATA SHEET (SDS/MSDS)
FORMALDEHYDE SOLUTION 37% AR

MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.
Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities**Storage conditions**

No metal containers. Protected from light. Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.
Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****8.2 Exposure controls****Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

FORMALDEHYDE SOLUTION 37% AR



MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0,40 mm
Break through time: 480 min
Material tested: Camatril®

Splash contact

Material: Chloroprene
Minimum layer thickness: 0,65 mm
Break through time: 240 min
Material tested: KCL 720

Body Protection

protective clothing

Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type ABEK The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: clear, liquid Colour: colourless
Odour	stinging
Odour Threshold	0,05 - 0,125 ppm - (Formaldehyde)
pH	2,8 - 4,0 at 20 °C
Melting point/freezing point	Melting point: < -15 °C
Initial boiling point and boiling range	93 - 96 °C at 1.013 hPa
Flash point	62 °C - c.c

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

FORMALDEHYDE SOLUTION 37% AR



MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

Evaporation rate	1
Flammability (solid, gas)	No data available
Upper/lower flammability or	Upper explosion limit: 73 %(V)
explosive limits	Lower explosion limit: 7 %(V)
Vapour pressure	No data available
Vapour density	40 mmHg at 39 °C
Relative density	No data available
Water solubility	No data available
Partition coefficient: noctanol/water	1,09 g/cm ³ at 20 °C
Auto-ignition temperature	log Pow: 0.35
Decomposition temperature	420 °C
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	Not classified as explosive.

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Reducing agents tends to polymerise Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability

Sensitivity to light The product is chemically stable under standard ambient conditions (room temperature) . Contains the following stabilizer(s): Methanol (10 %)

10.3 Possibility of hazardous reactions

Risk of explosion with: Nitromethane performic acid Acids phenol Nitric acid hydrogen peroxide peracetic acid nitrogen dioxide

Exothermic reaction with: Bases nitrides polymerisation initiators Sodium hydroxide potassium permanganate furfuryl alcohol Strong oxidizing agents perchloric acid with Dithallium trioxide
Generates dangerous gases or fumes in contact with: hydrochloric acid magnesium carbonate

10.4 Conditions to avoid

Exposure to light. Strong heating.

10.5 Incompatible materials

various metals, various alloys, Mild steel, Copper

10.6 Hazardous decomposition products

in the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimate Oral - 212,81 mg/kg (Calculation method)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

MATERIAL SAFETY DATA SHEET (SDS/MSDS)
FORMALDEHYDE SOLUTION 37% AR

MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

Acute toxicity estimate Inhalation - 4 h - 1,32 mg/l - vapor (Calculation method)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate Dermal - 586,99 mg/kg (Calculation method)

Skin corrosion/irritation

Mixture causes burns.

Serious eye damage/eye irritation

Mixture causes serious eye damage. Risk of blindness!

Respiratory or skin sensitisation

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

Evidence of genetic defects.

Carcinogenicity

IARC: 1 - Group 1: Carcinogenic to humans (Formaldehyde)

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Mixture causes damage to organs. - Eyes, Central nervous system

Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache

SECTION 12: Ecological information**12.1 Toxicity**

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

FORMALDEHYDE SOLUTION 37% AR



MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Harmful to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 2209

IMDG: 2209

IATA: 2209

14.2 UN proper shipping name

ADR/RID: FORMALDEHYDE SOLUTION

IMDG: FORMALDEHYDE SOLUTION

IATA: Formaldehyde solution

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Further information

No data available

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H225

Highly flammable liquid and vapour.

H301

Toxic if swallowed.

H301 + H311 + H331

Toxic if swallowed, in contact with skin or if inhaled

H311

Toxic in contact with skin.

MATERIAL SAFETY DATA SHEET (SDS/MSDS)
FORMALDEHYDE SOLUTION 37% AR

MSDS Number : 0159

Date : Aug 23th, 2024

Version : 1.0

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H371	May cause damage to organs.

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 2

Reactivity: 0

Further information

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

Version : 1.0

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