
Material Safety Data Sheet

Product Name	Formaldehyde 37% – 41% Solution
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:**Product Description:** Formaldehyde 37 % - 41% Solution**Synonyms:** Formalin, Methanal, Methylene oxide, Oxymethane, Formic aldehyde, Methyl aldehyde**CAS-No:** This product is a mixture. See Section 3.**EC-No.:** 200-001-8**Molecular Formula:** CH₂O**REACH Registration No:** A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.**1.2. Relevant identified uses of the substance or mixture and uses advised against:****Recommended Use:** Laboratory chemicals**1.3. Details of the supplier of the safety data sheet:**

- **Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad,
Email: info@finarchemicals.com
Web: www.finarchemicals.com
- **E-Mail Address** safety@finarchemicals.com; info@finarchemicals.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717
- Registered office No: +91 - 79 – 40040085

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SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture:****Classification according to Regulation (EC) No 1272/2008**

Flammable liquids (Category 3), H226

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Skin corrosion (Sub-category 1B), H314

Serious eye damage (Category 1), H318

Skin sensitisation (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 1B), H350

Specific target organ toxicity - single exposure (Category 1), Eyes, H370

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

2.2. Label Elements:**Labeling according Regulation (EC) No 1272/2008****Pictogram****Signal word****Danger****Hazard statement(s)**

H226 Flammable liquid and vapour.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

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H350 May cause cancer.

H370 Causes damage to organs (Eyes).

Precautionary statement(s)

P201 Obtain special instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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.

P305 + P351 + P338 + P310 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/doctor.

Supplemental Hazard Statements: None

Restricted to professional users.

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.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Formaldehyde 37% -41 % solution

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Formaldehyde	50-00-0	200-001-8	37 - 41
Methanol	67-56-1	200-659-6	10 - 15
Water	7732-18-5	231-791-2	47 - 53.5

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SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures:**

- **General advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

- **If inhaled**

If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Move to fresh air. Immediate medical attention is required.

- **If Contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

- **In case of eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

- **If swallowed**

Do not induce vomiting. Call a physician or Poison Control Center immediately.

4.2. Most important symptoms and effects, both acute and delayed:

Breathing difficulties. Causes burns by all exposure routes. May cause allergic skin reaction.

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

4.3. Indication of any immediate medical attention and special treatment needed:

No information Available

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media:**

Suitable Extinguishing Media- Use Water- Spray, alcohol-resistant foam, dry chemical or Carbon dioxide.

Unsuitable extinguishing media- For this substance/mixture no limitations of extinguishing agents are given. Do Not Use Water Jet.

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5.2. Special hazards arising from the substance or mixture:

Flammable. Containers may explode when heated. Vapours may form explosive mixtures with air. Vapours may travel to source of ignition and flash back. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

5.3. Advice for firefighters:

Special protective equipment 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

6.2. Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up:

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or

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on clothing. Wear personal protective equipment. Do not ingest. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools.

Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed in a dry and well-ventilated place. Corrosives area.

Keep away from heat and sources of ignition.

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:

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Formaldehyde	TWA: 0.1 ppm STEL: 0.3 ppm	(Vacated) TWA: 3 ppm (Vacated) STEL: 10 ppm (Vacated) Ceiling: 5 ppm TWA: 0.75 ppm STEL: 2 ppm	IDLH: 20 ppm TWA: 0.016 ppm Ceiling: 0.1 ppm	Ceiling: 0.3 ppm
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325mg/m ³	TWA: 200 ppm STEL: 250 ppm

Abbreviation:

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

8.2. Exposure Controls:

- Appropriate Engineering Controls:**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

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Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye & Face Protection-

safety goggles

Other Protective equipment-

Flame retardant antistatic protective clothing.

Respiratory Protection-

Required when vapours/aerosols are generated.

Recommended Filter type: filter 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.

Environmental Exposure Controls-

Do not let product enter drains. Risk of explosion.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** Colorless
- **Physical State:** Liquid
- **Odor:** Pungent
- **Odor Threshold:** 0.05 - 0.125 ppm
- **pH:** 2.8 - 4.0 at 20 °C
- **Melting Point:** 0 °C
- **Critical Temperature:** No data available
- **Vapor Pressure:** 53 hPa at 39 °C
- **Relative Density:** 1.09 g/cm³ at 25 °C
- **Vapor Density:** 1.04 - (Air = 1.0)
- **Ignition Temperature:** ca. 300 °C
- **Volatility:** No data available
- **Bulk Density:** No data available

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- **Viscosity, dynamic:** No data available
- **Water/Oil Dist. Co eff.:** No data available
- **Ionicity (in Water):** No data available
- **Partition coefficient: n-octanol/water:** log Pow: 0.35
- **Lower Explosion Limit:** 7 %(V)
- **Upper Explosion Limit:** 70 %(V)
- **Boiling Point/Range:** 101 °C
- **Flash Point:** 50 °C
- **Evaporation Rate:** 1
- **Specific Gravity / Density:** No data available
- **Water Solubility:** Completely soluble

9.2. Other information:

Molecular Formula: CH₂O

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) .

Stabilizer: Methanol

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, ANILINE

Generates dangerous gases or fumes in contact with: hydrochloric acid, magnesium carbonate

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10.4. Conditions to avoid:

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials:

Strong oxidizing agents, Strong bases, nitriles, Acids, Isocyanates, Acid anhydrides, Metals, Acid chlorides

10.6. Hazardous decomposition products:

Hydrogen, Formaldehyde

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute Oral toxicity**

LD50: 212.77 mg/kg

Calculation method

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

Acute Inhalation toxicity

Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract

Acute toxicity estimate: 6.55 mg/l; 4 h; vapour

Calculation method

Acute Dermal toxicity

Acute toxicity estimate: 638.47 mg/kg

Calculation method

Acute toxicity estimate: 638.51 mg/kg

Calculation method

Skin corrosion/irritation

Mixture causes burns.

Blistering Fissuring

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Serious eye damage/eye irritation

Mixture causes serious eye damage. Risk of blindness!

Lacrimal irritation due to vapours.

Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Mixture causes damage to organs.

Target Organs: Eyes

Mixture may cause respiratory irritation.

Target Organs: Respiratory system

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available

11.2 Further Information:

Systemic effects: inebriation, Dizziness, Headache, Drowsiness, acidosis, drop in blood pressure, agitation, spasms, Impairment of vision, narcosis, Coma

Damage to: Liver, Kidney, Cardiac, Cornea

Other dangerous properties cannot be excluded.

This substance should be handled with particular care.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

No data available

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12.2 Persistence and degradability:

No data available

12.3 Bioaccumulate potential:

Partition Coefficient: - n-Octanol/water

Log Pow: -0.35

12.4 Mobility in soil:

No data available

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:

Toxic to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations.

Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

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SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number		1198	
14.2 Proper shipping name	FORMALDEHYDE SOLUTION, FLAMMABLE		
14.3 Class		3(8)	
14.4 Packing group		III	
14.5 Environmentally hazardous		No	
14.6 Special precautions for user		No	
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			
Not Relevant			

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.

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, :

placing on the market and use of certain
dangerous substances, preparations and articles

(Annex XVII)

REACH - Restrictions on the manufacture, : Formaldehyde

placing on the market and use of certain
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(Annex XVII)

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.

H226 Flammable liquid and vapour.

H300 Fatal if swallowed.

H301 Toxic if swallowed.

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- H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- 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.

Training advice

Provide adequate information, instruction and training for operators.

References: Not available

Created: 05/11/2020

Disclaimer:

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