

Revision: 1.2

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Section 1. Identification

1.1 Product Identifier 2995

Product Name FORMALDEHYDE SOLUTION 40% w/w
CAS Number 50-00-0
REACH Registration No 01-2119488953-20-XXXX
Molecular Formula $\text{HCHO} = 30.03$

1.2 Relevant identified uses of the substance or mixture & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd



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1.4 Emergency Telephone (08:00-16:30) +44(0) 113 2362811 (24hr) 112 (Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Acute toxicity, category 3 (oral)	H301: Toxic if swallowed.
Acute toxicity, category 3 (dermal)	H311: Toxic in contact with skin.
Skin corrosion/irritation, category 1B	H314: Causes severe skin burns and eye damage.
Acute toxicity, category 3 (inhalation)	H331: Toxic if inhaled.
Serious eye damage/irritation, category 1	H318: Causes serious eye damage.
Skin sensitization, category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, category 2	H341: Suspected of causing genetic defects.
Carcinogenicity, category 1B	H350: May cause cancer.

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements Toxic if swallowed, inhaled and in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause cancer. Suspected of causing genetic defects.

Precautionary Statements Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of soap and water. Avoid breathing dust / fume / gas / mist / vapours / spray.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Formaldehyde	50-00-0	200-001-8	01-2119488953-20-XXXX	36.6%	Acute Tox. 3 (O), Acute Tox. 3 (D), Skin Corr. 1B, Acute Tox. 3 (I), Eye Dam. 1, Skin Sens. 1, Muta. 2, Carc. 1B
Methanol	67-56-1	200-659-6	01-2119433307-44-XXXX	7.3%	Flam. Liq. 2, Acute Tox. 3 (O), Acute Tox. 3 (D), Acute Tox. 3 (I), STOT SE 1

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. Unless contact has been slight OBTAIN MEDICAL ATTENTION
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. Convulsions may occur and cause unconsciousness. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

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

No further relevant information available.

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

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Water spray, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool.
Unsuitable Media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards	Vapour-air mixtures are explosive.
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5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.

6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.

Minor Spillage Contain and absorb on inert material. Neutralise with a 5% ammonia solution. Transfer absorbent to container for removal and disposal as solid chemical waste. Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

All transfer systems should be earthed to prevent accumulation of static electricity. Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Keep well separated from oxidising agents.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)	Short Term 15min period		
Formaldehyde	50-00-0	36.6%	2.0 ppm	2.5 mg/m-3	2.0 ppm	2.5 mg/m-3
Methanol	67-56-1	7.3%	200.0 ppm	266.0 mg/m-3	250.0 ppm	333.0 mg/m-3

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

Respiratory Protection Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.

Hand Protection Use PVC gauntlets.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance Clear colourless liquid.
Odour Pungent and intensely irritating.
pH 3 @ 20°C

Boiling Point	96°C
Melting Point	Not applicable
Flash Point	69°C (Closed cup)
Upper Flammable Limit	72%
Lower Flammable Limit	7%
Auto Ignition	300°C
Explosive Properties	Moderate/severe in confined spaces.
Oxidising Properties	No.
Vapour Pressure	1.3mmHg @ 20°C
Relative Density	1.0930
Water Solubility	Completely soluble in water.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1	Reactivity	No data available.
10.2	Chemical Stability	Stable under normal conditions
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
10.5	Incompatible Materials	Strong oxidising agents. Hydrochloric acid.
10.6	Hazardous Decomposition Products	None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	The liquid will be extremely irritating to eyes and can cause chemical eye burns. At 4ppm there may be lacrimation; at 10-20 ppm there is burning of the eyes and intense lacrimation; at 50-100ppm eye burns can be produced.
Skin	Toxic in contact with skin. Causes severe burns. Repeated exposure may cause dermatitis. Skin penetration is possible. May cause skin sensitisation.
LD50 Skin	270mg/kg Rabbit
Ingestion	Causes immediate irritation of the mouth, throat and gastro-intestinal tract. Ingestion may prove fatal.
LD50 Oral	800mg/kg Rat
Inhalation	Toxic if inhaled. Exposure to vapour concentrations above the occupational exposure limits will produce severe irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour will severe difficulty in breathing, burning of the nose and intense cough.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	Carcinogenicity, category 1B. Epidemiological studies of workers exposed to formaldehyde is inconclusive however cancers and tumours in rats and mice meet with the criteria for a potential human carcinogen.
Mutagenicity	Suspected of causing genetic defects.
Reproductive Effects	Some evidence for foetotoxicity and tetragenecity has been observed in experimental animals
Other Information	The irritant effect provides warning and toxic dosages are unlikely to be absorbed. The odour threshold (ca 0.5ppm) is below the MEL (2ppm).

Section 12. Ecological

12.1	Toxicity	Low levels are readily bio-degraded in the environment. Higher levels are toxic to marine and plant life.
	LC50 Algal	Not available
	LC50 Crustacea	Not available
	LC50 Fish	Not available

12.2 Persistence and degradability	No data available.
12.3 Bioaccumulative potential	No data available.
12.4 Mobility in soil	No data available.
12.5 Results of PBT & vPvB assessment	Assessment not required.
12.6 Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems.
Contaminated Packaging	Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion. Clean out with a weak ammonia solution then wash out thoroughly with water.

Section 14. Transport Information

14.1 UN Number	2209
14.2 Proper Shipping Name	Formaldehyde solution
14.3 Transport classes	
UN classification	8
Subsidiary hazard(s)	None
Transport category	3
ADR Hazard ID	80
Tunnel Restriction Code	E
14.4 Packing Group	III
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Acute toxicity, category 3 (oral); Acute toxicity, category 3 (dermal); Skin corrosion/irritation, category 1B; Acute toxicity, category 3 (inhalation); Serious eye damage/irritation, category 1; Skin sensitization, category 1; Germ cell mutagenicity, category 2; Carcinogenicity, category 1B

Signal word Danger

Hazard Pictograms



Hazard Statements H301+H311+H331, H314+H318, H317, H350, H341

Toxic if swallowed, inhaled and in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause cancer. Suspected of causing genetic defects.

Precautionary Statements P202, P281, P361, P363, P302+P352, P261

Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of soap and water. Avoid breathing dust / fume / gas / mist / vapours / spray.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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