



SAFETY DATA SHEET

Date of issue: 25/07/04

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Catalogue No: 10113

ID No.: 1011300

Product name: **Formaldehyde solution about 38%w/w, AnalaR® (contains 9-11% methanol)**

Use of the substance/preparation: General chemical reagent

Manufacturer/supplier identification

Company: VWR International Ltd
Hunter Boulevard, Magna Park, Lutterworth, Leicestershire, England, LE17 4XN
Telephone : + 44 (0) 1455 558600 Telefax : + 44 (0) 1455 558586

Emergency telephone No.: + 44 (0) 1202 669700

2. Composition/information on ingredients

Chemical characterization

Solution in water

Product name: Formaldehyde solution

CAS number: 50-00-0 (data for major component)

EC-No.: 200-001-8

Molecular formula: H.CHO = 30.03 g/mol

Hazardous ingredients:

Methanol	8-15%	
CAS number:	67-56-1	EC-No.: 200-659-6
Symbol(s):	F T	
R-phrases:	R11-23/24/25-39/23/24/25	
S-phrases:	S7-16-36/37-45	

Formaldehyde	35-45%	
CAS number:	50-00-0	EC-No.: 200-001-8
Symbol(s):	T	
R-phrases:	R23/24/25-34-40-43	
S-phrases:	S26-36/37/39-45-51	
Carcinogen, Category 3		

3. Hazards identification

Toxic by inhalation, in contact with skin and if swallowed. Causes burns. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.

4. First aid measures

- Eye contact: Irrigate thoroughly with water for at least 10 minutes. OBTAIN MEDICAL ATTENTION.
- Inhalation: Remove from exposure, rest and keep warm. In severe cases, or if exposure has been great, OBTAIN MEDICAL ATTENTION.
- Skin contact: Drench the skin thoroughly with water. Remove contaminated clothing and wash before re-use. Unless contact has been slight, OBTAIN MEDICAL ATTENTION.
- Ingestion: Wash out mouth thoroughly with water and give plenty of water to drink. OBTAIN MEDICAL ATTENTION.

5. Fire-fighting measures

Special risks:

Combustible. May evolve toxic fumes in fire. (formaldehyde vapours) Vapour/air mixture explosive. Keep away from sources of ignition.

Suitable extinguishing media:

Foam, dry powder or carbon dioxide

Wear chemical protection suit and respiratory protective equipment immediately. Prevent fire fighting water entering watercourses or ground-water.

6. Accidental release measures

Wear appropriate protective clothing. Inform others to keep at a safe distance. Ensure supply of fresh air in enclosed rooms. Do not allow to enter sewerage system.

Small amounts: Absorb on an inert absorbent, (e.g. BDH Spillage absorption granules), transfer to a suitable container and arrange removal by disposal company. Wash site of spillage thoroughly with water and detergent.

For large spillages liquids should be contained with sand or earth and both liquids and solids transferred to salvage containers. Any residues should be treated as for small spillages.

To render harmless: add a solution of sodium hydrogen sulfite.

7. Handling and storage

Handling:

Under no circumstances eat, drink or smoke while handling this material. Work under fume extractor. Do not inhale substance. Avoid contact with skin and eyes. Immediately change contaminated clothing. Wash hands and face after working with substance. Do not empty into drains.

Unsuitable working materials: various metals.

Storage:

Store at 15°C to 25°C. in a well-ventilated place. Keep well closed and protected from direct sunlight and moisture.

8. Exposure controls/personal protection

UK Exposure Limits:

WEL - Formaldehyde:

Long-term: 2.5 mg/m³ (2 ppm) Short term: 2.5 mg/m³ (2 ppm)

Personal protective equipment:

As appropriate to the situation and the quantity handled. Engineering methods to control or prevent exposure are preferred. Methods could include process enclosure or mechanical ventilation.

- Ventilation: Fume cupboard, flameproof
- Respirator: Self-contained breathing apparatus when vapours are generated.
- Gloves: Butyl rubber, Nitrile, Viton™. Gloves subject to permeation or any sign of degradation must be removed and replaced immediately.
- Eye Protection: Goggles or face-shield
- Other Precautions: Plastic apron, sleeves, boots - if handling large quantities

9. Physical and chemical properties

General information:

Form:	liquid
Colour:	colourless
Odour:	pungent

Health, safety and environmental information:

Melting temperature	<-15°C
Boiling temperature	96°C
Density(g/ml)	1.08
Solubility in water	Miscible in all proportions
pH value	2.8 - 4.0 (20°C)
Flash point	62°C
Explosion limits:	lower: 7 % v/v
	upper: 73 % v/v
Auto-ignition temperature	~300°C
Log P(o/w):	0.35

10. Stability and reactivity

tends to polymerize. hygroscopic

Stabiliser: Methanol

Substances to be avoided

polymerization initiators, nitric acid, acids, nitrogen oxides, hydrogen peroxide, oxidizing agents, performic acid, organic nitro compounds/bases.

The possibility of reaction with other substances cannot be excluded.

11. Toxicological information

Subacute to chronic toxicity:

After long-term exposure to the chemical: Possible effects: nasopharyngeal cancer Should be treated as a suspected carcinogen.

Acute toxicity:

- After inhalation: toxic. Inhalation may lead to the formation of oedemas in the respiratory tract.
- After skin contact: Danger of skin absorption. Risk of sensitization.
- After eye contact: Severe irritation. Lacrimal irritation due to vapours.

- After ingestion: irritant effect (mouth, pharynx, oesophagus, gastrointestinal tract). Risk of perforation in the oesophagus and stomach.

Systemic effect: narcosis, blindness.

Further hazardous properties cannot be excluded. This substance should be handled with particular care.

Further data

LD50 (oral, rat): 100 mg/kg

LC50 (inhalation, rat): 203 mg/m³

LD50 (dermal, rabbit): 270 mg/kg

Skin irritation test (rabbit): severe irritant effect

Eye irritation test (rabbit): severe irritant effect

Has been found to cause cancer in laboratory animals. Evidence of reproductive effects.

12. Ecological information

Toxic for aquatic organisms. Disinfectant effect. Sludge decomposition impaired or not possible even in diluted concentration.

Further ecological data:

Biological degradability: good.

Bioaccumulation potential: low (Log Pow <2). Toxic for aquatic organisms. Disinfectant effect. Sludge decomposition impaired or not possible even in diluted concentration.

Fish toxicity: LC50 (P.promelas)(Formaldehyde): 24 mg/l/96h

Daphnia toxicity: EC50 (Daphnia magna)(Formaldehyde): ~2mg/l/48h

Bacterial toxicity: EC50 (Photobacterium phosphoreum)(Formaldehyde): 8.5 mg/l/30min.

COD: 1.06 g/g ThOD 1.068 g/g

Remarks:

Do not allow to enter sewerage system.

13. Disposal considerations

Chemical residues are generally classified as hazardous or special waste, and as such are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company. Rinse out empty containers thoroughly before returning for recycling.

When recovery and recycling is not possible, incineration in a high temperature incinerator is the recommended method of disposal.

14. Transport information

UN-No.: 2209

Class: 8

Packaging group: III

Proper shipping name: FORMALDEHYDE SOLUTIONS

15. Regulatory information

Labelling according to EC directives

Symbol(s): T Toxic.

R-phrases: R23/24/25-34-39/23/24/25-40-43

Toxic by inhalation, in contact with skin and if swallowed. Causes burns. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.

S-phrases: S26-36/37/39-45-51

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Use only in well ventilated areas.

EC-No.: 200-001-8

Carcinogen, Category 3

Local Regulations

Within the UK, the use of this material must be assessed under the Control of Substances Hazardous to Health (COSHH) regulations.

16. Other information

References:

IARC Press release No. 153 'IARC Classifies formaldehyde as carcinogenic in humans.' (June 2004)

'Formaldehyde in air. Laboratory method using a diffusive sampler, solvent desorption and high performance liquid chromatography' (MDHS 78) (HSE Publications, U K)

Revision.

Supersedes edition of: 09/12/02

Reason for alteration: Changes in Section : 11, 16

Date of issue: 25/07/04

Date of print: 19/10/05

Text of R phrases listed in section 2

R11:	Highly flammable.
R23/24/25:	Toxic by inhalation, in contact with skin and if swallowed.
R34:	Causes burns.
R39/23/24/25:	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R40:	Limited evidence of a carcinogenic effect.
R43:	May cause sensitization by skin contact.