SAFETY DATA SHEET
FORMALDEHYDE

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: FORMALDEHYDE

PRODUCT NO: RM108

SUPPLIER

J M Loveridge Ltd
Unit 5, Kingsway
Walworth Industrial Estate, Andover
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Mr. S Knight – admin@jmloveridge.com

EMERGENCY CONTACT NUMBER:

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008):

Acute toxicity, Category 3, Oral, H301
Acute toxicity, Category 3, Inhalation, H331
Acute toxicity, Category 3, Dermal, H311
Skin corrosion, Category 1B, H314
Skin sensitisation, Category 1, H317
Carcinogenicity, Category 2, H351
Specific target organ toxicity – single exposure, Category 1, H370
Specific target organ toxicity – single exposure, Category 3, H335

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

Classification (67/548/EEC or 1999/45/EC)

T	Toxic	R23/24/25 – 39/23/24/25
C	Corrosive	R34
Carc.Cat.3	Carcinogenic Category 3	R40
	Sensitising	R43

For the full text of the R-Phrases mentioned in this Section, see Section 16

Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard Pictograms:

Signal Word:	Danger	
Hazard Statements:	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
	H351	Suspected of causing cancer
	H370	Causes damage to organs
Precautionary Statements:		
Prevention:	P280	Wear protective gloves/protective clothing/ eye protection/face protection
Response:	P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting
	P302+P352	IF ON SKIN: Wash with plenty of soap and water
	P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P309+P310	IF exposed or if you feel unwell: Immediately call a POISON CENTRE or doctor/physician

Reduced labelling (≤125 ml)
Hazard Pictograms:

Signal Word:	Danger	
Hazard Statements:	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
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Prevention:	P280	Wear protective gloves/protective clothing/ eye protection/face protection
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	P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P309+P310	IF exposed or if you feel unwell: Immediately call a POISON CENTRE or doctor/physician

Contains: formaldehyde, methanol

Labelling (67/548/EEC or 1999/45/EC)

Symbol(s): 	T	Toxic
R-Phrase(s):	23/24/25-34-	Toxic by inhalation, in contact with skin and if swallowed
	39/23/24/25-40-43	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 sensitisation by skin contact.
S-Phrase(s)	26-36/37/39-45	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)
Contains:	formaldehyde. methanol	

Other Hazards

None known

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Nature: Aqueous solution of organic compounds

Substance

Not applicable

Mixture

Hazard components (REGULATION (EC) No 1272/2008)

Chemical Name (Concentration)

CAS-No	Registration number	Classification
Formaldehyde (>= 25% -< 50%)		
50-00-0 *)		Carcinogenicity, Category 2, H351 Acute toxicity, Category 3, Inhalation, H331 Acute toxicity, Category 3, Dermal, H311 Acute toxicity, Category 3, Oral, H301 Skin corrosion, Category 1B, H314 Skin sensitisation, Category 1, H317
Methanol (>= 10% -< 20%)		
Substance does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, Annex XIII		
67-56-1	01-2119433307-44-XXXX	Flammable liquid, Category 2, H225 Acute toxicity, Category 3, H331 Acute toxicity, Category 3, H311 Acute toxicity, Category 3, H301 Specific target organ toxicity – single exposure, Category 1, H370

*) 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 date

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

Hazardous components (1999/45/EC)

Chemical Name (Concentration)	
CAS-No	Classification
Formaldehyde (>= 25% -< 50%)	
50-00-0	Carc.Cat.3; R40 T, Toxic; R23/24/25 C, Corrosive; R34 R43
Methanol (>= 10% -< 20%)	
67-56-1	F, Highly flammable; R11 T, Toxic; R23/24/25-39/23/24/25

For the full text of the R-Phrases mentioned in this Section, see Section 16

4 FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES
GENERAL ADVICE
First aider needs to protect himself.
AFTER INHALATION
Fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary oxygen. Immediately call in physician.
AFTER SKIN CONTACT
Wash off with plenty of water. Remove contaminated clothing. Call a physician immediately.
AFTER EYE CONTACT
Rinse out with plenty of water. Immediately call ophthalmologist.
AFTER SWALLOWING
Immediately make victim drink water (two glasses at most). Call a physician immediately. Risk of perforation!
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED
Irritation and corrosion, Allergic reactions, Cough, Shortness of breath, Inebriation, Dizziness, Headache, Drowsiness, Agitation, Spasms, Impairment of vision, Blindness, Narcosis, Coma, Risk of blindness!
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED
Mention methanol.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
SUTIABLE EXTINGUISHING MEDIA
Water, Carbon dioxide (CO2), Foam, Dry powder
UNSUTIABLE EXTINGUISHING MEDIA
For this substance/mixture no limitations of extinguishing agents are given
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE
Mixture with combustible ingredients. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air at relevant temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.
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.

FURTHER INFORMATION
Suppress (knock down) gases/vapours/mists with water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES
Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see Section 8.
ENVIRONMENTAL PRECAUTIONS
Do not let product enter drains. Risk of explosion.
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 with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
Render harmless: Treatment with execess sodium hydrogen sulfite solution.
REFERENECE TO OTHER SECTIONS
Indications about waste treatment see Section 13.

7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING
ADVICE ON SAFE HANDLING
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Observe label precautions.
HYGIENE MEASURES
Immediately change contaminated clothing. Apply preventative skin protection. Wash hands and face after working with substance.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES
STORAGE CONDITIONS
Tightly closed. Protected from light. Keep in well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons. Store at +15°C to +25°C.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS
Methanol (67-56-1)

Worker DNEL, acute	Systemic effects	Dermal	40 mg/kg Body weight
Worker DNEL, acute	Systemic effects	Inhalation	260 mg/m3
Worker DNEL, acute	Local effects	Inhalation	260 mg/m3
Worker DNEL, longterm	Systemic effects	Dermal	40 mg/kg Body weight
Worker DNEL, longterm	Systemic effects	Inhalation	260 mg/m3
Worker DNEL, longterm	Local effects	Inhalation	260 mg/m3
Consumer DNEL, acute	Systemic effects	Dermal	8 mg/kg Body weight
Consumer DNEL, acute	Systemic effects	Inhalation	50 mg/m3
Consumer DNEL, acute	Systemic effects	Oral	8 mg/kg Body weight
Consumer DNEL, acute	Local effects	Inhalation	50 mg/m3
Consumer DNEL, longterm	Systemic effects	Dermal	8 mg/kg Body weight

Consumer DNEL, longterm	Systemic effects	Inhalation	50 mg/m3
Consumer DNEL, longterm	Systemic effects	Oral	8 mg/kg Body weight
Consumer DNEL, longterm	Local effects	Inhalation	50 mg/m3

Methanol (67-56-1)

PNEC Fresh water	154 mg/l
PNEC Fresh water sediment	570,4 mg/kg
PNEC Marine water	15,4 mg/l
PNEC Soil	23,5 mg/kg
PNEC Sewage treatment plant	100 mg/l

EXPOSURE CONTROLS

ENGINEERING MEASURES

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See Section 7.1

INDIVIDUAL PROTECTION MEASURES

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

Tightly fitting safety goggles

HAND PROTECTION

Full contact:	Glove material	Nitrile rubber
	Glove thickness	0,40 mm
	Breakthrough time	> 480 min
Splash contact:	Glove material	Polychloroprene
	Glove thickness	0,65 mm
	Breakthrough time	> 240 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 730 Camatril® - Velours (full contact), KCL 720 Camapren® (splash contact). The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the Safety Data Sheet <(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de)

OTHER PROTECTIVE EQUIPMENT

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.

9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form:	Liquid
Colour:	Colourless

Odour:	Stinging
Odour Threshold:	0,05 – 0,125 ppm (Formaldehyde)
pH:	2,8 – 4,0 at 20°C
Melting point:	< -15°C
Boiling point/boiling range:	93-96°C at 1.013 hPa
Flash point:	62°C Method: c.c
Evaporation rate:	No information available
Flammability (solid, gas):	No information available
Lower explosion limit:	7% (V) (Formaldehyde)
Upper explosion limit:	73% (V) (Formaldehyde)
Vapour pressure:	No information available
Relative vapour density:	No information available
Relative density:	1,09 g/cm3 at 20°C
Water solubility:	at 20°C soluble
Partition coefficient: n-octanol/ water:	No information available
Auto-ignition temperature:	No information available
Decomposition temperature:	No information available
Viscosity, dynamic:	No information available
Explosive properties:	Not classified as explosive
Oxidizing properties:	None
Other data	
Ignition temperature:	ca. 300°C (Formaldehyde)

10 STABILITY AND REACTIVITY

REACTIVITY
Reducing agents. Tends to polymerise. Vapour/air-mixtures are explosive at intense warming.
CHEMICAL STABILITY
The product is chemically stable under standard ambient conditions (room temperature)
STABILIZER
Methanol
POSSIBILITY OF HAZARDOUS REACTIONS
Violent reactions possible with: polymerisation initiators, nitrogen oxides, hydrogen peroxide, oxidizing agents, performic acid, phenol, acids, alkali metals, bases.
CONDITIONS TO AVOID
Heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
INCOMPATIBLE MATERIALS
Various metals, various alloys, mild steel, copper.
HAZARDOUS DECOMPOSITION PRODUCTS
No information available

11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS
MIXTURE
Acute oral toxicity
LD50: 212,77 mg/kg
Calculation method

Absorption
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
Acute toxicity estimate: 6,38 mg/l; vapour
Calculation method
Absorption
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 dermal toxicity
Acute toxicity estimate: 638,30 mg/kg
Calculation method
Absorption
Symptoms: Blistering, Fissuring.
Skin irritation
Mixture causes severe burns
Eye irritation
Mixture causes serious eye damage. Lacrimal irritation due to vapours. Risk of blindness!
Sensitisation
Mixture may cause an allergic skin reaction
Germ cell mutagenicity
This information is not available
Carcinogenicity
This information is not available
Reproductive toxicity
This information is not available
Teratogenicity
This information is not available
CMR effects
Carcinogenicity: Suspected of causing cancer
Specific target organ toxicity – single exposure
Mixture causes damage to organs. Mixture may cause respiratory irritation.
Specific target organ toxicity – repeated exposure
This information is not available
Aspiration hazard
This information is not available
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 can not be excluded. This substance should be handled with particular care.
COMPONENTS
Formaldehyde
No information available

Methanol
Acute oral toxicity
LDLO human: 143 mg/kg (RTECS)
LD50 rat: 5.628 mg/kg (IUCLID)

Acute inhalation toxicity
LC50 rat: 85,26 mg/l; 4 h (IUCLID)
Acute dermal toxicity
LD50 rabbit: ca. 17.100 mg/kg (External SDS)
Sensitisation
Sensitisation test: guinea pig.
Result: negative
(IUCLID)
Germ cell mutagenicity
Genotoxicity in vivo
Mutagenicity (mammal cell test): micronucleus
Result: negative
(IUCLID)
Genotoxicity in vivo
Ames test
Result: negative
(IUCLID)

12 ECOLOGICAL INFORMATION

MIXTURE
TOXICITY
No information available
PERSISTENCE AND DEGRADABILITY
No information available
BIOACCUMULATIVE POTENTIAL
No information available
MOBILITY IN SOIL
No information available
RESULTS OF PBT AND vPvB ASSESSMENT
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
OTHER ADVERSE EFFECTS
Additional ecological information
Biological effects:
Caustic even in diluted form. Disinfectant effect. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities.
Further information on ecology
Discharge into the environment must be avoided

COMPONENTS
Formaldehyde
No information available

Methanol
Toxicity to fish
LC50 Lepomis macrochirus (Bluegill sunfish): 15.400 mg/l; 96 h (in soft water) (ECOTOX Database)

Toxicity to daphnia and other aquatic inverterbrates
EC5 E.sulcatum: >10.000 mg/l; 72 h (Lit.)

EC50 Daphnia magna (Water flea): >10.000 mg/l; 48 h (IUCLID)

Toxicity to algae
EC50 Pseudokirchneriella subcapitata (green algae): ca. 22.000 mg/l; 96 h (External MSDS)
IC5 Scenedesmus quadricauda (green algae): 8.000 mg/l; 8 d (IUCLID)

Toxicity to bacteria
EC5 Pseudomonas fluorescens: 6.600 mg/l; 16 h (IUCLID)

Toxicity to fish (Chronic toxicity)
NOEC Oryzias latipes (Orange-red killfish): 7.900 mg/l; 200 h (External MSDS)

Biodegradability
99%; 30d
OECD Test Guideline 301D
Readily biodegradable

Biochemical Oxygen Demand (BOD)
600 – 1.120 mg/kg (5d)
(IUCLID)

Chemical Oxygen Demand
1.420 mg/g
(IUCLID)

Theoretical oxygen demand
1.500 mg/g
(Lit.)

Ratio BOD/ThBOD
BOD5 76%
Closed bottle test

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII

Stability in water
2,2 yr
Reaction with hydroxyl radicals (IUCLID)

13 DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further queries.

14 TRANSPORT INFORMATION

LAND TRANSPORT (ADR/RID)
UN Number: UN 2209

Proper Shipping Name:	FORMALDEHYDE SOLUTION
Class:	8
Packing Group:	III
Environmentally Hazardous:	--
Special Precautions for user:	Yes
Tunnel Restriction Code:	E

INLAND WATERWAY TRANSPORT (ADN)
Not relevant

AIR TRANSPORT (IATA)

UN Number:	UN 2209
Proper Shipping Name:	FORMALDEHYDE SOLUTION
Class:	8
Packing Group:	III
Environmentally Hazardous:	--
Special Precautions for user:	No

SEA TRANSPORT (IMDG)

UN Number:	UN 2209
Proper Shipping Name:	FORMALDEHYDE SOLUTION
Class:	8
Packing Group:	III
Environmentally Hazardous:	--
Special Precautions for user:	Yes
EmS:	F-A S-B

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE
Not relevant

15 REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE
EU Regulations

Major Accident Hazard Legislation	96/82/EC
	Toxic
	2
	Quantity 1: 50 t
	Quantity 2: 200 t

OCCUPATIONAL RESTRICTIONS
Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.
National Legislation
Storage Class 6.1C
CHEMICAL SAFETY ASSESSMENT
For this product a chemical safety assessment was not carried out.

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
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
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H370	Causes damage to organs

Full text of R-Phrases referred to under Sections 2 and 3

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 sensitisation by skin contact

TRANING ADVICE

Provide adequate information, instruction and training for operators

KEY OR LEGEND TO ABBREVIATIONS AND ACRONYMS USED IN THE SAFETY DATA SHEET

Used abbreviations and acronyms can be looked up at www.wikipedia.org

REGIONAL REPRESENTATION

This information is given on the authorised Safety Data Sheet for your country.