

SAFETY DATA SHEET
METHYL FORMATE

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	METHYL FORMATE
PRODUCT NO.	SRM MASTER
SYNONYMS, TRADE NAMES	Formic Acid, Methyl Ester, Cyanide Propaninitrile
SUPPLIER	Solvent Resource Management Head Office Hanson House 14 Castle Hill Maidenhead SL6 4JJ sales@srm-ltd.com
CONTACT PERSON	Customer Service Centre +044 (0)1524 853053
EMERGENCY TELEPHONE	0870 190 6888 (24 Hours)

2 HAZARDS IDENTIFICATION

Extremely flammable. Harmful by inhalation and if swallowed. Irritating to eyes and respiratory system.

CLASSIFICATION F+;R12 Xn;R20/22 Xi;R36/37

PHYSICAL AND CHEMICAL HAZARDS

The product is highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures.

HUMAN HEALTH

The liquid may irritate the skin, the eyes and the respiratory tract.

3 COMPOSITION/INFORMATION ON INGREDIENTS

EU INDEX NO.	607-014-00-1
EC No.	203-481-7
GROSS FORMULA	C2H4O2
CAS-No.	107-31-3

4 FIRST-AID MEASURES

GENERAL INFORMATION

Remove affected person from source of contamination. Perform artificial respiration if breathing has stopped. Get medical attention immediately.

INHALATION

Remove victim immediately from source of exposure. Place unconscious person on the side in the recovery position and ensure breathing. Perform artificial respiration if breathing has stopped.

INGESTION

Do not induce vomiting. Get medical attention.

SKIN CONTACT

Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Continue to rinse for at least 15 minutes and seek medical attention.

EYE CONTACT

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention immediately. Continue to rinse.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

SPECIAL FIRE FIGHTING PROCEDURES

Be aware of risk of fire re-starting, and risk of explosion.

UNUSUAL FIRE & EXPLOSION HAZARDS

HIGHLY FLAMMABLE! May explode in a fire. Fire causes formation of toxic gases.

METHYL FORMATE

SPECIFIC HAZARDS

Fire or high temperatures create: Carbon monoxide (CO). Carbon dioxide (CO2).

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective clothing as described in Section 8 of this safety data sheet. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains, water courses or onto the ground.

SPILL CLEAN UP METHODS

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Avoid inhalation of vapours and spray mists.

STORAGE PRECAUTIONS

Store in a cool and well-ventilated place.

STORAGE CLASS

Flammable liquid storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT



ENGINEERING MEASURES

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined workplace exposure limit is not exceeded. Ensure that eye wash stations and showers are close to the workstation

RESPIRATORY EQUIPMENT

If ventilation is insufficient, suitable respiratory protection must be provided.

HAND PROTECTION

Wear protective gloves.

EYE PROTECTION

Wear approved safety goggles.

OTHER PROTECTION

Provide eyewash station and safety shower. Wear suitable protective clothing as protection against splashing or contamination.

HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash promptly if skin becomes wet or contaminated.

SKIN PROTECTION

Wear apron or protective clothing in case of splashes.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Colourless liquid

COLOUR

Colourless

ODOUR

Pleasant, agreeable. Ether

VOLATILITY DESCRIPTION

Highly volatile.

SOLUBILITY

Slightly soluble in water.

MOL. WEIGHT

60.06

BOILING POINT (°C)

32

METHYL FORMATE

MELTING POINT (°C)	-100	RELATIVE DENSITY	1
VAPOUR DENSITY (air=1)	2.1	VAPOUR PRESSURE	476 mm Hg 20
EVAPORATION RATE	Not Available	VOLATILE BY VOL. (%)	100
VISCOSITY	n/a	CRITICAL TEMPERATURE (°C)	214
ODOUR THRESHOLD, LOWER	165 mg/m3	ODOUR THRESHOLD, UPPER	mg/m3
FLASH POINT (°C)	-19 CC (Closed cup).	AUTO IGNITION	449
		TEMPERATURE (°C)	
FLAMMABILITY LIMIT - LOWER(%)	4.5	FLAMMABILITY LIMIT - UPPER(%)	23
SOLUBILITY VALUE (g/100g H2O@20°C)	30		

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID

Avoid mixing with: Water, moisture. Strong oxidising agents. Strong alkalis. Strong mineral acids.

MATERIALS TO AVOID

Flammable/combustible material. Strong acids. Strong alkalis.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire or high temperatures create: Carbon monoxide (CO). Carbon dioxide (CO2).

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 475 mg/kg (oral rat)

TOXIC CONC. - LC 50 5200 ppm/4h (inh-rat)

TOXICOLOGICAL INFORMATION

This material is toxic.

INHALATION

Vapour from this chemical can be hazardous when inhaled.

INGESTION

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

SKIN CONTACT

Product has a defatting effect on skin.

EYE CONTACT

May cause severe irritation to eyes.

HEALTH WARNINGS

Prolonged inhalation of high concentrations may damage respiratory system. Prolonged exposure to the preparation may cause serious health effects.

ROUTE OF ENTRY

Inhalation. Skin absorption. Ingestion. Skin and/or eye contact.

TARGET ORGANS

Central nervous system.

MEDICAL SYMPTOMS

Extreme irritation of eyes and mucous membranes, including burning and tearing. General respiratory distress, unproductive cough. Central nervous system depression. Unconsciousness.

MEDICAL CONSIDERATIONS

Pre Existing Respiratory Disorders and Lung Diseases.

12 ECOLOGICAL INFORMATION

LC 50, 96 Hrs, FISH mg/l n/a

BIOACCUMULATION

MODERATE

DEGRADABILITY

No data available.

METHYL FORMATE

ACUTE FISH TOXICITY

Not considered toxic to fish.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

If this product becomes waste it is to be treated as hazardous waste. Any other constituents or contaminants in the waste stream must be taken into account when classifying the waste. In the EU, the European Waste Catalogue Code to be assigned is dependant on the processes giving rise to the waste. In the absence of any such processes having taken place EWC 40603* (other solvents and solvent mixtures) may be used. Hazardous waste must be suitably contained, stored, packaged and transported, see section 7 and 4 for such details. In the UK only waste carriers registered with the Environment Agency may transport waste.

DISPOSAL METHODS

Absorb in vermiculite or dry sand, dispose in licensed hazardous waste. Environmental manager must be informed of all major spillages.

14 TRANSPORT INFORMATION



UK ROAD CLASS	3		
PROPER SHIPPING NAME	Methyl Formate		
UN NO. ROAD	1243	UK ROAD PACK GR.	I
ADR CLASS NO.	3	ADR CLASS	Class 3: Flammable liquids.
ADR PACK GROUP	I	HAZCHEM CODE	3YE
RID CLASS NO.	3	RID PACK GROUP	I
UN NO. SEA	1243	IMDG CLASS	3
IMDG PACK GR.	I	UN NO. AIR	1243
AIR CLASS	3	AIR PACK GR.	I

15 REGULATORY INFORMATION

LABELLING



Harmful



Extremely Flammable

RISK PHRASES

R12	Extremely flammable.
R20/22	Harmful by inhalation and if swallowed.
R36/37	Irritating to eyes and respiratory system.

SAFETY PHRASES

S2	Keep out of the reach of children
S9	Keep container in a well-ventilated place.
S16	Keep away from sources of ignition - No smoking.
S24	Avoid contact with skin.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33	Take precautionary measures against static discharges.

16 OTHER INFORMATION

GENERAL INFORMATION

Please ensure that this Safety Data Sheet is passed onto the relevant person(s) in your company, who are capable of acting on the information given.

METHYL FORMATE

INFORMATION SOURCES

Croner's :Substances Hazardous to the Environment.2005. www.msdsolutions.com Sigma Aldrich msds Hazardous Materials, Emergency Response Guidebook, DOT-P 5800.3, 1984. Threshold Limit Values and Biological Exposure Indices for 1985-86. The Merck Index, 11. edition, 1989. Material Safety Data Sheet, Misc. manufacturers. NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards, 1981.

ISSUED BY

FGJ

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SDS NO. 631

SAFETY DATA SHEET STATUS

Approved.

DATE 12/07/2007

SIGNATURE FGJ

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