# otto chemie pvt ltd

An ISO 9001: 2015 & GMP Certified Company

101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

### MATERIAL SAFETY DATA SHEET (MSDS)

### **SECTION 1. Product identifiers**

Product name: Formaldehyde solution, for molecular biology

Product Code: F 1500 CAS NO.: 50-00-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification OTTO CHEMIE PVT LTD

101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,

Chinchpada, Vasai East, Waliv, Maharashtra 401208.

Email info@ottokemi.com

1.4. Emergency telephone number

Phone no.: + 91 22 2207 0099 (9:00am - 6:00 pm)

### **SECTION 2: Hazards identification**

2.1 Classification of the substance or mixture

Flammable liquids, (Category 3)

Acute toxicity, (Category 3)

Acute toxicity, (Category 2) Acute toxicity, (Category 3)

Skin corrosion, (Sub-category

Serious eye damage, (Category

Skin sensitization, (Category 1)

Germ cell mutagenicity,

(Category 2)

Carcinogenicity, (Category 1B)

Specific target organ toxicity -

single exposure, (Category 1),

Eyes, Central nervous system

Specific target organ toxicity -

single exposure, (Category 3),

Respiratory system

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram Signal Word

Hazard Statements

H226

H301 + H311

H314

H317

H330

H335

H341 H350

H370

**Precautionary Statements** 

P202

P210

P280

H226: Flammable liquid and vapor.

H301: Toxic if swallowed.

H330: Fatal if inhaled.

H311: Toxic in contact with skin.

H314: Causes severe skin burns and eye

damage.

H318: Causes serious eye damage.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic

defects.

H350: May cause cancer.

H370: Causes damage to organs.

H335: May cause respiratory irritation.

### Danger

Flammable liquid and vapor.

Toxic if swallowed or in contact with skin. Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Fatal if inhaled.

May cause respiratory irritation. Suspected of causing genetic defects.

May cause cancer.

Causes damage to organs (Eyes, Central nervous system).

Do not handle until all safety precautions have been read and

understood.

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

Wear protective gloves/ protective clothing/ eye protection/ face

protection.

### DISCI AIMER

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P303 + P361 + P353

P304 + P340 + P310

P305 + P351 + P338

Supplemental Hazard

Statements

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Hazard Statements

H330

H317

H341

H350 H370

H314

H301 + H311

**Precautionary Statements** 

P202

P280

P303 + P361 + P353

P304 + P340 + P310

P305 + P351 + P338

Supplemental Hazard

Statements

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.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients** 

3.2 Mixtures

Component	Classification	Concentration
formaldehyde		
CAS-No. 50-00-0 EC-No. 200-001-8	Acute Tox. 3; Acute Tox. 2; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 1B; STOT SE 3; H301, H330, H311, H314, H318, H317, H341, H350, H335 Concentration limits: >= 25 %: Skin Corr. 1B, H314; 5 - < 25 %: Skin Irrit. 2, H315; 5 - < 25 %: Eye Irrit. 2, H319; >= 5 %: STOT SE 3, H335; >= 0,2 %: Skin Sens. 1. H317:	>= 30 - < 50 %

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IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsing.

none

Danger

Fatal if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

Causes damage to organs.

Causes severe skin burns and eye damage.

Toxic if swallowed or in contact with skin.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable

for breathing. Immediately call a POISON CENTER/ doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsing.

none



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

#### **SECTION 4: First aid measures**

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour). Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

## **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Mixture with combustible ingredients.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice 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 Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 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 carefully with liquid-absorbent material (e.g.

Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

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For disposal see section 13.

## **SECTION 7: Handling and storage**

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary

measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stabilityRecommended storage temperature

15 - 25 °C

Storage class

Storage class (TRGS 510): 3: Flammable liquids

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

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU)

2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm Break through time: 480 min

Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,2 mm Break through time: 60 min

Material tested:Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail

sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection** 

Flame retardant antistatic protective clothing.

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## Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepeneur 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.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

### **SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

a) Physical state

b) Color

c) Odor

d) Melting

point/freezing point

e) Initial boiling point

and boiling range f) Flammability (solid,

gas)

g) Upper/lower flammability or

explosive limits

h) Flash point

i) Autoignition temperature

j) Decomposition

temperature

k) pH

I) Viscosity

m) Water solubility

n) Partition coefficient:

n-octanol/water

o) Vapor pressure

p) Density

Relative density

q) Relative vapor

density

r) Particle

characteristics

s) Explosive properties

t) Oxidizing properties

9.2 Other safety information

Relative vapor

density

liquid clear

No data available No data available

No data available

No data available

Upper explosion limit: 73 %(V) Lower explosion limit: 7 %(V)

56,11 °C - closed cup No data available

No data available

No data available

Viscosity, kinematic: No data available Viscosity, dynamic: No data available

at 20 °C soluble

No data available

69 hPa at 37 °C 1,09 g/cm3 at 20 °C 1,09 at 20 °C

1,04 - (Air = 1.0)

No data available

Not classified as explosive.

none

1,04 - (Air = 1.0)

# **SECTION 10: Stability and reactivity**

10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heating.

10.5 Incompatible materials

Strong oxidizing agents

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10.6 Hazardous decomposition products In the event of fire: see section 5

# **SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant),

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available.

### **SECTION 12: Ecological information**

12.1 Toxicity

Mixture

No data 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 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 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available Components

formaldehyde

Toxicity to fish static test LC50 - Morone saxatilis - 6,7 mg/l - 96 h

Remarks: (ECHA) Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia pulex (Water flea) - 5,8 mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) -

4,89 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - 19 mg/l - 3 h

(OECD Test Guideline 209)

Toxicity to daphnia

and other aquatic invertebrates(Chronic

toxicity)

semi-static test NOEC - Daphnia magna (Water flea) - >= 6,4

mg/l - 21 d

(OECD Test Guideline 211)

Methanol

Toxicity to fish flow-through test LC50 - Lepomis macrochirus (Bluegill) -

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IATA: 1198

IATA: 3 (8)

IATA: III

IATA: no

15.400,0 mg/l - 96 h

(US-EPA)

Toxicity to daphnia

and other aquatic

invertebrates

semi-static test EC50 - Daphnia magna (Water flea) - 18.260

mg/l - 96 h

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green

algae) - ca. 22.000,0 mg/l - 96 h

(OECD Test Guideline 201)

Toxicity to bacteria static test IC50 - activated sludge - > 1.000 mg/l - 3 h

(OECD Test Guideline 209)

Toxicity to

fish(Chronic toxicity)

NOEC - Oryzias latipes (Orange-red killifish) - 7.900 mg/l - 200

Remarks: (External MSDS)

### **SECTION 13: Disposal considerations**

13.1 Waste treatment methods

No data available

### **SECTION 14: Transport information**

14 1 UN number

ADR/RID: 1198 IMDG: 1198

14.2 UN proper shipping name

: FÖRMALDEHYDE SOLUTION, FLAMMABLE ADR/RID

: FORMALDEHYDE SOLUTION, FLAMMABLE **IMDG** 

IATA : Formaldehyde solution, flammable

14.3 Transport hazard class(es)

ADR/RID: 3 (8) IMDG: 3 (8)

14.4 Packaging group

ADR/RID: III

IMDG: III 14.5 Environmental hazards

IMDG Marine pollutant: no

ADR/RID: no

14.6 Special precautions for user Tunnel restriction code (D/E)

: No data available Further information

## SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet 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, mixtures and articles

(Annex XVII)

: formaldehyde

Methanol

National legislation

Seveso III: Directive 2012/18/EU of the

European Parliament and of the Council

on the control of major-accident hazards

involving dangerous substances.

**H2 ACUTE TOXIC** 

14 Formaldehyde (concentration

>= 90 %)

P5c FLAMMABLE LIQUIDS

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H2 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
22 Methanol
Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## **SECTION 16: Other Information**

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

