



SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

#### **SECTION 1: Identification**

#### **GHS Product identifier**

Product name NEUTRAL BUFFERED FORMALIN

### Other means of identification

Description Item Code 0890/2L Formaldehyde Solution 4% Neutral buffered Formaldehyde Solution 10% Neutral Buffered 1258/ Formaldehyde Solution 10% Neutral Buffered 2912/ Formaldehyde Solution 5% 5012/ 961-Neutral Buffered Formalin 10% Formalin 10% (formaldehyde 4%) AF4 Neutral Buffered Formalin Jar ANBFB. Neutral Buffered Formalin 10% Clear ANBFC-**Neutral Buffered Formalin** NBF-**Neutral Buffered Formalin Blue** NBFB-Neutral Buffered FormalinGreen NBFG-**Neutral Buffered Formalin Conc** NBFH-Neutral Buffered Formalin Pail NBFJ-Neutral Buffered Formalin 10% NBFR-

#### Recommended use of the chemical and restrictions on use

Class II In vitro diagnostic reagent, intended for the preservation of samples for later morphological studies and/or diagnostic protocols.

## Supplier's details

Name ChemSupply Australia Pty Ltd

Address 38-50 Bedford Street

5013 Gillman South Australia

Australia

Telephone 08 8440 2000

email www.chemsupply.com

**Emergency phone number** 

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

## **SECTION 2: Hazard identification**

#### **General hazard statement**

Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

## **NEUTRAL BUFFERED FORMALIN**

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

#### Classification of the substance or mixture

#### GHS classification in accordance with: UN GHS revision 7

- Carcinogenicity, Cat. 1
- Germ cell mutagenicity, Cat. 2
- Skin corrosion/irritation, Cat. 2
- Skin sensitizer, Cat. 1
- Serious eye damage/eye irritation, Cat. 2A
- Specific target organ toxicity following repeated exposure, Cat. 2

#### GHS label elements, including precautionary statements

## **Pictograms**



## Signal word Danger

### Hazard statement(s)

H315 Causes skin irritation

H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H341 Suspected of causing genetic defects

H350 May cause cancer

H373 May cause damage to organs through prolonged or repeated exposure

#### **Precautionary statement(s)**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash hands thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water/soap

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container to an approved waste disposal facility

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

#### **Mixtures**

Molecular weight: 30.03

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

Information on ingredients:

May contain minor amounts of:;

Edicol Blue - Blue::

Bromothymol Blue - Green;;

Bromocresyl Purple - Purple;;

Phenol Red - Red;;

for colouring.

Stabilised with methanol. May contain various salts as buffering agents.

#### **Components**

Component	CAS no.	Concentration
FORMALDEHYDE, 37% SOLUTION (EC no.: 200-001-8; Index no.: 605-001-00-5)	50-00-0	3 - 4.5 % (weight)

CLASSIFICATIONS: Germ cell mutagenicity, Cat. 2; Acute toxicity, dermal, Cat. 3; Acute toxicity, oral, Cat. 3; Skin corrosion/irritation, Cat. 1B; Skin sensitizer, Cat. 1; Acute toxicity, inhalation, Cat. 2; Carcinogenicity, Cat. 1. HAZARDS: 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; H330 - Fatal if inhaled; H341 - Suspected of causing genetic defects [route]; H350 - May cause cancer [route]. [SCLs/M-factors/ATEs]: STOT SE 3; H335:  $C \ge 5$  %; Skin Corr. 1B; H314:  $C \ge 25$  %; Skin Irrit. 2; H315: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Skin Irrit. 2; H315: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Skin Irrit. 2; H315: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Skin Irrit. 2; H315: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Skin Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319: 5 %  $\le C < 25$  %; Eye Irrit. 2; H319:  $\ge C < 25$  %; Eye Irrit. 2; H319:  $\ge C < 25$  %; Eye Irrit. 2; H319:  $\ge C < 25$  %; Eye I Skin Sens. 1; H317:  $C \ge 0.2 \%$ 

#### Methanol (EC no.: 200-659-6; Index no.: 603-001-00-X)

67-56-1 1 - 1.2 % (weight)

CLASSIFICATIONS: Flammable liquids, Cat. 2; Acute toxicity, inhalation, Cat. 3; Acute toxicity, dermal, Cat. 3; Acute toxicity, oral, Cat. 3; Specific target organ toxicity following single exposure, Cat. 1. HAZARDS: H225 - Highly flammable liquid and vapor; H301 - Toxic if swallowed; H311 - Toxic in contact with skin; H331 - Toxic if inhaled; H370 - Causes damage to organs [organs, route]. [SCLs/M-factors/ATEs]: \*; STOT SE 1; H370: C ≥ 10 %; STOT SE 2; H371: 3 % ≤ C < 10 %

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

#### **Description of necessary first-aid measures**

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

First Aid Facilities: Maintain eyewash fountain in work area.

If inhaled If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

In case of skin contact If skin or hair contact occurs, remove contaminated clothing and flush skin and hair

with running water.

In case of eye contact If in eyes, hold eyelids apart and flush eye continuously with running water. Continue

flushing until advised to stop by a Poisons Information Centre (e.g. phone Australia 13

11 26; New Zealand 0800 764 766) or a doctor, or for at least 15 minutes.

If swallowed Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate

medical attention.

#### Most important symptoms/effects, acute and delayed

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

### Indication of immediate medical attention and special treatment needed, if necessary

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

## **SECTION 5: Fire-fighting measures**

#### Suitable extinguishing media

Small fire: Use foam, dry chemical, CO2 or water spray.

Large fire: Use foam, fog or water spray. Do not use water jets.

# Safety Data Sheet

## **NEUTRAL BUFFERED FORMALIN**

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.

Alcohol resistant foam is preferred however fine water spray can be used.

#### Specific hazards arising from the chemical

May liberate toxic fumes in fire including formic acid, methanol, carbon monoxide and carbon dioxide.

#### Special protective actions for fire-fighters

Wear SCBA, fully-encapsulating, gas-tight suit and structural firefighting uniform when handling leaking or damaged containers and equipment. SCBA and chemical splash suits will offer limited protection for brief exposure provided there is no risk of ignition.

#### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. For personal protection see section 8.

#### Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of in accordance with local and national regulations. Keep in suitable, closed containers for disposal.

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

## **Precautions for safe handling**

Avoid inhalation of vapour or mist. For precautions see section 2.2.

Avoid ingestion and inhalation of vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Keep containers closed when not in use. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Wear suitable protective clothing. Under no circumstances eat, drink or smoke while handling this material. Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse.

## Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

## **SECTION 8: Exposure controls/personal protection**

#### **Control parameters**

CAS: 50-00-0

FORMALDEHYDE, 37% SOLUTION
AU/SWA (Australia): 2 ppm; 2.5 mg/m3 STEL inhalation; 1 ppm; 1.2 mg/m3 TWA inhalation

### **Appropriate engineering controls**

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.f the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn.

#### Individual protection measures, such as personal protective equipment (PPE)

#### **Eye/face protection**

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

## Skin protection

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Normally not required but if in doubt ensure hand protection should complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

#### **Body protection**

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

#### **Respiratory protection**

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

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

#### Basic physical and chemical properties

Liquid Physical state **Appearance** Clear

Color No data available.

Odor Pungent, suffocating odour.

Odor threshold No data available. No data available. Melting point/freezing point Boiling point or initial boiling point and boiling range No data available. **Flammability** Combustible liquid.

Lower and upper explosion limit/flammability limit Flammable Limits - Lower: 7% Upper: 70%

85 °C Flash point

No data available. **Explosive properties** Auto-ignition temperature No data available. No data available. Decomposition temperature Oxidizing properties No data available.

рΗ

Kinematic viscosity Solubility Solubility in Water: Completely miscible.

Partition coefficient n-octanol/water (log value) Log P(oct) = 0.35 (experimental) (formaldehyde).

Vapor pressure No data available.

No data available. **Evaporation rate** Density and/or relative density 1.1

Particle characteristics

## Supplemental information regarding physical hazard classes

No data available.

#### **Further safety characteristics (supplemental)**

No data available.

## **SECTION 10: Stability and reactivity**

#### Reactivity

Stable under normal conditions of storage and handling.

p. 5 of 11

Relative vapor density

1.0

No data available.

No data available.

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

#### **Chemical stability**

Stable under recommended storage conditions.

May form paraformaldehyde on prolonged storage or if stored outside recommended temperatures/conditions

#### Possibility of hazardous reactions

None under normal use conditions.

#### **Conditions to avoid**

Open flames, heat, hot surfaces, sparks and other ignition sources.

#### **Incompatible materials**

Strong oxidizing agents, strong acids, strong bases, alkali metals.

#### **Hazardous decomposition products**

Formic acid, methanol, carbon monoxide and carbon dioxide.

## **SECTION 11: Toxicological information**

#### Information on toxicological effects

#### **Acute toxicity**

Acute Toxicity - Oral: LD50 (rat): >200 mg/kg (Formaldehyde).

Ingestion: Harmful if swallowed. Ingestion may cause irritation of the mouth, throat and stomach resulting in nausea. In extreme cases swallowing can result in vomiting, diarrhoea, abdominal pain, convulsions, chemical burns, loss of consciousness, collapse and possible death. Risk of perforation in the oesophagus and stomach. Systemic effects: narcosis and blindness.

Inhalation: Harmful if inhaled. Inhalation may lead to the formation of oedemas in the respiratory tract. Vapour is irritating to mucous membranes and the respiratory tract. Inhalation can result in headache, dizziness and possible nausea.

#### Skin corrosion/irritation

May cause on allergic skin reaction. Repeated or prolonged skin contact may lead to allergic contact dermatitis. A skin sensitiser.

## Serious eye damage/irritation

May be an irritant to the eye.

#### Respiratory or skin sensitization

Formaldehyde: Known to act as a sensitiser.

## **Germ cell mutagenicity**

Formaldehyde [50-00-0]: DNA damage system-human: fibroblast 100 mmol/l.

#### Carcinogenicity

H350 May cause cancer.

Formaldehyde [50-00-0] is evaluated in the IARC Monographs (Vol. 88; in preparation) as Group 1: Carcinogenic to humans. For addition information see IARC publication: http://monographs.iarc.fr/ENG/Monographs/vol100F/mono100F-29.pdf

#### Reproductive toxicity

Formaldehyde [resp], human: one study suggests a slight percentage increase in spontaneous abortion and subtle neurobehavioral abnormalities, animal-decreased sperm motility, reduced fetal and maternal weight.

#### Specific target organ toxicity (STOT) - single exposure

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

No data available.

#### Specific target organ toxicity (STOT) - repeated exposure

May cause damage to Kidney, Liver and Spleen on repeated exposure

#### **Aspiration hazard**

No data available.

#### **Additional information**

Chronic Effects: Repeated or prolonged skin contact may cause chronic dermatitis. Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

----

FORMALDEHYDE, 37% SOLUTION: \*TOXICITY:

typ. dose mode specie amount units other

LDLo orl wmn 108 mg/kg

TCLo ihl hmn 17 mg/m3/30M

TCLo ihl man 300 ug/m3

LDLo unr man 477 mg/kg

LD50 orl rat 800 mg/kg

LC50 ihl rat 590 mg/m3

LC50 ihl mam 92 mg/m3

LD50 scu rat 420 mg/kg

LD50 ivn rat 87 mg/kg

LDLo ipr mus 16 mg/kg

LD50 scu mus 300 mg/kg

LD50 orl mus 42 mg/kg

LDLo scu dog 595 mg/kg

LCLo ihl cat 400 mg/m3/2H

LD50 skn rbt 270 mg/kg

LDLo scu rbt 240 mg/kg

LD50 orl gpg 260 mg/kg

LC50 ihl mus 400 mg/m3/2H

LDLo ivn cat 30 mg/kg

LDLo ivn rbt 48 mg/kg

\*AQTX/TLM96: 100-10 ppm [042]

#### \*SAX TOXICITY EVALUATION:

THR: Human poison by ingestion. Experimental poison by ingestion, skin contact, inhalation, intravenous, intraperitoneal and subcutaneous routes. A suspected human carcinogen. An experimental carcinogen, tumorigen and teratogen. Human systemic effects by inhalation. Experimental reproductive effects. Human mutagenic data. A human skin and eye irritant. A severe experimental eye and skin irritant. An air concentration of 20 ppm is quickly irritating to eyes. A common air contaminant. The gas is a more dangerous fire hazard than the vapor.

#### \*CARCINOGENICITY:

Tumorigenic Data:

TDLo: scu-rat 1170 mg/kg/65W-I TD: scu-rat 350 mg/kg/78W-I TC: ihl-rat 15 ppm/6H/78W-I TCLo: ihl-mus 14300 ppb/6H/2Y-I TC: ihl-rat 6 ppm/6H/2Y-I

p. 7 of 11

TCLo: ihl-rat 14300 ppb/6H/2Y-I

TC: ihl-rat 15 ppm/6H/86W-I

TC: ihl-rat 14 ppm/6H/84W-I

TC: ihl-rat 18750 ug/m3/2Y-l

TC: ihl-mus 15 ppm/6H/104W-I

TC: ihl-rat 15 ppm/6H/2Y-I

TC: ihl-rat 5600 ppb/6H/2Y-I

TC: ihl-rat 14300 ppb/6H/2Y-I

Review: IARC Cancer Review: Animal Sufficient Evidence

IARC Cancer Review: Human Limited Evidence

IARC probable human carcinogen (Group 2A) [015,610]

EPA Carcinogen Assessment Group [610]

ACGIH suspected human carcinogen [015,415,421]

OSHA cancer suspect agent [610]

Status: NTP Fourth Annual Report on Carcinogens, 1984

#### \*MUTATION DATA:

test lowest dose I test lowest dose

------|

mmo-sat 100 umol/L | mmo-omi 250 ppm mmo-esc 100 ppm/3H | mmo-omi 1 pph/15M mmo-srm 5 gm/L | sln-dmg-unr 10 pph/3H-C dnr-esc 1950 ug/L | oms-rat:oth 100 umol/L dnd-esc 5 ppm | sln-dmg-orl 250 ppm mmo-omi 1 pph/5M-C | sln-dmg-par 2000 ppm mmo-omi 10 ppm | dlt-dmg-orl 1300 ppm mmo-omi 200 ppm | mmo-nsc 10 mmol/plate mmo-omi 1000 ppm | mrc-smc 24 mmol/L sln-asn 20 mg/L | slt-nml-unr 700 ppm oms-nml:oth 40 mmol/L | oms-nml:oth 25 mmol/L cyt-nml:oth 40 mmol/L | cyt-grh:oth 750 umol/L dnd-hmn:fbr 100 umol/L | dnd-hmn:lng 100 umol/L dnd-hmn:oth 100 umol/L | dns-hmn:hla 10 nmol/L oms-hmn:lym 10 mg/L | dnd-rat-ihl 35 ug/m3/8W-I cyt-hmn:lym 10 mg/L | cyt-hmn:fbr 2 mmol/L sce-hmn:lym 125 umol/L | msc-hmn:lym 130 umol/L dnd-rat-orl 10 umol/kg | mmo-omi 200 umol/L cyt-rat-ihl 15 ppm/5D-I | otr-mus:emb 1 mg/L dnd-mus:leu 125 umol/L | cyt-mus-orl 100 mg/kg cyt-mus-ipr 15 mg/kg | otr-ham:kdy 4 mg/L pic-ham:emb 3 uL/L | cyt-ham:lng 18 mg/L cyt-ham:ovr 200 ug/L | sce-ham:ovr 110 ug/L dnd-ckn:leu 500 ppm | dnd-mam:lym 500 ppm dnd-mam:lym 660 mmol/L | mma-sat 100 umol/L dnd-rat:oth 500 umol/L | dni-esc 5 mmol/L dni-hmn:oth 210 umol/L | dni-rat:oth 100 umol/L oms-hmn:oth 210 umol/L | dns-rat:oth 50 umol/L msc-mus:lym 74 mg/L | mma-mus:lym 25 mg/L sln-dmg:ihl 7 pph/24H | sce-ham:lng 67 umol/L spm-rat-orl 200 mg/kg | otr-nml:oth 25 mmol/L otr-nml:oth 25 mmol/L | spm-dom-itt 23 mg/kg

## \*TERATOGENICITY:

Reproductive Effects Data:

TCLo: ihl-rat 12 ug/m3/24H (15D pre/1-22D preg)

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

TCLo: ihl-rat 12 ug/m3/24H (1-22D preg) TCLo: ihl-rat 35 ug/m3/8H (60D male) TCLo: ihl-rat 1 mg/m3/24H (1-22D preg) TDLo: ims-mus 259 mg/kg (11D preg)

TDLo: orl-rat 200 mg/kg (1D male)

TCLo: ihl-rat 12 ug/m3/24H (20D pre/1-22D preg)

TCLo: ihl-rat 50 ug/m3/4H (1-19D preg) TDLo: scu-rat 46243 mg/kg (20D male)

TDLo: itt-rat 400 mg/kg (1D male)

TDLo: ipr-mus 240 mg/kg (7-14D preg) TDLo: ipr-mus 160 mg/kg (7-14D preg)

TDLo: itt-dog 7 mg/kg (1D male)

TDLo: itt-mky 4 mg/kg (1D male)
TDLo: itt-dom 6667 ug/kg (1D male)

TDLo: ipr-mus 500 mg/kg (5D male)

#### \*STANDARDS, REGULATIONS & RECOMMENDATIONS:

OSHA: Federal Register (1/19/89) and 29 CFR 1910.1000 Subpart Z Transitional Limit: PEL-TWA 3 ppm; Ceiling Limit 5 ppm; Peak 10 ppm/30M [610]

Final Limit: PEL-TWA 1 ppm; STEL 2 ppm [610]

Action level TWA 0.5 ppm [610]

OSHA irritant and potential cancer hazard [610]

ACGIH: TLV-TWA 1 ppm, STEL 2 ppm, with a notice of intent to change to a

Ceiling Limit of 0.3 pppm [610]

NIOSH Criteria Document: Recommended Exposure Limit to this compound-air:

Ceiling Limit 0.1 ppm/15M [610] NFPA Hazard Rating: Health (H): 2

Flammability (F): 4 Reactivity (R): 0

H2: Materials hazardous to health, but areas may be entered freely with full-faced mask self-contained breathing apparatus which provides eye protection (see NFPA for details).

F4: Very flammable gases or very volatile flammable liquids (see NFPA for details).

R0: Materials which are normally stable even under fire exposure conditions and which are not reactive with water (see NFPA for details).

#### \*OTHER TOXICITY DATA:

Skin and Eve Irritation Data:

skn-hmn 150 ug/3D-I MLD

eye-hmn 4 ppm/5M

eye-hmn 1 ppm/6M nse MLD

skn-rbt 540 mg open MLD

skn-rbt 50 mg/24H MOD

eye-rbt 750 ug SEV

skn-rbt 2 mg/24H SEV

eye-rbt 750 ug/24H SEV

eye-rbt 10 mg SEV

Review: Toxicology Review-3

Standards and Regulations: DOT-Hazard: ORM-A; Label: None

DOT-Hazard: Combustible liquid; Label: None DOT-IMO: Flammable or Combustible liquid;

Label: Flammable liquid

Status: NIOSH Analytical Methods: see Formaldehyde (oxazolidine), 2502;

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

(chromotropic acid), 3500

NIOSH Analytical Methods: see Formaldehyde (Girard T), 3501

NIOSH Current Intelligence Bulletin 34. April 1981

EPA TSCA Test Submission (TSCATS) Data Base, June 1988

EPA TSCA Chemical Inventory, 1986

EPA Genetox Program 1988, Positive: D melanogaster-reciprocal

translocation

EPA Genetox Program 1988, Positive: N crassa-reversion; E coli polA

without S9

EPA Genetox Program 1988, Positive: D melanogaster Sex-linked lethal EPA Genetox Program 1988, Positive: S cerevisiae gene conversion;

S cerevisiae-reversion

EPA Genetox Program 1988, Inconclusive: In vitro UDS-human fibroblast

EPA TSCA Section 8(e) Status Report 8EHQ-1079-0314 Meets criteria for proposed OSHA Medical Records Rule

EPA Genetox Program 1988, Positive: Carcinogenicity-mouse/rat

EPA Genetox Program 1988, Inconclusive: CHO gene mutation

Fatal dose is 60-90 mL [301]

## **SECTION 12: Ecological information**

#### **Toxicity**

Biological Properties: Toxic for aquatic organisms. Protoplasmatic toxin. Caustic even in diluted form. Disinfectant effect. Toxic effect on fish and plankton. Sludge decomposition impaired or not possible even in diluted concentration. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities.

Acute Toxicity - Fish: LC50 (P.promelas): 24 mg/l /96 h (Formaldehyde);

LC50 (Br.rerio): 41 mg/l /96 h (Formaldehyde).

Acute Toxicity - Daphnia: Daphnia magna EC50: ~2 mg/l /48 h (Formaldehyde).

Acute Toxicity - Algae: Maximum permissible toxic concentration: Algeal toxicity: Sc.quadricauda IC5: 2.5 mg/l /8 d (Formaldehyde).

Acute Toxicity - Bacteria: Photobacterium phosphoreum EC50: 8.5 mg/l /30 min (Formaldehyde).

Bacterial toxicity: M.aeruginosa EC5: 0.39 mg/l /8 d (Formaldehyde).

#### Persistence and degradability

Abiotic degradation: Rapid degradation. (air, formaldehyde)

Biologic degradation: Biodegradation: 97.4 % /5 d (Formaldehyde). Readily biodegradable.

COD: 1.06 g/g (Formaldehyde); TOD: 1.068 g/g (Formaldehyde)

## **Bioaccumulative potential**

No bioaccumulation is to be expected (log P(o/w < 1)).

## Mobility in soil

Distribution: log p(o/w): 0.00 (Formaldehyde).

## **SECTION 13: Disposal considerations**

## **Disposal methods**

## **Product disposal**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

#### Sewage disposal

SDS no. NLRZR28E • Version 1.1 • Date of issue: 2023-06-29

No bioaccumulation is to be expected (log P(o/w < 1)).

#### Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

## **SECTION 14: Transport information**

#### ADG (Road and Rail)

Not dangerous goods

#### **IMDG**

Not dangerous goods

#### IATA

Not dangerous goods

## **SECTION 15: Regulatory information**

Safety, health and environmental regulations specific for the product in question

#### **Australia SUSMP**

Poison Schedule: S6

#### **SECTION 16: Other information**

1.1 - Added product codes and descriptions to section 1 - 10/4/24

## Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

## **Preparation information**

All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. ChemSupply Australia Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)