MATERIAL SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name: Testing solution No. 77 Hexamine/acetic acid

Product Numbers: TS77, 129872144

Brand: Solmedia Ltd

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

Identified uses: Test reagent

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Solmedia Ltd.
- Address of Supplier: Unit 2, Vernon Drive
  Battlefield Enterprise Park
  Shrewsbury
  SY1 3TF
  UK
- Telephone: 0844 80 80 900
- Email: labsupplies@solmedialtd.com

1.4 Emergency telephone number

- Emergency telephone: 0844 80 80 900

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification under CLP: Regulation (EC) No. 1272/2008 [CLP]

Hazard Class	Hazard Category	Target Organs	Hazard Statement
Irritant	-	Skin	H317

2.2 Label elements

Hazard pictograms:

Signal word: Warning

Hazard Statements:

H317 – May cause an allergic skin reaction.

Precautionary statements:

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P501 - Dispose of contents/container to an authorised waste collection point

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients Classification according to Regulation (EC) No. 1272/2008 [CLP]

			Classification (Regulation (EC) No 1272/2008 [CLP]	
Hazardous Components		Amount [%]	Hazard class/ Hazard category	Hazard Statements
Name:	Hexamethylenetetramine	10-25%	FLAM. SOL. CAT. 2.	H228
CAS NO.	100-97-0			
EC-NO.	202-905-8		SKIN. SENS. CAT. 1.	H317
Name:	Acetic acid	<10%	FLAM. LIQ. CAT. 3.	H226
CAS NO.	64-19-7		SKIN. CORR. CAT. 1A.	H314
EC-NO.	200-580-7			

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

After inhalation Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

In case of skin contact After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

After eye contact In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of ingestion If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

4.4 Self-protection of the first aider

First aider: Pay attention to self-protection!

4.5 Information to physician

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

- In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide - Unsuitable extinguishing media: high volume water jet - Use water to cool containers exposed to fire.

5.2 Special hazards arising from the substance or mixture

- Gives off irritating or toxic fumes (or gases) in a fire.
- Vapours may ignite

5.3 Advice for firefighters

- Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains.
  Prevent fire extinguishing water from contaminating surface or ground water.
- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions for non-emergency personnel: Ensure adequate ventilation; Avoid contact with skin and eyes; Avoid breathing vapours, mist or gas; Wear protective clothing as per section 8; Wash thoroughly after handling. Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Avoid contact with skin and eyes; Avoid breathing vapours, mist or gas; Wear chemical protection suit; Wear self-contained breathing apparatus (SCBA).

6.2 Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Clean contaminated objects and areas thoroughly observing environmental regulations. Collect in closed and suitable containers for disposal.

6.4 Additional information

Clear spills immediately

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Keep away from heat and sources of ignition - Avoid breathing vapours, mist or gas
- Do not get in eyes, on skin, or on clothing.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves
- Contaminated clothing should be laundered before reuse - Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a well-ventilated place. Keep container tightly closed.
- Keep only in the original container
- Keep container dry
- Keep away from oxidisers, heat, flames or ignition sources
- Store at ambient temperature
- Keep away from acid
- Incompatible with peroxides
- Incompatible with halogenated substances

7.3 Specific end use(s)

- Test reagent

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- methenamine; hexamethylenetetramine

No exposure limits have been set for this substance

DNEL (inhalational) 5.6 mg/m3 Industry, Long Term, Systemic Effects

DNEL (dermal) 6.4 mg/kg (bw/day) Industry, Long Term, Systemic Effects

DNEL (inhalational) 1.2 mg/m3 Consumer, Long Term, Systemic Effects

DNEL (dermal) 3.2 mg/kg (bw/day) Consumer, Long Term, Systemic Effects

DNEL (oral) 800 ug/kg (bw/day) Consumer, Long Term, Systemic Effects

PNEC aqua (freshwater) 3 mg/l

PNEC aqua (intermittent releases) (freshwater) 30 mg/l

PNEC aqua (marine water) 300 ug/l

PNEC (STP) 100 mg/l

PNEC sediment (freshwater) 10.2 mg/kg

PNEC sediment (marine water) 1.02 mg/kg
PNEC terrestrial (soil) 280 ug/kg

- acetic acid … %

(EU) OELV (long term TWA) 10 ppm 25 mg/m3

(EU) OELV (short term limit value) 20 ppm 50 mg/m3

DNEL (inhalational) 25 mg/m3 Industry, Long Term, Local Effects

DNEL (inhalational) 25 mg/m3 Industry, Acute/Short Term, Local Effects

DNEL (inhalational) 25 mg/m3 Consumer, Long Term, Local Effects

DNEL (inhalational) 25 mg/m3 Consumer, Acute/Short Term, Local Effects

PNEC aqua (freshwater) 3.058 mg/l

PNEC aqua (intermittent releases) 30.58 mg/l

PNEC aqua (marine water) 305.8 ug/l

PNEC (STP) 85 mg/l

PNEC sediment (freshwater) 11.36 mg/kg

PNEC sediment (marine water) 1.136 mg/kg
PNEC terrestrial (soil) 470 ug/kg

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protective equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact	Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min
Splash contact	Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min

Wash and dry hands.

Body Protection

Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type OV/AG (US) or type ABEK

(EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye protection:

Goggles recommended during refilling: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Additional Information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Control of environmental exposure

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities responsible for such cases.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Liquid; colourless
- Odour: None
- Odour threshold: No information available
- pH: 5.0 - 6.0 at 20.0 °C (undiluted)
- Melting point/freezing point: < -7.0 °C
- Initial boiling point and boiling range: No information available
- Flashpoint: Not applicable
- Evaporation Rate: No information available
- Flammability (solid,gas): Not applicable
- Upper/lower flammability or explosive limits: Not applicable
- Vapour Pressure: No information available - Vapour Density: No information available
- Relative Density: 1.06 – 1.1 g/cm³ @ 20.0 °C Method: DIN 51757
- Solubility(ies): Completely soluble in water
- Partition Coefficient (n-Octanol/Water): Log Pow: (methenamine) -2.18 to -2 @ 20 °C and pH 7 - 9
- Autoignition Temperature: No information available - Decomposition temperature: >290 °C
- Viscosity: Ca.15.0 sec Ø 4mm @ 20.0 °C Method: ISO 2431
- Explosive Properties: No information available
- Oxidising properties: No information available

9.2 Other information

- No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored normally

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

- Reacts violently with peroxides. Risk of explosion.

10.4 Conditions to avoid

- Avoid overheating
- Heating can release vapours which can be ignited

10.5 Incompatible materials

- Incompatible with acid
- Incompatible with oxidizing substances
- Incompatible with peroxides
- Incompatible with halogenated hydrocarbons

10.6 Hazardous decomposition products

- Decomposition products may include hydrogen cyanide (HCN), ammonia, formaldehyde vapours, nitrogen oxides (NOx), carbon monoxide and carbon dioxide

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

Based on available data, the classification criteria are not met

LD50 (oral, rat) (methenamine) 20 000 mg/kg bw

LD50 (dermal, rat) (methenamine) 2 000 mg/kg bw

LD50 (oral, rat) (acetic acid) 3 310 mg/kg bw

LC50 (inhalation, rat) (acetic acid) 8.5 - 12.7 mg/l/4h

Skin corrosion/irritation

Based on available data, the classification criteria are not met

Serious eye damage/irritation

Based on available data, the classification criteria are not met

Respiratory or skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

No evidence of mutagenic effects

Carcinogenicity

No evidence of carcinogenic effects

Reproductive toxicity

No evidence of reproductive effects

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met

Aspiration hazard

No information available

Contact with eyes

May cause redness and irritation
May cause blurred vision

Contact with skin

May cause allergic reaction in susceptible people

May cause skin sensitisation. Stop using product if skin sensitisation occurs.

Ingestion

May disturb the central nervous system

May cause gastro-intestinal irritation

May cause nausea/vomiting
May cause diarrhoea

Inhalation

May cause respiratory irritation

May cause breathing difficulty

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicity values:

Fish Toxicity:

Ethanol Absolute – LC50: 11000mg/l (96h) – Bengtsson, B.E., L. Renberg and M. Tarkpea 1984. Molecular Structure & Aquatic Toxicity – an example with C1-C13 Aliphatic Alcohols. Chemoshphere 13 (5/6):613-622

Daphnia Toxicity:

Ethanol Absolute – LC50: 92mg/l (48h) – Takashi, I.T, U.M Cowgill and P.G Murphy 1987. Comparison of Ethanol Toxicity to Daphnia magna and Ceriodaphnia dubia tested at two different temperatures: Static Acute Toxicity Test Results. Bull.Environ.Contam.Toxicol. 39(2):29-236

Ethanol Absolute – EC50: 9950mg/l (48h) – Barera, Y, and W.J Adams 1983. Resolving some practical questions about Daphnia Acute Toxicity Tests. In: W.E Bishpp (ed.), Aquatic toxicology and Hazard Assessment, 6th symposium, ASTM STP 802, Philadelphia, PA :509-518.

Algae Toxicity:

No data available

Bacteria Toxicity:

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Do not discharge into drains or the environment, dispose to an authorised waste collection point. Disposal should be in accordance with local, state or national legislation. This material and/or its container must be disposed of as hazardous waste. Do not reuse empty containers without commercial cleaning or reconditioning

13.2 Classification

The waste must be identified according to the List of Wastes (2000/532/EC)

SECTION 14: Transport information

Land transport (ADR/RID)

Not classified as hazardous for transport

14.1 UN number

- UN No.: Not applicable

14.2 UN proper shipping name

- Proper Shipping Name: Not applicable

14.3 Transport hazard class(es)

- Hazard Class: Not applicable

14.4 Packing group

- Packing Group: Not applicable

14.5 Environmental hazards

- Not Classified

14.6 Special precautions for user

- Not Classified

14.7 **Transport in bulk according to Annex II of Marpol and the IBC Code- Not** Classified

14.8 **Road/Rail (ADR/RID)**

- Proper Shipping Name: Not applicable
- ADR UN No.: Not applicable - ADR Hazard Class: Not applicable - ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

14.9 Sea (IMDG)

- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable - IMDG Hazard Class: Not applicable
- IMDG Pack Group.: Not applicable 14.10 Air (ICAO/IATA)
- Proper Shipping Name: Not applicable
- ICAO UN No.: Not applicable - ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

SECTION 15: Regulatory information

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

This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2015/830. Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe

15.2 Chemical safety assessment

A REACH chemical safety assessment has not been carried out

SECTION 16: Other information

Revision No. 2.2.0. Revised March 2025

Changes made: Product code added to subsection 1.1

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Sens. 1, H317: Classification based on calculation and concentration thresholds

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

- H226: Flammable liquid and vapour
- H228: Flammable solid
- H314: Causes severe skin burns and eye damage - H317: May cause an allergic skin reaction.

--- end of safety datasheet ---