

## Section 1 - Identification

**Product Name** H2S Medium

|                                |  |
|--------------------------------|--|
| <b>Product Code</b>            | <b>R05132</b>  |
| <b>Address</b>                 | ThermoFisher Scientific Australia Pty Ltd<br>5 Caribbean Drive, Scoresby<br>VICTORIA 3179, Australia |
| <b>Emergency Tel.</b>          | <b>CHEMTREC®</b><br><b>03 9757 4559 or +613 9757 4559</b>  |
| <b>Telephone / Fax Numbers</b> | Tel: 1300 735 292<br>Fax: 1800 067 639   |
| <b>E-mail address</b>          | ANZinfo@thermofisher.com   |

**Recommended Use** Laboratory chemicals.

**Uses advised against** This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

## Section 2 - Hazard(s) Identification

### Classification under Safe Work Australia

Classified as not hazardous according to criteria of Safe Work Australia.

**Physical hazards**  
No hazards identified

**Health hazards**  
No hazards identified

**Environmental hazards**  
No hazards identified

**Label Elements** None required

### Other information

This product does not contain any known or suspected endocrine disruptors

## Section 3 - Composition and Information on Ingredients

| Component   | CAS No     | Weight % |
|---|------------|----------|
| Water   | 7732-18-5  | 97.74    |
| Lead (II) acetate, trihydrate   | 6080-56-4  | Trace    |
| Yeast, ext.   | 8013-01-2  | 0.49     |
| Agar  | 9002-18-0  | 0.19     |
| Glucose   | 50-99-7    | 0.49     |
| Lead acetate  | 301-04-2   | Trace    |
| Ethyl alcohol   | 64-17-5    | 0.1      |
| Phylloquinone   | 84-80-0    | Trace    |
| Methyl alcohol  | 67-56-1    | Trace    |
| Sodium hydroxide  | 1310-73-2  | Trace    |
| Ferrate(2-),<br>chloro[7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(4-)-N21,N22,N23,N24]-,<br>dihydrogen, (SP-5-13)- | 16009-13-5 | Trace    |

## Section 4 - First Aid Measures

|  |  |
|--|--|
| <b>Inhalation</b>                          | Remove to fresh air.   |
| <b>Ingestion</b>                           | Clean mouth with water and drink afterwards plenty of water.   |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.                |
| <b>Eye Contact</b>                         | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| <b>Self-Protection of the First Aider</b>  | No special precautions required.   |
| <b>First Aid Facilities</b>                | Eyewash, safety shower and washroom.   |
| <b>Most important symptoms and effects</b> | No information available.  |
| <b>Notes to Physician</b>                  | Treat symptomatically.   |

## Section 5 - Fire Fighting Measures

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### Extinguishing media which must not be used for safety reasons

No information available.

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

### Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## Section 6 - Accidental Release Measures

### Emergency procedures

Ensure adequate ventilation.

#### Environmental Precautions

See Section 12 for additional Ecological Information.

#### Methods for Containment and Clean Up

##### Clean-up methods - small spillage

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

##### Clean-up methods - large spillage

Typically only supplied in small quantities as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

#### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7 - Handling and Storage

#### Precautions for Safe Handling

Ensure adequate ventilation.

#### Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## Section 8 - Exposure Controls and Personal Protection

#### Exposure limits

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia

**ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

**UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

**DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

**NZ** - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

| Component                     | Australia  | New Zealand WEL  | ACGIH TLV                             | The United Kingdom   | Germany   |
|-------------------------------|--|--|---------------------------------------|--|---|
| Lead (II) acetate, trihydrate |  |  |                                       | STEL: 0.45 mg/m <sup>3</sup> 15 min<br>TWA: 0.15 mg/m <sup>3</sup> 8 hr  |   |
| Lead acetate                  |  |  |                                       | STEL: 0.45 mg/m <sup>3</sup> 15 min<br>TWA: 0.15 mg/m <sup>3</sup> 8 hr  |   |
| Ethyl alcohol                 | TWA: 1000 ppm<br>TWA: 1880 mg/m <sup>3</sup>   | TWA: 1000 ppm<br>TWA: 1880 mg/m <sup>3</sup>   | STEL: 1000 ppm                        | TWA: 1000 ppm TWA;<br>1920 mg/m <sup>3</sup> TWA<br>WEL - STEL: 3000 ppm<br>STEL: 5760 mg/m <sup>3</sup><br>STEL | 200 ppm TWA MAK;<br>380 mg/m <sup>3</sup> TWA MAK                 |
| Methyl alcohol                | STEL: 250 ppm<br>STEL: 328 mg/m <sup>3</sup><br>TWA: 200 ppm<br>TWA: 262 mg/m <sup>3</sup> | TWA: 200 ppm<br>TWA: 262 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 328 mg/m <sup>3</sup><br>Skin | TWA: 200 ppm<br>STEL: 250 ppm<br>Skin | WEL - TWA: 200 ppm<br>TWA: 266 mg/m <sup>3</sup> TWA<br>WEL - STEL: 250 ppm<br>STEL: 333 mg/m <sup>3</sup> STEL  | 100 ppm TWA MAK;<br>130 mg/m <sup>3</sup> TWA<br>MAKSkin absorber |

|   |                          |                              |                              |   |  |
|---|--------------------------|------------------------------|------------------------------|---|--|
| Sodium hydroxide  | 2 mg/m <sup>3</sup> TWA  | Ceiling: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup> | 2 mg/m <sup>3</sup> STEL  | 2 mg/m <sup>3</sup> TWA (inhalable fraction) |
| Ferrate(2-), chloro[7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(4-)-N21,N22,N23,N24]-, dihydrogen, (SP-5-13)- | TWA: 1 mg/m <sup>3</sup> |                              | TWA: 1 mg/m <sup>3</sup>     | STEL: 2 mg/m <sup>3</sup> 15 min<br>TWA: 1 mg/m <sup>3</sup> 8 hr |  |

**Biological limit values**

**NZ** - Substances assigned Biological Exposure Indices in the New Zealand Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

| Component      | Australia | New Zealand                                   | European Union | United Kingdom | Germany   |
|----------------|-----------|---|----------------|----------------|---|
| Methyl alcohol |           | 15 mg/L (urine) end of shift (Methyl alcohol) |                |                | Methanol: 15 mg/L urine (end of shift )<br>Methanol: 15 mg/L urine (for long-term exposures: at the end of the shift after several shifts ) |

**Exposure Controls****Engineering Measures**

None under normal use conditions.

**Personal protective equipment****Eye Protection**

Wear safety glasses with side shields (or goggles) (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection**

Protective gloves

| Glove material    | Breakthrough time                 | Glove thickness | AUS/NZ Standard | Glove comments        |
|-------------------|-----------------------------------|-----------------|-----------------|-----------------------|
| Disposable gloves | See manufacturers recommendations | -               | AS/NZS 2161     | (minimum requirement) |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection**

Long sleeved clothing

**Respiratory Protection**

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

**Recommended Filter type:**

Particle filter (or AUS/NZ equivalent)

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**

No information available.

## Section 9 - Physical and Chemical Properties

**Information on basic physical and chemical properties**

|  |                          |  |
|--|--------------------------|--|
| <b>Appearance</b>                              |                          |  |
| <b>Physical State</b>                          | Liquid                   |  |
| <b>Odor</b>                                    | No information available |  |
| <b>Odor Threshold</b>                          | No data available        |  |
| <b>pH</b>                                      | No information available |  |
| <b>Melting Point/Range</b>                     | No data available        |  |
| <b>Softening Point</b>                         | No data available        |  |
| <b>Boiling Point/Range</b>                     | No information available |  |
| <b>Flash Point</b>                             | No information available | <b>Method -</b> No information available |
| <b>Evaporation Rate</b>                        | No data available        |  |
| <b>Flammability (solid,gas)</b>                | Not applicable           | Liquid                                   |
| <b>Explosion Limits</b>                        | No data available        |  |
| <b>Vapor Pressure</b>                          | No data available        |  |
| <b>Vapor Density</b>                           | No data available        | (Air = 1.0)                              |
| <b>Specific Gravity / Density</b>              | No data available        |  |
| <b>Bulk Density</b>                            | Not applicable           | Liquid                                   |
| <b>Water Solubility</b>                        | No information available |  |
| <b>Solubility in other solvents</b>            | No information available |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |  |
| <b>Component</b>                               | <b>log Pow</b>           |  |
| Ethyl alcohol                                  | -0.32                    |  |
| Methyl alcohol                                 | -0.74                    |  |
| <b>Autoignition Temperature</b>                | No data available        |  |
| <b>Decomposition Temperature</b>               | No data available        |  |
| <b>Viscosity</b>                               | No data available        |  |
| <b>Explosive Properties</b>                    | No information available |  |
| <b>Oxidizing Properties</b>                    | No information available |  |
| <b>Other information</b>                       |                          |  |
| <b>VOC Content(%)</b>                          | 0.105                    |  |

## Section 10 - Stability and Reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                       | None known, based on information available |
| <b>Stability</b>                        | Stable under normal conditions.            |
| <b>Conditions to Avoid</b>              | Heat, flames and sparks.                   |
| <b>Incompatible Materials</b>           | None known.                                |
| <b>Hazardous Decomposition Products</b> | None under normal use conditions.          |
| <b>Hazardous Polymerization</b>         | No information available.                  |

## Section 11 - Toxicological Information

### Information on Toxicological Effects

#### Product Information

|                            |  |
|----------------------------|--|
| <b>(a) acute toxicity;</b> |  |
| <b>Oral</b>                | Based on available data, the classification criteria are not met |
| <b>Dermal</b>              | Based on available data, the classification criteria are not met |
| <b>Inhalation</b>          | Based on available data, the classification criteria are not met |

#### Toxicology data for the components

| Component                     | LD50 Oral                      | LD50 Dermal                   | LC50 Inhalation               |
|-------------------------------|--------------------------------|-------------------------------|-------------------------------|
| Water                         | -                              | -                             | -                             |
| Lead (II) acetate, trihydrate | LD50 = 4665 mg/kg ( Rat )      |                               |                               |
| Agar                          | LD50 = 11 g/kg ( Rat )         |                               |                               |
| Glucose                       | 25.8 g/kg ( Rat )              |                               |                               |
| Ethyl alcohol                 | LD50 = 7060 mg/kg ( Rat )      |                               | 20000 ppm/10H ( Rat )         |
| Phylloquinone                 | LD50 > 33487 mg/kg ( Rat )     |                               |                               |
| Methyl alcohol                | LD50 = 1187 – 2769 mg/kg (Rat) | LD50 = 17100 mg/kg ( Rabbit ) | LC50 = 128.2 mg/L ( Rat ) 4 h |
| Sodium hydroxide              | LD50 = 325 mg/kg ( Rat )       | LD50 = 1350 mg/kg ( Rabbit )  |                               |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory No data available

Skin No data available

| Component                           | Test method   | Test species | Study result    |
|-------------------------------------|---|--------------|-----------------|
| Methyl alcohol<br>67-56-1 ( Trace ) | OECD Test Guideline 406<br>Guinea Pig Maximisation Test<br>(GPMT) | guinea pig   | non-sensitising |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B) The table below indicates whether each agency has listed any ingredient as a carcinogen Ethanol has been shown to be carcinogenic in long-term studies only when consumed and abused as an alcoholic beverage.

(g) reproductive toxicity; No data available

| Component                           | Test method             | Test species / Duration       | Study result           |
|-------------------------------------|-------------------------|-------------------------------|------------------------|
| Methyl alcohol<br>67-56-1 ( Trace ) | OECD Test Guideline 416 | Rat / Inhalation 2 Generation | NOAEC = 1.3 mg/l (air) |

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed No information available

## Section 12 - Ecological Information

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|-----------|-----------------|------------|------------------|----------|
|-----------|-----------------|------------|------------------|----------|

|                  |  |   |   |   |
|------------------|--|---|---|---|
| Ethyl alcohol    | Fathead minnow<br>(Pimephales promelas)<br>LC50 = 14200 mg/L/96h | EC50 = 9268 mg/L/48h<br>EC50 = 10800 mg/L/24h | EC50 (72h) = 275 mg/l<br>(Chlorella vulgaris) | Photobacterium<br>phosphoreum:EC50 =<br>34634 mg/L/30 min<br>Photobacterium<br>phosphoreum:EC50 =<br>35470 mg/L/5 min |
| Methyl alcohol   | Pimephales promelas:<br>LC50 > 10000 mg/L 96h                    | EC50 > 10000 mg/L 24h                         |   | EC50 = 39000 mg/L 25<br>min<br>EC50 = 40000 mg/L 15<br>min<br>EC50 = 43000 mg/L 5<br>min                              |
| Sodium hydroxide | LC50: = 45.4 mg/L, 96h<br>static (Oncorhynchus<br>mykiss)        | -   | -   | -   |

**Persistence and Degradability** No information available

| Component                           | Degradability                  |
|-------------------------------------|--------------------------------|
| Methyl alcohol<br>67-56-1 ( Trace ) | DT50 ~ 17.2d<br>>94% after 20d |

**Bioaccumulative Potential** No information available

| Component      | log Pow | Bioconcentration factor (BCF) |
|----------------|---------|-------------------------------|
| Ethyl alcohol  | -0.32   | No data available             |
| Methyl alcohol | -0.74   | <10 dimensionless             |

**Mobility** No information available.

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Ozone Depletion Potential** This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

### Waste from Residues/Unused Products

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

### Contaminated Packaging

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

### Other Information

Chemical wastes should be disposed through a licensed commercial waste collection service.

## Section 14 - Transport Information

### IMDG/IMO

Not regulated

| Component                          | IMDG Marine Pollutant                    |
|------------------------------------|--|
| Lead acetate<br>301-04-2 ( Trace ) | IMDG regulated marine pollutant (UN1616) |

### ADG

Not regulated

| Component                           | Hazchem Code |
|-------------------------------------|--------------|
| Lead acetate<br>301-04-2 ( Trace )  | 2Z           |
| Ethyl alcohol<br>64-17-5 ( 0.1 )    | 2YE<br>2Y    |
| Methyl alcohol<br>67-56-1 ( Trace ) | 2WE          |
| Sodium hydroxide                    | 2W           |

|                     |    |
|---------------------|----|
| 1310-73-2 ( Trace ) | 2R |
|---------------------|----|

|                               |                                 |
|-------------------------------|---------------------------------|
| <u>IATA</u>                   | Not regulated                   |
| <b>Environmental hazards</b>  | No hazards identified           |
| <b>Special Precautions</b>    | No special precautions required |
| <b>Additional information</b> | None known                      |

## Section 15 - Regulatory Information

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

#### National Regulations                      **Australia**

See section 8 for national exposure control parameters.

#### **Standard for the Uniform Scheduling of Medicines and Poisons**

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

| Component   | Standard for the Uniform Scheduling of Medicines and Poisons  |
|---|---|
| Lead (II) acetate, trihydrate - 6080-56-4   | Schedule 6 listed - except: [a] when included in Schedule 4, [b] in paints, tinters, inks or ink additives, [c] in preparations for cosmetic use containing $\leq 100$ mg/kg of Lead, [d] in pencil cores, finger colours, showcard colours, pastels, crayons, poster paints/colours or coloured chalks containing $\leq 100$ mg/kg of Lead, or [e] in ceramic glazes when labelled with the warnings statement: CAUTION - Harmful if swallowed. Do not use on surfaces which contact food or drink, written in letters $\geq 1.5$ mm in height<br>Schedule 10 listed   |
| Lead acetate - 301-04-2   | Schedule 4 listed - in human therapeutic use<br>Schedule 6 listed - except: [a] when included in Schedule 4, [b] in paints, tinters, inks or ink additives, [c] in preparations for cosmetic use containing $\leq 100$ mg/kg of Lead, [d] in pencil cores, finger colours, showcard colours, pastels, crayons, poster paints/colours or coloured chalks containing $\leq 100$ mg/kg of Lead, or [e] in ceramic glazes when labelled with the warnings statement: CAUTION - Harmful if swallowed. Do not use on surfaces which contact food or drink, written in letters $\geq 1.5$ mm in height<br>Schedule 10 listed   |
| Methyl alcohol - 67-56-1  | Schedule 5 listed - except its derivatives; in preparations except a) when included in Schedule 10, or b) in preparations containing $\leq 2\%$ of Methanol, or c) when Methanol is present only as a denaturant of Ethanol<br>Schedule 6 listed - except its derivatives; except a) when included in Schedule 5, or b) when included in Schedule 10, or c) in preparations containing $\leq 2\%$ of Methanol<br>Schedule 10 listed   |
| Sodium hydroxide - 1310-73-2  | Schedule 5 listed - except its salts and derivatives; in preparations being: solid preparations the pH of which in a 10 g/L aqueous solution is $> 11.5$ ; liquid or semi-solid preparations the pH of which is $> 11.5$ except in food additive preparations for domestic use<br>Schedule 6 listed - except its salts and derivatives; except: [a] when included in Schedule 5 or Schedule 10, [b] in preparations containing $\leq 5\%$ of Sodium hydroxide being: [i] solid preparations, the pH of which in a 10 g/L aqueous solution is $\leq 11.5$ , or [ii] liquid or semi-solid preparations the pH of which is $\leq 11.5$<br>Schedule 10 listed   |
| Ferrate(2-), chloro[7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(4-)-N 21,N22,N23,N24]-, dihydrogen, (SP-5-13)- 16009-13-5 | Schedule 2 listed<br>Schedule 4 listed - in injectable preparations for human use<br>Schedule 5 listed - for the treatment of animals except up to 1% of Iron oxides when present as an excipient; in preparations for injection except in preparations containing $\leq 0.1\%$ of Iron<br>Schedule 5 listed - for the treatment of animals except up to 1% of Iron oxides when present as an excipient; in other preparations except in liquid or gel preparations containing $\leq 0.1\%$ of Iron, or in animal feeds or feed premixes<br>Schedule 5 listed - for use as agricultural chemicals except in preparations containing $\leq 4\%$ of Iron<br>Schedule 6 listed - except up to 1% of Iron oxides when present as an excipient. For the treatment of animals except: when included in Schedule 5, in liquid or gel preparations containing $\leq 0.1\%$ of Iron, or in animal feeds or feed premixes |

#### **Australian Industrial Chemicals Introduction Scheme (AICIS)**



| Component                                 | Australian Industrial Chemicals Introduction Scheme (AICIS) | Additional information |
|---|---|------------------------|
| Water - 7732-18-5                         | Present   | -                      |
| Lead (II) acetate, trihydrate - 6080-56-4 | Present   | -                      |
| Yeast, ext. - 8013-01-2                   | Present   | -                      |
| Agar - 9002-18-0                          | Present   | -                      |
| Glucose - 50-99-7                         | Present   | -                      |
| Lead acetate - 301-04-2                   | Present   | -                      |
| Ethyl alcohol - 64-17-5                   | Present   | -                      |
| Phylloquinone - 84-80-0                   | Present   | -                      |
| Methyl alcohol - 67-56-1                  | Present   | -                      |
| Sodium hydroxide - 1310-73-2              | Present   | -                      |

**Australian - Illicit Drug Precursors/Reagents Substance List**

This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances.

**Chemicals of Security Concern**

This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

| Component                    | Australian - Illicit Drug Precursors/Reagents Substance List | Chemicals of Security Concern |
|------------------------------|--|-------------------------------|
| Sodium hydroxide - 1310-73-2 | Category 3   |                               |

**Legend**

Category 3 - Chemicals and apparatus that may be used in the illicit production of drugs. Purchases from this list should alert companies or organizations to seek further indicators of any suspicious orders or enquiries. No official reporting is required for items on this list unless considered warranted

**National pollutant inventory**

Subject to reporting requirements

| Component                | National pollutant inventory      |
|--------------------------|-----------------------------------|
| Ethyl alcohol - 64-17-5  | 10 tonne/yr. Threshold category 1 |
| Methyl alcohol - 67-56-1 | 10 tonne/yr. Threshold category 1 |

**Prohibition or notification/licensing requirements**

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

**International Inventories**

| Component   | AICS | NZIoC | EINECS    | ELINCS | TSCA | DSL | NDSL | PICCS | ENCS | ISHL | IECSC | KECL       |
|---|------|-------|-----------|--------|------|-----|------|-------|------|------|-------|------------|
| Water   | X    | X     | 231-791-2 | -      | X    | X   | -    | X     | X    |      | X     | KE-35400   |
| Lead (II) acetate, trihydrate   | X    | X     | -         | -      | -    | -   | -    | X     | X    |      | X     | -          |
| Yeast, ext.   | X    | X     | 232-387-9 | -      | X    | X   | -    | X     | -    |      | X     | KE-05-1355 |
| Agar  | X    | X     | 232-658-1 | -      | X    | X   | -    | X     | -    |      | X     | KE-00275   |
| Glucose   | X    | X     | 200-075-1 | -      | X    | X   | -    | X     | X    | X    | X     | KE-17727   |
| Lead acetate  | X    | X     | 206-104-4 | -      | X    | X   | -    | X     | X    | X    | X     | KE-21888   |
| Ethyl alcohol   | X    | X     | 200-578-6 | -      | X    | X   | -    | X     | X    | X    | X     | KE-13217   |
| Phylloquinone   | X    | X     | 201-564-2 | -      | X    | X   | -    | X     | X    | X    | X     | KE-24853   |
| Methyl alcohol  | X    | X     | 200-659-6 | -      | X    | X   | -    | X     | X    | X    | X     | KE-23193   |
| Sodium hydroxide  | X    | X     | 215-185-5 | -      | X    | X   | -    | X     | X    | X    | X     | KE-31487   |
| Ferrate(2-), chloro[7,12-diethenyl-3,8,13,17-tetramethyl-2,18-dipropionate(4-)-N21, | -    | X     | 240-140-1 | -      | X    | X   | -    | -     | X    | X    | X     | -          |

|                                       |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| N22,N23,N24]-, dihydrogen, (SP-5-13)- |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|

**Legend:** X - Listed. '-' - Not Listed. XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)). **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### International Regulations

**Ozone Depletion Potential** This product does not contain any known or suspected substance

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Rotterdam Convention (PIC)** Not applicable

**MARPOL** - International Convention for the Prevention of Pollution from Ships

| Component               | IMDG Marine Pollutant                    |
|-------------------------|--|
| Lead acetate - 301-04-2 | IMDG regulated marine pollutant (UN1616) |

### Basel convention on the control of transboundary movements of hazardous wastes and their disposal

Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

| Component                                 | Basel Convention (Hazardous Waste) | Australian Hazardous Waste Act - Categories of Wastes to Be Controlled |
|---|------------------------------------|--|
| Lead (II) acetate, trihydrate - 6080-56-4 | Annex I - Y31                      | Y31  |
| Lead acetate - 301-04-2                   | Annex I - Y31                      | Y31  |
| Ethyl alcohol - 64-17-5                   | Annex I - Y42                      | Y42 except Halogenated solvents  |
| Sodium hydroxide - 1310-73-2              | Annex I - Y35                      | Y35 solid or solution  |

| Component   | CAS No     | OECD HPV       | Restriction of Hazardous Substances (RoHS) | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|---|------------|----------------|--|---|--|
| Water   | 7732-18-5  | Listed         | Not applicable                             | Not applicable  | Not applicable   |
| Lead (II) acetate, trihydrate   | 6080-56-4  | Not applicable | Not applicable                             | Not applicable  | Not applicable   |
| Yeast, ext.   | 8013-01-2  | Not applicable | Not applicable                             | Not applicable  | Not applicable   |
| Agar  | 9002-18-0  | Not applicable | Not applicable                             | Not applicable  | Not applicable   |
| Glucose   | 50-99-7    | Listed         | Not applicable                             | Not applicable  | Not applicable   |
| Lead acetate  | 301-04-2   | Not applicable | Not applicable                             | Not applicable  | Not applicable   |
| Ethyl alcohol   | 64-17-5    | Listed         | Not applicable                             | Not applicable  | Not applicable   |
| Phylloquinone   | 84-80-0    | Not applicable | Not applicable                             | Not applicable  | Not applicable   |
| Methyl alcohol  | 67-56-1    | Listed         | Not applicable                             | 500 tonne   | 5000 tonne   |
| Sodium hydroxide  | 1310-73-2  | Listed         | Not applicable                             | Not applicable  | Not applicable   |
| Ferrate(2-), chloro[7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoate(4-)-N21,N22,N23,N24]-, dihydrogen, (SP-5-13)- | 16009-13-5 | Not applicable | Not applicable                             | Not applicable  | Not applicable   |

### Authorisation/Restrictions according to EU REACH

| Component                     | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances  | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------------------|---|--|---|
| Lead (II) acetate, trihydrate | -   | Use restricted. See item 30.<br>(see <a href="http://eur-lex.europa.eu/LexUriServ/L">http://eur-lex.europa.eu/LexUriServ/L</a> | SVHC candidate list - Toxic for reproduction (Article 57 c)   |

|                  |   |  |   |
|------------------|---|--|---|
|                  |   | <i>exUriServ.do?uri=CELEX:32006R1907:EN:NOT</i> for restriction details)   |   |
| Lead acetate     | - | Use restricted. See item 72.<br>(see link for restriction details)<br>Use restricted. See item 30.<br>(see link for restriction details)<br>Use restricted. See item 75.<br>(see link for restriction details)<br>Use restricted. See item 63.<br>(see link for restriction details) | SVHC candidate list - Toxic for reproduction (Article 57 c) |
| Phylloquinone    | - | Use restricted. See item 75.<br>(see link for restriction details)   | -   |
| Methyl alcohol   | - | Use restricted. See item 69.<br>(see link for restriction details)<br>Use restricted. See item 75.<br>(see link for restriction details)   | -   |
| Sodium hydroxide | - | Use restricted. See item 75.<br>(see link for restriction details)   | -   |

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

<https://echa.europa.eu/authorisation-list>

<https://echa.europa.eu/substances-restricted-under-reach>

<https://echa.europa.eu/candidate-list-table>

## Section 16 - Other Information

### Legend

**AICS** - Australian Inventory of Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**IECSC** - Chinese Inventory of Existing Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**NZS 5433:2020** - Transport of Dangerous Goods on Land

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**WEL** - Workplace Exposure Limit

**DNEL** - Derived No Effect Level

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**VOC** - (Volatile Organic Compound)

**NZIoC** - New Zealand Inventory of Chemicals

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**CAS** - Chemical Abstracts Service

**ACGIH** - American Conference of Governmental Industrial Hygienists

Predicted No Effect Concentration (PNEC)

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**ADG** - Australian Code for the Transport of Dangerous Goods by Road and Rail

**OECD** - Organisation for Economic Co-operation and Development

**LC50** - Lethal Concentration 50%

**ATE** - Acute Toxicity Estimate

**RPE** - Respiratory Protective Equipment

**NOEC** - No Observed Effect Concentration

**BCF** - Bioconcentration factor

**PBT** - Persistent, Bioaccumulative, Toxic

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

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

**Physical hazards** On basis of test data

**Health Hazards** Calculation method

**Environmental hazards** Calculation method

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

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|                  |                 |
|------------------|-----------------|
| Revision Date    | 05-Jul-2023     |
| Revision Summary | Not applicable. |

**This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).**

**Disclaimer**

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**End of Safety Data Sheet**