According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 01.09.2017

Revision date: 12.27.2017

Hydrazine - Methanol Reagent

SECTION 1: Identification

Product identifier

Product name: Hydrazine - Methanol Reagent Product code: HM1840SS

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory chemicals Uses advised against: Not determined or not applicable. Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer: United States AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 1-717-632-1291

Emergency telephone number: Canada ChemTel: (24-hour) +1(800)255-3924 +1(813)248-0585 (International)

SECTION 2: Hazard(s) identification

GHS classification:

Flammable liquids, category 2 Acute toxicity (oral), category 3 Acute toxicity (dermal), category 3 Acute toxicity (inhalation), category 4 Specific target organ toxicity - single exposure, category 1

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

H225 Highly flammable liquid and vapor.

- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H332 Harmful if inhaled.

H370 Causes damage to organs.

Precautionary statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P270 Do not eat, drink or smoke when using this product.

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

P271 Use only outdoors or in a well-ventilated area.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/light/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

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

P264 Wash skin thoroughly after handling.

P303+P361+P353 If on skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

P370+P378 In case of fire: Use agents recommended in section 5 for extinction.

P321 Specific treatment (see supplemental first aid instructions on this label).

P301+P330+P312 IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

P363 Wash contaminated clothing before reuse.

P302+P352+P312 If on skin: Wash with soap and water. Call a poison center or doctor/physician if you feel unwell.

P304+P340+P312 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

P307+P311 If exposed: Call a poison center or doctor/physician.

P403+P235 Store in a well ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents and container as instructed in Section 13.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

| Identification | Name | Weight % |
|-------------------------|-----------------------------|----------|
| CAS number: 67-56-1 | Methanol | 97.54 |
| CAS number: 100-10-7 | p-Dimethylaminobenxaldehyde | 2.46 |

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Move to fresh air

Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

After skin contact:

Immediately remove all contaminated clothing Wash affected area with soap and water Seek medical attention if symptoms develop or persist Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

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After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes If symptoms develop or persist, seek medical attention

After swallowing:

Immediately call a POISON CONTROL CENTER or seek medical attention Do not induce vomiting Rinse mouth and then drink plenty of water

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors Vapors can flow to distant ignition sources and flashback Liquid is volatile and may generate an explosive atmosphere

Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing Refer to Section 8

Special precautions:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols Avoid contact with skin, eyes and clothing

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation Ensure air handling systems are operational Beware of vapors accumulating to form explosive concentrations Vapors can accumulate in low areas

Environmental precautions:

Should not be released into the environment Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

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Wear protective eye wear, gloves and clothing Use spark-proof tools and explosion-proof equipment

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

Use only non-sparking tools.

Take precautionary measures against electrostatic discharges.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

Keep container tightly sealed.

Keep away from all ignition sources: open flames, hot surfaces, direct sunlight, spark sources. Store locked up.

Use appropriate containment to avoid environmental contamination.

Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

| Country (Legal Basis) | Substance | Identifier | Permissible concentration | |
|-----------------------|-------------------------------|------------|--|--|
| NIOSH | Methanol | 67-56-1 | NIOSH REL TWA 200 ppm [skin] | |
| | Methanol | 67-56-1 | NIOSH REL TWA 260 mg/m ³ [skin] | |
| | Methanol 67-56-1 NIOSH REL ST | | NIOSH REL ST 250 ppm [skin] | |
| | Methanol | 67-56-1 | NIOSH REL ST 325 mg/m ³ [skin] | |
| United States (OSHA) | Methanol | 67-56-1 | OSHA PEL TWA 200 ppm | |
| | Methanol | 67-56-1 | OSHA PEL TWA 260 mg/m ³ | |
| ACGIH | Methanol | 67-56-1 | ACGIH TLV STEL 250 ppm [skin] | |
| | Methanol | 67-56-1 | ACGIH TLV TWA 200 ppm [skin] | |

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Respiratory protection:

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When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:

Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| Annoaranco | |
|---|----------------------------------|
| Appearance | Clear, pale yellow liquid |
| Odor | Alcohol |
| Odor threshold | Not available |
| рН | Not available |
| Melting point/freezing point | -98°C |
| Initial boiling point/range | 64.7 °C |
| Flash point (closed cup) | 12 °C |
| Evaporation rate | 5.2 |
| Flammability (solid, gas) | Flammable |
| Upper flammability/explosive limit | 31% |
| Lower flammability/explosive limit | 6% |
| Vapor pressure | 128 hPa at 20°C |
| Vapor density | 1.11 |
| Density | Not available |
| Relative density | 0.79 |
| Solubilities | Not determined or not available. |
| Partition coefficient (n-octanol/water) | Not available |
| Auto/Self-ignition temperature | 455 °C |
| Decomposition temperature | Not available |
| Dynamic viscosity | Not available |
| Kinematic viscosity | Not available |
| Explosive properties | Not determined or not available. |
| Oxidizing properties | Not determined or not available. |

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Excess heat, ignition source or flames.

Incompatible materials:

None known.

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Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Toxic if swallowed Toxic in contact with skin Harmful if inhaled **Product data:** No data available.

Substance data:

| Name | Route | Result |
|-----------------------------|-------|-----------------------------|
| p-Dimethylaminobenxaldehyde | oral | LD50 Oral - Rat - 500 mg/kg |

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met. Product data: No data available. Substance data: No data available. Serious eye damage/irritation Assessment: Based on available data, the classification criteria are not met. Product data: No data available. Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Causes damage to organs

Product data: No data available.

Substance data:

| Name | Result |
|----------|--|
| Methanol | Causes damage to the optic nerve and central nervous system. |

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

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Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available. Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

| Name | Result |
|-----------------------------|---|
| p-Dimethylaminobenxaldehyde | LC50 - Pimephales promelas - 45 mg/L 48hr |

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available. Substance data: No data available.

Mobility in soil

Product data: No data available. Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

| UN number | UN 1230 | |
|-------------------------------|--------------------|--|
| UN proper shipping name | Methanol solutions | |
| UN transport hazard class(es) | 3 | Part of the second seco |
| Packing group | 11 | |
| Environmental hazards | None | |

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| Special precautions for user | None |
|------------------------------|---------|
| | i i onc |

International Maritime Dangerous Goods (IMDG)

| UN number | UN 1230 | |
|-------------------------------|--------------------|---------|
| UN proper shipping name | Methanol solutions | |
| UN transport hazard class(es) | 3 | rum rum |
| Packing group | Ш | |
| Environmental hazards | None | |
| Special precautions for user | None | |

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

| UN number | UN 1230 |
|-------------------------------|--------------------|
| UN proper shipping name | Methanol solutions |
| UN transport hazard class(es) | 3 |
| Packing group | I |
| Environmental hazards | None |
| Special precautions for user | None |

| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | |
|---|------|
| Bulk Name | None |
| Ship type | None |
| Pollution category | None |

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

| 67-56-1 | Methanol | Listed |
|----------|-----------------------------|--------|
| 100-10-7 | p-Dimethylaminobenxaldehyde | Listed |

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

| Acute | Chronic | Fire | Pressure | Reactive |
|-------|---------|------|----------|----------|
| No | No | No | No | No |

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

| | 67-56-1 | Methanol | | Listed | | | |
|-----|---------|----------|--------|--------|--|--|--|
| CEI | RCLA: | | | | | | |
| | 67-56-1 | Methanol | Listed | 5000 | | | |
| | | | | | | | |

RCRA:

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| 67-56-1 | Methanol | Listed | |
|-----------------|--|--------|---------------|
| ection 112(r) o | f the Clean Air Act (CAA): Not determined. | - | • |
| lassachusetts F | Right to Know: | | |
| 100-10-7 | p-Dimethylaminobenxaldehyde | | Not Listed |
| 67-56-1 | Methanol | | Listed |
| ew Jersey Righ | t to Know: | | • |
| 100-10-7 | p-Dimethylaminobenxaldehyde | | Not Listed |
| 67-56-1 | Methanol | | Listed |
| ew York Right | to Know: | | • |
| 100-10-7 | p-Dimethylaminobenxaldehyde | | Not Listed |
| 67-56-1 | Methanol | | Listed |
| ennsylvania Rig | ght to Know: | | |
| 100-10-7 | p-Dimethylaminobenxaldehyde | | Not Listed |
| 67-56-1 | Methanol | | Listed |

California Proposition 65:

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

67-56-1

Methanol

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-3-0 HMIS: 1-3-0 Initial preparation date: 01.09.2017 Revision date: 12.27.2017

End of Safety Data Sheet

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