

SECTION 1: Identification

1.1. Identification

| | |
|--------------|-----------------------------------|
| Product form | : Mixture |
| Trade name | : Marking Dye for Tissue - Yellow |
| Product code | : 24112 |
| Formula | : no data |

1.2. Recommended use and restrictions on use

| | |
|-----------------|--|
| Recommended use | : Use as laboratory reagent, Manufacture of substances |
|-----------------|--|

1.3. Supplier

Supplier

Polysciences
400 Valley Road
Warrington, PA 18976 - United States
T +1 215 343 6484 - F +1 215 343 0214
info@polysciences.com - www.polysciences.com

1.4. Emergency telephone number

| | |
|------------------|---|
| Emergency number | : 24-hour emergency phone number ChemTel 1-800-255-3924 |
|------------------|---|

SECTION 2: Hazard(s) identification


2.1. Classification of the substance or mixture

GHS US classification

| | |
|---|------------------------|
| Acute toxicity (inhalation) Category 4 | Harmful if inhaled |
| Skin corrosion/irritation Category 2 | Causes skin irritation |
| Serious eye damage/eye irritation Category 2B | Causes eye irritation |

2.2. GHS Label elements, including precautionary statements

GHS US labeling

| | |
|-----------------------------------|---|
| Hazard pictograms (GHS US) | :  |
| Signal word (GHS US) | : Warning |
| Hazard statements (GHS US) | : Causes skin irritation Causes eye irritation Harmful if inhaled |
| Precautionary statements (GHS US) | : Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. |

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

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| Name | Product identifier | % | GHS US classification |
|--------------------|---------------------|-------|---|
| Ammonium hydroxide | (CAS-No.) 1336-21-6 | 0 – 5 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 |
| Formaldehyde | (CAS-No.) 50-00-0 | 0 – 5 | Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1A, H350 STOT SE 3, H336 Aquatic Acute 2, H401 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : Irritation.
- Symptoms/effects after eye contact : Mild eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

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6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool. Store at room temp.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| |
|--|
| Marking Dye for Tissue - Yellow |
| No additional information available |
| Ammonium hydroxide (1336-21-6) |
| No additional information available |
| Formaldehyde (50-00-0) |
| No additional information available |

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : yellow slightly viscous liquid.
- Color : Mixture contains one or more component(s) which have the following colour(s):
Colorless
- Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.
Mixture contains one or more component(s) which have the following odour:
ammonia-like

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| | |
|---|---------------------|
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : no data |
| Freezing point | : No data available |
| Boiling point | : no data |
| Flash point | : no data |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Not applicable. |
| Vapor pressure | : no data |
| Relative vapor density at 20°C | : no data |
| Relative density | : No data available |
| Solubility | : No data available |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------|-----------------------|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Harmful if inhaled. |

| | |
|---------------------|--------------|
| ATE US (gases) | 4500 ppmV/4h |
| ATE US (vapors) | 11 mg/l/4h |
| ATE US (dust, mist) | 1.5 mg/l/4h |

| | |
|---------------------------------------|-----------|
| Ammonium hydroxide (1336-21-6) | |
| LD50 oral rat | 350 mg/kg |

| | |
|-----------------------------------|---------------------------|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes eye irritation. |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |

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Carcinogenicity : Not classified

| Formaldehyde (50-00-0) | |
|--|----------------------------|
| IARC group | 1 - Carcinogenic to humans |
| National Toxicity Program (NTP) Status | Known Human Carcinogens |

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

| Ammonium hydroxide (1336-21-6) | |
|--------------------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |

| Formaldehyde (50-00-0) | |
|------------------------|------------------------------------|
| STOT-single exposure | May cause drowsiness or dizziness. |

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Mild eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

| Ammonium hydroxide (1336-21-6) | |
|--------------------------------|---|
| LC50 fish 1 | 8.2 mg/l (Exposure time: 96 h - Species: Pimephales promelas) |
| EC50 Daphnia 1 | 0.66 mg/l (Exposure time: 48 h - Species: water flea) |
| EC50 Daphnia 2 | 0.66 mg/l (Exposure time: 48 h - Species: Daphnia pulex) |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

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Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

| Ammonium hydroxide (1336-21-6) | |
|---|---------|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| CERCLA RQ | 1000 lb |
| Formaldehyde (50-00-0) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| Subject to reporting requirements of United States SARA Section 313 | |
| Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 100 lb |
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 100 lb |
| SARA Section 302 Threshold Planning Quantity (TPQ) | 500 lb |

15.2. International regulations

CANADA

| Ammonium hydroxide (1336-21-6) | |
|---|--|
| Listed on the Canadian DSL (Domestic Substances List) | |
| Formaldehyde (50-00-0) | |
| Listed on the Canadian DSL (Domestic Substances List) | |

EU-Regulations

| Ammonium hydroxide (1336-21-6) | |
|--|--|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) | |

National regulations

| Ammonium hydroxide (1336-21-6) | |
|--|--|
| Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) | |
| Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) | |
| Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory | |
| Listed on the Japanese ISHL (Industrial Safety and Health Law) | |
| Listed on KECL/KECI (Korean Existing Chemicals Inventory) | |
| Listed on NZIoC (New Zealand Inventory of Chemicals) | |
| Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) | |
| Japanese Poisonous and Deleterious Substances Control Law | |
| Listed on INSQ (Mexican National Inventory of Chemical Substances) | |
| Listed on CICR (Turkish Inventory and Control of Chemicals) | |
| Listed on the TCSI (Taiwan Chemical Substance Inventory) | |
| Formaldehyde (50-00-0) | |
| Listed on IARC (International Agency for Research on Cancer) | |
| Listed as carcinogen on NTP (National Toxicology Program) | |

15.3. US State regulations

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| Formaldehyde (50-00-0) | | | | | |
|---|---|---|---|----------------------------------|-------------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) | Maximum allowable dose level (MADL) |
| Yes | No | No | No | 40 µg/day | |

| Component | State or local regulations |
|-------------------------------|--|
| Ammonium hydroxide(1336-21-6) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List |
| Formaldehyde(50-00-0) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |

SECTION 16: Other information

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Hazard Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

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