### Kit Summary

**Product Code(s)**
AB112146

**Product name**
MMP Activity Assay Kit (Fluorometric - Green)

### Assay Buffer

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton-X-100</td>
<td>-</td>
<td>9002-93-1</td>
<td>0.1</td>
<td>Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)</td>
<td>-</td>
</tr>
<tr>
<td>Calcium chloride</td>
<td>-</td>
<td>10043-52-4</td>
<td>0.01386</td>
<td>Eye Irrit. 2 (H319)</td>
<td>-</td>
</tr>
</tbody>
</table>

### APMA, 4-Aminophenylmercuric Acetate

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA</td>
<td>228-497-1</td>
<td>6283-24-5</td>
<td>35.2</td>
<td>STOT RE 2 (H373) Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)</td>
<td>-</td>
</tr>
</tbody>
</table>

### MMP Green Substrate

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>200-664-3</td>
<td>67-68-5</td>
<td>99</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### GHS / CLP - GHS - Classification

**Signal Word**
Danger
Hazard statements
H300 - Fatal if swallowed
H310 - Fatal in contact with skin
H311 - Toxic if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P284 - Wear respiratory protection
P280 - Wear protective gloves/ eye protection/ face protection
P271 - Use only outdoors or in a well-ventilated area
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P262 - Do not get in eyes, on skin, or on clothing
P270 - Do not eat, drink or smoke when using this product
P264 - Wash face, hands and any exposed skin thoroughly after handling
P361 - Remove/Take off immediately all contaminated clothing
P363 - Wash contaminated clothing before reuse
P314 - Get medical advice/ attention if you feel unwell
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
P315 - Get immediate medical advice/ attention
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor/ physician
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P330 - Rinse mouth
P273 - Avoid release to the environment
P391 - Collect spillage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3 Other information
A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous
Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

TRANSPORT INFORMATION

DOT

<table>
<thead>
<tr>
<th>Proper shipping name</th>
<th>Excepted Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury compound, liquid, n.o.s. (4-Aminophenylmercury acetate)</td>
<td></td>
</tr>
<tr>
<td>Hazards class</td>
<td>6.1</td>
</tr>
<tr>
<td>UN/ID No</td>
<td>UN2024</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
</tbody>
</table>

IATA

<table>
<thead>
<tr>
<th>UN/ID No</th>
<th>Excepted Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN2024</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proper shipping name</th>
<th>Mercury compound, liquid, n.o.s. (4-Aminophenylmercury acetate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazards class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
</tbody>
</table>

ADR

<table>
<thead>
<tr>
<th>Proper shipping name</th>
<th>Excepted Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury compound, liquid, n.o.s. (4-Aminophenylmercury acetate)</td>
<td></td>
</tr>
<tr>
<td>Hazards class</td>
<td>6.1</td>
</tr>
<tr>
<td>UN/ID No</td>
<td>UN2024</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
</tbody>
</table>
## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Assay Buffer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended use</td>
<td>For research use only</td>
</tr>
</tbody>
</table>

**Supplier Address**

Abcam Inc  
1 Kendall Square, Ste 341  
Cambridge, MA 02139-1517  
USA  
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)  
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

**E-mail address**

technical@abcam.com

**Emergency telephone**

+1 866 928 0789 (Toll free) /+1 202 464 2554

## 2. HAZARDS IDENTIFICATION

**GHS - Classification**

<table>
<thead>
<tr>
<th>Ozone</th>
<th>Not applicable</th>
</tr>
</thead>
</table>

**GHS Label elements, including precautionary statements**

Not dangerous

**Precautionary Statements - EU (§28, 1272/2008)**

P280 - Wear protective gloves/ protective clothing

**Other information**

No information available
3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton-X-100</td>
<td>9002-93-1</td>
<td>0.1-1</td>
<td>Skin Irrit. 2 (H315), Eye Dam. 1 (H318), Acute Tox. 4 (H302), Aquatic Chronic 2 (H411)</td>
</tr>
<tr>
<td>Calcium chloride</td>
<td>10043-52-4</td>
<td>&lt;0.1</td>
<td>Eye Irrit. 2 (H319)</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Eye contact
- Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

Skin contact
- Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation
- Move to fresh air.

Ingestion
- Clean mouth with water. Drink plenty of water.

Notes to physician
- Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties
- Not flammable.

Flash point
- not determined >250 °F

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

Explosion Data
- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.

Protective equipment and precautions for firefighters
- As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
- Ensure adequate ventilation.

Environmental precautions
- Try to prevent the material from entering drains or water courses.

Methods for containment
- Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
- Pick up and transfer to properly labeled containers.
7. HANDLING AND STORAGE

Advice on safe handling
Handle in accordance with good industrial hygiene and safety practice.

Technical measures/Storage conditions
Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering measures
Showers
Eyewash stations
Ventilation systems

Personal protective equipment
Eye/face protection
Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Long sleeved clothing. Protective gloves.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>No information available.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available &gt;250°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available.</td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td>Liquid</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>solubility</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor Pressure @20°C (kPa)</td>
<td>No information available.</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable under recommended storage conditions.

Incompatible products
None known based on information supplied.

Conditions to avoid
None known based on information supplied.

Hazardous decomposition products
None known based on information supplied.

Hazardous polymerization
Hazardous polymerization does not occur.
11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information
Product does not present an acute toxicity hazard based on known or supplied information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral (mg/kg) (Rat)</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation (mg/kg) (Rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton-X-100</td>
<td>1800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium chloride</td>
<td>1000</td>
<td>2630</td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity

Target Organ Effects
None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>10650: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>52: 48 h Daphnia magna mg/L EC50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste disposal methods
Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging
Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT
Not dangerous goods

IATA
Not dangerous goods

ADR
Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 3T3 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

- Acute Health Hazard: yes
- Chronic Health Hazard: no
- Fire Hazard: no
- Sudden Release of Pressure Hazard: no
- Reactive Hazard: no
Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

International Regulations

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H315 - Causes skin irritation H318 - Causes serious eye damage H302 - Harmful if swallowed H411 - Toxic to aquatic life with long lasting effects H319 - Causes serious eye irritation

Revision Date 06-Apr-2020
Revision Note No information available.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS
Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: APMA, 4-Aminophenylmercuric Acetate
UN/ID No: UN2024
Recommended use: For research use only

Supplier Address:
Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address: technical@abcam.com

Emergency telephone: +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Acute inhalation toxicity - dust/mist</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ systemic toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute aquatic toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

- Skull and crossbones icon
Signal Word
Danger

Hazard statements
H300 - Fatal if swallowed
H310 - Fatal in contact with skin
H331 - Toxic if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P280 - Wear protective gloves/ eye protection/ face protection
P271 - Use only outdoors or in a well-ventilated area
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P270 - Do not eat, drink or smoke when using this product
P264 - Wash face, hands and any exposed skin thoroughly after handling
P363 - Wash contaminated clothing before reuse
P314 - Get medical advice/ attention if you feel unwell
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
P315 - Get immediate medical advice/ attention
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor/ physician
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
P273 - Avoid release to the environment
P391 - Collect spillage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information
No information available
3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA</td>
<td>6283-24-5</td>
<td>15-40</td>
<td>STOT RE 2 (H373)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 2 (H300)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 1 (H310)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 2 (H330)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 1 (H400)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1 (H410)</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice
Immediate medical attention is required.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin contact
Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation
Immediate medical attention is required. Move to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion
Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do NOT induce vomiting. Drink plenty of water.

Notes to physician
Treat symptomatically.

Protection of first-aiders
Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

5. FIRE-FIGHTING MEASURES

Flammable properties
Not flammable.

Flash point
not determined >250 °F

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

Explosion Data
Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
None.

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus and protective suit.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Keep people away from and upwind of spill/leak.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for containment
Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up
Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Advice on safe handling
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.

Technical measures/Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA 6283-24-5</td>
<td>TWA: 0.1 mg/m³ Hg</td>
<td>(vacated) Ceiling: 0.1 mg/m³ Hg</td>
<td>IDLH: 10 mg/m³ Hg Ceiling: 0.1 mg/m³ Hg TWA: 0.05 mg/m³ except Organo alkyls Hg vapor</td>
</tr>
</tbody>
</table>

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering measures
Showers
Eyewash stations
Ventilation systems

Personal protective equipment
Eye/face protection
Tightly fitting safety goggles.

Skin and body protection
Long sleeved clothing. Protective gloves.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures
When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available &gt;250 °F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No information available 163 - 165 °C (325 - 329 °F)</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>Physical State @20°C Liquid</td>
</tr>
<tr>
<td>Flammable point</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

- **Stability**: Stable under recommended storage conditions.
- **Incompatible products**: None known based on information supplied.
- **Conditions to avoid**: None known based on information supplied.
- **Hazardous decomposition products**: None known based on information supplied.
- **Hazardous polymerization**: Hazardous polymerization does not occur.

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

- **Product Information**: Very toxic in contact with skin and if swallowed
- **Inhalation**: Very toxic by inhalation
- **Skin contact**: Avoid contact with skin Very toxic in contact with skin
- **Ingestion**: Very toxic if swallowed

#### Chronic toxicity

- **Chronic toxicity**: Prolonged or repeated exposure increases the risk Possible risks of irreversible effects

#### Target Organ Effects

- **None known.**

### 12. ECOLOGICAL INFORMATION

- **Ecotoxicity**: TOXIC TO AQUATIC ORGANISMS. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This product contains a chemical which is listed as a severe marine pollutant according to DOT.
13. DISPOSAL CONSIDERATIONS

Waste disposal methods  
Dispose of in accordance with local regulations.

Contaminated packaging  
Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT  
Proper shipping name  
Mercury compound, liquid, n.o.s. (4-Aminophenylmercury acetate)
Hazard class  
6.1
UN/ID No  
UN2024
Packing group  
II
Marine pollutant  
This product contains a chemical which is listed as a severe marine pollutant according to DOT.

IATA  
Proper shipping name  
Mercury compound, liquid, n.o.s. (4-Aminophenylmercury acetate)
Hazard class  
6.1
UN/ID No  
UN2024
Packing group  
II

ADR  
Proper shipping name  
Mercury compound, liquid, n.o.s. (4-Aminophenylmercury acetate)
Hazard class  
6.1
UN/ID No  
UN2024
Packing group  
II

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA</td>
<td>6283-24-5</td>
<td>35.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute Health Hazard  
no
Chronic Health Hazard  
yes
Fire Hazard  
no
Sudden Release of Pressure Hazard  
no
Reactive Hazard  
no

Clean Water Act  
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>APMA</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
AB112146-CP96069 - APMA, 4-Aminophenylmercuric Acetate

Revision Date 06-Apr-2020

16. OTHER INFORMATION

Full text of H-Staments referred to under sections 2 and 3

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled H300 + H310 + H330 - Fatal if swallowed, in contact with skin or if inhaled H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects

Hazard statements

H300 - Fatal if swallowed
H310 - Fatal in contact with skin
H331 - Toxic if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects

Revision Note

No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS
Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

### GHS - Classification

- **Ozone**: Not applicable

### GHS Label elements, including precautionary statements

- **Not dangerous**

### Precautionary Statements - EU (§28, 1272/2008)

- P280 - Wear protective gloves/ protective clothing

### Other information

Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>67-68-5</td>
<td>60-99</td>
<td>-</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16
## 4. FIRST AID MEASURES

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Move to fresh air.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Clean mouth with water. Drink plenty of water.</td>
</tr>
<tr>
<td>Notes to physician</td>
<td>Treat symptomatically.</td>
</tr>
</tbody>
</table>

## 5. FIRE-FIGHTING MEASURES

| Flammable properties         | Not flammable.                                                                                                               |
| Flash point                  | not determined 192 °F                                                                                                         |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                     |

### Explosion Data

| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge  | None. |

| Protective equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes. |

## 6. ACCIDENTAL RELEASE MEASURES

| Personal precautions          | Ensure adequate ventilation.                                                                                                 |
| Environmental precautions     | Try to prevent the material from entering drains or water courses.                                                           |
| Methods for containment       | Prevent further leakage or spillage if safe to do so.                                                                       |
| Methods for cleaning up       | Pick up and transfer to properly labeled containers.                                                                         |

## 7. HANDLING AND STORAGE

| Advice on safe handling       | Handle in accordance with good industrial hygiene and safety practice.                                                       |
| Technical measures/Storage conditions | Keep containers tightly closed in a dry, cool and well-ventilated place.                                                     |
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering measures
Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Long sleeved clothing. Protective gloves.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>No information available.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available 192°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Melting point/Range</td>
<td>No information available.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No information available.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available.</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available.</td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td>Liquid</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapor Pressure @20°C (kPa)</td>
<td>No information available.</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>99</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable under recommended storage conditions.

Incompatible products
None known based on information supplied.

Conditions to avoid
None known based on information supplied.

Hazardous decomposition products
None known based on information supplied.

Hazardous polymerization
Hazardous polymerization does not occur.
11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information
Product does not present an acute toxicity hazard based on known or supplied information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>14500 mg/kg (Rat)</td>
<td>40 g/kg (Rat)</td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity

Target Organ Effects
None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>12350 - 25500: 96 h Skeletonema costatum mg/L EC50</td>
<td>34: 96 h Pimephales promelas mg/L LC50 33-37: 96 h Oncorhynchus mykiss g/L LC50 static 40: 96 h Lepomis macrochirus g/L LC50 static 41.7: 96 h Cyprinus carpio g/L LC50</td>
<td>7000: 24 h Daphnia species mg/L EC50</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>-2.03</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste disposal methods
Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging
Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT
Not dangerous goods

IATA
Not dangerous goods

ADR
Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

- Acute Health Hazard: no
- Chronic Health Hazard: no
Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International Regulations

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Revision Date 06-Apr-2020
Revision Note No information available.

Disclaimer
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End of MSDS