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

1.1 Product identifiers

Product Name: Heavy Atom M2™
Product Number: HR2-450
Product type: Liquid
REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses: For research use only. Not for drug, household, or other use.

1.3 Details of the supplier of the Safety Data Sheet

Company: Hampton Research
34 Journey
Aliso Viejo, CA 92656-3317
United States
Telephone: 949 425 1321
Telephone technical support is available 8:00 a.m. to 4:30 p.m. USA Pacific Standard Time.
Fax: 949 425 1611
Fax Technical Support is available 24 hours a day.
e-mail: tech@hrmail.com
e-mail Technical Support is available 24 hours a day.

1.4 Emergency telephone number

Emergency phone: 949 425 1321
For CHEMTREC Assistance: 800 424 9300
For CHEMTREC Assistance: 703 527 3887 (International)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
see SECTION 16

Classification according to EU Directives 67/548/EEC or 1999/45/EC
see SECTION 16

Additional information:
Relevant R-phrase(s), S-phrase(s), GHS pictogram(s), Hazard statement(s), and Precautionary statement(s) please see SECTION 16
SECTION 4: First Aid Measures

4.1 Description of first aid measures

General Advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments
No specific treatment.
SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media
None known

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further Information
No data available

SECTION 6: Accidental Release Measures

6.1 Personal Precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see SECTION 8 and 13.

SECTION 7: Handling and Storage

7.1 Personal Precautions
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
See Section 8 for additional information on hygiene measures. For precautions see section 16.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end uses
A part from the uses mentioned in section 1.2 no other specific uses are stipulated.
SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters
Components with workplace control parameters
Consult a physician. Show this safety data sheet to the doctor in attendance.

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment
Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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

Respiratory protection
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental Exposure Controls
See SECTION 6

SECTION 9: Physical and Chemical Properties

No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
No data available

10.3 Possibility of hazardous reactions
No data available
(CONTINUED) - SECTION 10: Stability and Reactivity

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
Other decomposition products - no data available

SECTION 11: Toxicological Information

Refer to Section 16

SECTION 12: Ecological Information

Refer to Section 16

SECTION 13: Disposal Considerations

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transportation Information

14.1 UN number
ADR/RID: 3316  IMDG: 3316  IATA: 3316

14.2 UN proper shipping name
ADR/RID: CHEMICAL KIT
IMDG: CHEMICAL KIT
IATA: Chemical kit

14.3 Transport hazard class(es)
ADR/RID: -  IMDG: -  IATA: -

14.4 Packaging group
ADR/RID: -  IMDG: -  IATA: -

14.5 Environmental hazards
ADR/RID: No  IMDG Marine pollutant: No  IATA: No
(CONTINUED) - SECTION 14: Transportation Information

14.6 Special precautions for user
No data available

SECTION 15: Regulatory Information

This safety data sheet complies with the requirements of Regulation (EC) No 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
No data available

SECTION 16: Other Information

<table>
<thead>
<tr>
<th>Kit Components</th>
<th>[CAS]</th>
<th>R-Phrase</th>
<th>S-Phrase</th>
<th>GHS Pictogram</th>
<th>Hazard Statement</th>
<th>Precautionary Statement</th>
<th>WKG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium tetrathiotungstate(VI)</td>
<td>13862-78-7</td>
<td>36/37/38</td>
<td>26-37/39</td>
<td>GHS07</td>
<td>H315-H319-H335</td>
<td>P261-P305 + P351 + P338</td>
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<td>Dysprosium(III) chloride hexahydrate</td>
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<td>Gadolinium(III) chloride hydrate</td>
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<td>GHS07</td>
<td>H315-H319-H335</td>
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<td>Lanthanum(III) nitrate hexahydrate</td>
<td>10277-43-7</td>
<td>8-36/37/38</td>
<td>17-26-36</td>
<td>GHS03, GHS07</td>
<td>H272-H315-H319-H335</td>
<td>P220-P261-P305 + P351 + P338</td>
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<td>Lutetium(III) acetate hydrate</td>
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<td>P261-P305 + P351 + P338</td>
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<td>Neodymium(III) chloride hydrate</td>
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<td>GHS07</td>
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<td>Potassium hexachlororhenate(IV)</td>
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<td>26-27-36/37/39-45</td>
<td>GHS05</td>
<td>H314</td>
<td>P280-P305 + P351 + P338-P310</td>
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<td>Praseodymium(III) chloride heptahydrate</td>
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<td>Samarium(III) acetate hydrate</td>
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<td>Samarium(III) nitrate hexahydrate</td>
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<td>P261-P305 + P351 + P338</td>
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<td>26</td>
<td>GHS07</td>
<td>H315-H319-H335</td>
<td>P261-P305 + P351 + P338</td>
<td>3</td>
</tr>
</tbody>
</table>
## Relevant R-phrase(s), S-phrase(s), GHS Pictogram(s), Hazard statement(s), and Precautionary statement(s)

### Risk Phrase(s)
- **R 8**: Contact with combustible material may cause fire
- **R 22**: Harmful if swallowed
- **R 34**: Causes burns
- **R 36/37/38**: Irritating to eyes, respiratory system and skin

### Safety Phrase(s)
- **S 17**: Keep away from combustible material
- **S 26**: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- **S 27**: Take off immediately all contaminated clothing
- **S 36**: Wear suitable protective clothing and seek medical advice
- **S 36/37/39**: Wear suitable protective clothing, gloves and eye/face protection
- **S 37/39**: Wear suitable gloves and eye/face protection
- **S 45**: In case of accident or if you feel unwell, see a medical advice immediately (show label where possible)

### GHS Pictogram
- **GHS03**: Flame over circle
- **GHS07**: Acute toxicity
- **GHS05**: Corrosion

### Hazard statement(s)
- **H272**: May intensify fire; oxidizer.
- **H302**: Harmful if swallowed.
- **H314**: Causes severe skin burns and eye damage.
- **H315**: Causes skin irritation.
- **H319**: Causes serious eye irritation.
- **H335**: May cause respiratory irritation.

### Precautionary statement(s)
- **P220**: Keep/Store away from clothing/.../combustible materials.
- **P261**: Avoid breathing dust/fume/gas/mist/vapours/spray.
- **P280**: Wear protective gloves/protective clothing/eye protection/face protection.
- **P310**: Immediately call a POISON CENTER or doctor/physician.
- **P305 + P351 + P338**: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### Kit Components

<table>
<thead>
<tr>
<th>Substance Name</th>
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<th>WKG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium tungstate dihydrate</td>
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<td>36</td>
<td>GHS07</td>
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<td>Ytterbium(III) chloride hydrate</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

For additional information, please refer to the individual Material Safety Data Sheets(s).
DISCLAIMER

• For R&D use only. Not for drug, household, or other use.

WARRANTY

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