1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance/preparation
2711A

Use of the substance/preparation
Test sample.

Version No.
02

CAS No.
Mixture

Product code
Part#: 130255/41990716

Manufacturer
Evident Scientific

Supplier
48 Woerd Ave. Waltham, MA 02453, USA

Address
+1 781-419-3900

Telephone
CHEMTREC

Emergency telephone number
US: 1-800-424-9300, International: +1 703-527-3887

2. HAZARDS IDENTIFICATION

Classification
Repr. Cat. 1; R61, R52/53

Physical hazards
Not classified as a physical hazard.

Health hazards
May cause harm to the unborn child.

Environmental hazards
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Specific hazards
Dusts may irritate the respiratory tract, skin and eyes.

Main symptoms
Dusts may irritate the respiratory tract, skin and eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>Percent</th>
<th>EC-No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead compounds</td>
<td>-</td>
<td>&lt; 1</td>
<td></td>
<td>Repr. Cat. 1; R61, R52/53</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact
Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact
Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth thoroughly. Get medical attention if symptoms occur.

Notes to physician
Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing agent suitable for type of surrounding fire.

Extinguishing media which must not be used for safety reasons
None known.

Unusual fire & explosion hazards
None known.

Specific hazards
During fire, gases hazardous to health may be formed.

Special protective equipment for fire-fighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Use water spray to cool unopened containers.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

6. ACCIDENTAL RELEASE MEASURES

Containment procedures
Prevent entry into waterways, sewer, basements or confined areas.
Personal precautions
Keep unnecessary personnel away. Keep upwind. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

Environmental precautions
Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

Methods for cleaning up
Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Handling
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Should be handled in closed systems, if possible. Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Pregnant or breastfeeding women must not handle this product. Wear appropriate personal protective equipment. Wash thoroughly after handling. Observe good industrial hygiene practices.

Storage
Store in a well-ventilated place. Store locked up. Store in original tightly closed container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead compounds (CAS -)</td>
<td>TWA</td>
<td>0.05 mg/m3</td>
</tr>
</tbody>
</table>

Egypt. OELs. Threshold limits of air pollutants in the workplace (Decree No. 388, Annex 8)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead compounds (CAS -)</td>
<td>TWA</td>
<td>0.05 mg/m3</td>
</tr>
</tbody>
</table>

South Africa. Control Limits. Regulations for Hazardous Chemical Substances, Table 1

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead compounds (CAS -)</td>
<td>TWA</td>
<td>0.15 mg/m3</td>
<td>Dust and fume.</td>
</tr>
</tbody>
</table>

Biological limit values

ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead compounds (CAS -)</td>
<td>300 µg/l</td>
<td>Lead</td>
<td>Blood</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

Recommended monitoring procedures

Additional exposure data
Not available.

Engineering measures
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.

Personal protective equipment

Respiratory protection
Wear respirator with dust filter.

Hand protection
Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Eye protection
Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin and body protection
Wear suitable protective clothing.

Environmental exposure controls
Environmental manager must be informed of all major releases.

Hygiene measures
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state
Solid.

Form
Powder.

Colour
Grey.
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point, initial boiling point, and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Combustion characteristics (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

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

**Conditions to avoid**
Avoid dust formation.

**Hazardous decomposition products**
Lead oxides.

**Stability**
Material is stable under normal conditions.

**Materials to avoid**

**Hazardous polymerisation**
No dangerous reaction known under conditions of normal use.

### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
May cause discomfort if swallowed.

**Routes of exposure**
Inhalation. Skin contact. Eye contact.

**Toxicological information**
Occupational exposure to the substance or mixture may cause adverse effects.

**Chronic toxicity**
Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

**Sensitisation**
Not classified.

**Carcinogenicity**
Risk of cancer cannot be excluded with prolonged exposure.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
| Lead compounds (CAS -) | 2A Probably carcinogenic to humans. |

**Mutagenicity**
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Teratogenicity**
Avoid exposure to women during early pregnancy.

**Reproductivity**
May damage fertility or the unborn child.

**Epidemiology**
No epidemiological data is available for this product.

**Local effects**
Inhalation of dusts may cause respiratory irritation.

**Symptoms and target organs**
Dusts may irritate the respiratory tract, skin and eyes.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Harmful to aquatic life with long lasting effects.

**Environmental effects**
Harmful to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Persistence and degradability**
No data available.

**Bioaccumulation**
No data available.

**Aquatic toxicity**
May cause long-term adverse effects in the aquatic environment.

**Mobility**
No data available.

**Other adverse effects**
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
13. DISPOSAL CONSIDERATIONS

**Disposal instructions**
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

**Waste from residues / unused products**
Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.

**Contaminated packaging**
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

**IATA**
Not regulated as dangerous goods.

**IMDG**
Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable.

15. REGULATORY INFORMATION

**Labelling**
Contains Lead compounds

Symbol(s)
Toxic

**R-phrase(s)**
R61 May cause harm to the unborn child.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S-phrase(s)**
S29 Do not empty into drains.
S36/37 Wear suitable protective clothing and gloves.
S53 Avoid exposure - obtain special instructions before use.
S60 This material and its container must be disposed of as hazardous waste.

Follow national regulation for work with chemical agents.

**Regulatory information**
Pregnant women should not work with the product, if there is the least risk of exposure.

16. OTHER INFORMATION

**Wording of the R-phrases in sections 2 and 3**
R20/22 Harmful by inhalation and if swallowed.
R33 Danger of cumulative effects.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61 May cause harm to the unborn child.
R62 Possible risk of impaired fertility.

**International Inventories**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
</tbody>
</table>

*"Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

**Recommended use**
Use in accordance with supplier’s recommendations.
Disclaimer

Evident Scientific cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Prepared by
Evident Scientific

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