Section 1 - Product and Company Information

Product Name               PLATINUM BLACK, 99.9+% , LOW BULK DENSITY
Product Number              520799
Brand                      ALDRICH
Company                     Sigma-Aldrich
Address                     3050 Spruce Street
                            SAINT LOUIS MO 63103 US
Technical Phone:            800-325-5832
Fax:                        800-325-5052
Emergency Phone:           314-776-6555

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATINUM</td>
<td>7440-06-4</td>
<td>No</td>
</tr>
</tbody>
</table>

Formula          Pt
Synonyms         C.I. 77795 * Liquid bright platinum * Platin (German) * Platinum (ACGIH) * Platinum Black * Platinum sponge
RTECS Number:    TP2160000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Possible sensitizer.

HMIS RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious
amounts of water.

**EYE EXPOSURE**

*In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.*

---

**Section 5 - Fire Fighting Measures**

**FLASH POINT**

N/A

**AUTOIGNITION TEMP**

N/A

**FLAMMABILITY**

N/A

**EXTINGUISHING MEDIA**

*Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.*

**FIREFIGHTING**

*Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.*

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**Section 6 - Accidental Release Measures**

**PROCEDURE(S) OF PERSONAL PRECAUTION(S)**

*Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.*

**METHODS FOR CLEANING UP**

*Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.*

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**Section 7 - Handling and Storage**

**HANDLING**

*User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.*

**STORAGE**

*Suitable: Keep tightly closed.*

---

**Section 8 - Exposure Controls / PPE**

**ENGINEERING CONTROLS**

*Safety shower and eye bath. Mechanical exhaust required.*

**PERSONAL PROTECTIVE EQUIPMENT**

*Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Hand: Protective gloves. Eye: Chemical safety goggles.*

**GENERAL HYGIENE MEASURES**
Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

<table>
<thead>
<tr>
<th>Country</th>
<th>Source</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>ACGIH</td>
<td>TWA</td>
<td>1 MG/M3 (METAL)</td>
</tr>
<tr>
<td>USA</td>
<td>MSHA Standard-air TWA</td>
<td>0.002 MG/M3</td>
<td></td>
</tr>
</tbody>
</table>

New Zealand OEL

Remarks: check ACGIH TLV

USA NIOSH TWA 1 MG/M3

Section 9 - Physical/Chemical Properties

Appearance: Physical State: Solid

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
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<td></td>
</tr>
<tr>
<td>pH</td>
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<td></td>
</tr>
<tr>
<td>BP/BP Range</td>
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<td></td>
</tr>
<tr>
<td>MP/MP Range</td>
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<td></td>
</tr>
<tr>
<td>Freezing Point</td>
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<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
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</tr>
<tr>
<td>Vapor Density</td>
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</tr>
<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>SG/Density</td>
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<tr>
<td>Bulk Density</td>
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<tr>
<td>Odor Threshold</td>
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<tr>
<td>Volatile%</td>
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<td></td>
</tr>
<tr>
<td>VOC Content</td>
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<td></td>
</tr>
<tr>
<td>Water Content</td>
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<td></td>
</tr>
<tr>
<td>Solvent Content</td>
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<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
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<td></td>
</tr>
<tr>
<td>Viscosity</td>
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<td></td>
</tr>
<tr>
<td>Surface Tension</td>
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<tr>
<td>Partition Coefficient</td>
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<tr>
<td>Decomposition Temp.</td>
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<tr>
<td>Flash Point</td>
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<tr>
<td>Explosion Limits</td>
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<tr>
<td>Flammability</td>
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<tr>
<td>Autoignition Temp</td>
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<tr>
<td>Refractive Index</td>
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<td>Optical Rotation</td>
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<tr>
<td>Miscellaneous Data</td>
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<tr>
<td>Solubility</td>
<td>N/A</td>
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</tr>
</tbody>
</table>

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Alcohols.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Platinum oxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

SENSITIZATION
Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

CHRONIC EXPOSURE - CARCINOGEN

Species: Rat
Route of Application: Implant
Dose: 5250 MG/KG
Result: Tumorigenic:Tumors at site or application.
Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.

Species: Mouse
Route of Application: Implant
Dose: 23 GM/KG
Result: Tumorigenic:Tumors at site or application.
Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Material in the elemental state should be recovered for reuse or recycling. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

US CLASSIFICATION AND LABEL TEXT
US Statements: Possible sensitizer.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in
accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

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

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.
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