# SAFETY DATA SHEET

**Date Printed:** 04/20/2024
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## SECTION 1. IDENTIFICATION

**Product Identifier:** Platinum Ruthenium on Compressed Carbon Black

**Product Code:** PTRU-ONCCB-01-P

**CAS Number:** 172515-31-0

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351
Emergency telephone number:
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable solids (Category 1), H228
Carcinogenicity (Category 2), H351
For the full text of the H-Statements mentioned in this Section, see Section 16.
2.2 GHS Label elements, including precautionary statements
Pictogram

Signal word Danger
Hazard statement(s)
H228 Flammable solid.
H351 Suspected of causing cancer.
Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
Synonyms : 20% Pt, 10% Ru on Vulcan XC72; 30% Pt-Ru/Vulcan
Formula : Pt/Ru
Hazardous components
Component Classification Concentration
Carbon black
CAS-No.
EC-No.
1333-86-4
215-609-9
Carc. 2; H351 >= 70 - < 90 %
Platinum
CAS-No.
EC-No.
7440-06-4
231-116-1
>= 20 - < 30 %
Ruthenium
CAS-No.
EC-No.
7440-18-8
231-127-1
Flam. Sol. 1; H228 >= 10 - < 20 %
For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4. FIRST AID MEASURES

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.Move out of dangerous area.
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
Flush eyes with water as a precaution.
If swallowed

Do NOT induce vomiting. 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
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
No data available

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## SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Carbon oxides, Ruthenium oxide
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
Use water spray to cool unopened containers.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate
ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing
and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed
containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing
and transfer to a container for disposal according to local regulations (see section 13).
6.4 Reference to other sections
For disposal see section 13.

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## SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.Keep away from sources of ignition - No
smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.
Keep in a dry place.
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component: Carbon Black
CAS: 1333-86-4
Value / Control Parameters / Basis
TWA / 3.500000 mg/m3 / USA. ACGIH Threshold Limit Values (TLV)
Remarks: Adopted values or notations enclosed are those for which changes are proposed in the NIC - See Notice of Intended Changes (NIC). Not classifiable as a human carcinogen
TWA / 3.500000 mg/m3 / USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TWA / 3.500000 mg/m3 / USA. NIOSH Recommended Exposure Limits
TWA / 0.100000 mg/m3 / USA. NIOSH Recommended Exposure Limits
Potential Occupational Carcinogen
Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)
See Appendix C
See Appendix A
TWA / 3.000000 mg/m3 / USA. ACGIH Threshold Limit Values (TLV)
Bronchitis
Confirmed animal carcinogen with unknown relevance to humans.

Component: Platinum
CAS: 7440-06-4
Value / Control Parameters / Basis
TWA / 1.000000 mg/m3 / USA. ACGIH Threshold Limit Values (TLV)
Upper Respiratory Tract irritation
Asthma
TWA / 1.000000 mg/m3 / USA. NIOSH Recommended Exposure Limits
TWA / 0.002000 mg/m3 / USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TWA / 1.000000 mg/m3 / USA. ACGIH Threshold Limit Values (TLV)
Upper Respiratory Tract irritation
Asthma

Hazardous components without workplace control parameters
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, Flame retardant antistatic protective 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
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Appearance
Form: powder
Colour: black
b) Odor: No data available
c) Odor Threshold: No data available
d) pH: No data available
e) Melting point/freezing point: No data available
f) Initial boiling point and boiling range: No data available
g) Flash point: No data available
h) Evaporation rate: No data available
i) Flammability (solid, gas): No data available
j) Upper/lower flammability or explosive limits: No data available
k) Vapor pressure: No data available
l) Vapor density: No data available
m) Relative density: No data available
n) Water solubility: No data available
o) Partition coefficient: noctanol/water: No data available
p) Auto-ignition temperature: > 140 °C (> 284 °F)
q) Decomposition temperature: No data available
r) Viscosity: No data available
s) Explosive properties: No data available
t) Oxidizing properties: No data available

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## SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.
10.5 Incompatible materials
Oxidizing agents, Alcohols, organic solvents
10.6 Hazardous decomposition products

Other decomposition products - No data available
In the event of fire: see section 5

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## SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
No data available
Inhalation: No data available
Dermal: No data available
No data available
Skin corrosion/irritation
No data available
Serious eye damage/eye irritation
No data available
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Carbon black)
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity
No data available
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
Additional Information
RTECS: Not available
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available
12.2 Persistence and degradability:
No data available
12.3 Bioaccumulative potential:
No data available
12.4 Mobility in soil:
No data available
12.5 Results of PBT and vPvB assessment:
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this
material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a
licensed professional waste disposal service to dispose of this material.
Contaminated packaging
Dispose of as unused product.

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## SECTION 14. TRANSPORT INFORMATION

DOT (US)
UN number: 1325 Class: 4.1 Packing group: II
Proper shipping name: Flammable solids, organic, n.o.s. (Carbon black, Platinum, Ruthenium)
Reportable Quantity (RQ):
Poison Inhalation Hazard: No
IMDG
UN number: 1325 Class: 4.1 Packing group: II EMS-No: F-A, S-G
Proper shipping name: FLAMMABLE SOLID, ORGANIC, N.O.S. (Carbon black, Platinum, Ruthenium)
IATA
UN number: 1325 Class: 4.1 Packing group: II
Proper shipping name: Flammable solid, organic, n.o.s. (Carbon black, Platinum, Ruthenium)

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## SECTION 15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De
Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Fire Hazard, Chronic Health Hazard
Massachusetts Right To Know Components
Carbon black
CAS-No.
1333-86-4
Revision Date
1991-07-01
Platinum 7440-06-4 1993-04-24
Pennsylvania Right To Know Components
Carbon black
CAS-No.
1333-86-4

Revision Date
1991-07-01
Platinum 7440-06-4 1993-04-24
Ruthenium 7440-18-8
New Jersey Right To Know Components
Carbon black
CAS-No.
1333-86-4
Revision Date
1991-07-01
Platinum 7440-06-4 1993-04-24
Ruthenium 7440-18-8
California Prop. 65 Components
WARNING! This product contains a chemical known to the State of California to cause cancer.
Carbon black
CAS-No.
1333-86-4
Revision Date
2003-02-21

## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements 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. 