

SAFETY DATA SHEET

Date Printed: 05/17/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: Platinum Ruthenium on Carbon Black

Product Code: PTRU-ONCB-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

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 $\geq 70 - < 90$ %

Platinum

CAS-No.

EC-No.

7440-06-4

231-116-1

$\geq 20 - < 30$ %

Ruthenium

CAS-No.

EC-No.

7440-18-8

231-127-1

Flam. Sol. 1; H228 $\geq 10 - < 20$ %

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

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

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.

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.

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

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.

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: octanol/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

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

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.

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

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.

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)

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. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.