



PAGE 1 of 5	PLATINUM METALS REFINERY
REVISION N°.: 3	HAZARD DATA SHEET – PLATINUM
Effective Date: 20/11/01	Document N°.: MSDS-Pt Software file: g:\quality\hds\msdspt
REVISED BY: IM BRATT	APPROVED BY: SNR OPERATIONS MANAGER – PMR

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: PLATINUM SPONGE

1. PRODUCT AND COMPANY IDENTIFICATION

Identification of the preparation:

Product name: Platinum sponge **Product code:** PT METAL

Chemical name: Platinum **Formula:** Pt

Company Identification:

Impala Platinum Limited – Refineries

Corner East Geduld Road & Cowles Street

P O Box 222, Springs 1560, South Africa

Tel.: +27 (0)11 360 3111, Fax: +27 (0)11 360 3202

Emergency telephone no.: Impala Platinum Refineries +27 (0)11 360 3777

Poison Centre - Tygerberg Hospital, Belville, Cape +27 (0)21 931 6129

2. COMPOSITION / INFORMATION ON INGREDIENTS

Major components:	Typical wt %:
Platinum	99.95-99.99%

3. HAZARDS IDENTIFICATION

Low toxicity

The product may cause adverse health effects with high-level dust generation – inhalation or prolonged skin contact. May form platinum salts on contact with acids.

4. FIRST AID MEASURES

Inhalation: If over exposure occurs leave exposure area immediately. If other than minor symptoms are displayed seek immediate medical attention

Ingestion: If poisoning occurs, contact a Doctor or Poisons Information Centre on +27-21-931-6129. Do not induce vomiting. Give a glass of water to drink. Seek urgent medical attention.

Skin: Gently flush affected areas with soap and water. Seek medical attention if irritation develops.

Eyes: Flush gently with running water for at least 15 minutes. Seek medical attention if irritation develops.

PAGE 2 of 5	Doc No: MSDS-Pt	PLATINUM METALS REFINERY
REVISION: 3	HAZARD DATA SHEET – PLATINUM	

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: does not burn
Extinguishing media not be used: not applicable
Special exposure hazards: none
Special protective equipment for fire-fighters: none

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: If spilt (bulk) wear goggles and PVC or rubber gloves. Where a dust inhalation hazard exists (i.e. when used in large quantities) wear a Class P1 (particulate) respirator.
Environmental precautions: Prevent this material from entering into surface waters.
Methods for cleaning-up: SOLID – sweep up and place in sealed container.
SOLUTION - Absorb with moist sand or similar and place in sealed containers for reprocessing or recovery.

7. HANDLING AND STORAGE

Handling: Avoid inhalation of dust or fumes. Avoid contact with skin or eyes. Use local ventilation which is adequate to limit exposure to levels not exceeding occupational exposure limits. Activities generating dust should be avoided.
Storage: Store in tightly sealed containers in a cool, dry and well-ventilated area removed from oxidising agents, acids and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit: (ACGIH, edition 1998)
TLV-TWA: Pt (metal/dust) 1mg/m³ Pt (soluble salts) 0.002mg/m³
Respiratory protection: Use an appropriate and approved respirator for toxic dust or fume if airborne concentration is likely to exceed the occupational exposure limits.
Hand protection: Wear suitable gloves (PVC or rubber)
Eye protection: Wear dust-proof goggles.
Skin protection: Safety shoes, overalls or similar full-body work clothes should be worn and laundered daily. This protective clothing should not be worn at home.
Personal Hygiene: Practice good housekeeping and personal hygiene procedures. No eating, drinking or smoking in work area. Wash hands thoroughly before eating, drinking or smoking. Avoid ingestion, inhalation and skin and eye contact. Medical examinations, monitoring, record keeping and hygiene facilities are recommended.

PAGE 3 of 5	Doc No: MSDS-Pt	PLATINUM METALS REFINERY
REVISION: 3	HAZARD DATA SHEET – PLATINUM	

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale gray coarse powder
Odour: Odourless
pH: not applicable
Boiling point / boiling range: 4530°C
Melting point / melting range: 1773°C
Flash point: not applicable
Flammability (solid, gas): non-flammable
Autoflammability: not applicable
Explosive properties: not applicable
Oxidizing properties: not applicable
Vapour pressure: unknown
Relative density: 21.4
Solubility : - **hydrosolubility:** insoluble in water
Liposolubility (solvent-oil): insoluble in solvent-oil
Partition coefficient (n-octanol/water): not applicable

10. STABILITY AND REACTIVITY

The material is : (*) **stable under normal circumstances**
 () **unstable under normal circumstances**
Conditions to avoid: Exposure to high temperatures, generation of dust.
Materials to avoid: Contact with acids.
Hazardous decomposition products: Nil

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Inhalation : Low irritant. Inhalation of dusts may result in upper respiratory tract irritation. Platinum metal poses a low hazard but platinum salts are potential irritants and sensitisers.

Ingestion : Non toxic. TDLo 9100mg/kg/26 weeks intermittently (rat)

Skin : Non-irritant. Platinum metal is relatively inert, though there has been one case of sensitisation. Direct contact with platinum salts may result in irritation and skin sensitisation.

Eyes : Irritant. Exposure may result in eye irritation, lachrymation, burning sensation and conjunctivitis.

CHRONIC TOXICITY

Chronic exposure to soluble complex platinum salts may result in allergy to complex salts of platinum (ACSOP). Symptoms include nose and throat irritation, sneezing, coughing, tight chest, breathing difficulties and sensitisation with asthma-like symptoms. If detected early symptoms subside on removal from exposure but effects can linger with chronic exposure.

Platinum salts are reported to cause lymphocytosis (a condition in which there is an excess of lymph cells in the body).

PAGE 4 of 5	Doc No: MSDS-Pt	PLATINUM METALS REFINERY
REVISION: 3	HAZARD DATA SHEET – PLATINUM	

IRRITATION / SENSITIZATION

Platinum metal is unlikely to cause irritation except as a dust. Platinum salts are irritating to eyes, skin and mucous membranes and may cause sensitization.

12. ECOLOGICAL INFORMATION

Mobility:

- Known or predicted distribution to environmental compartments: unknown
- Surface tension: not applicable
- Absorption / desorption: unknown

Degradability:

- Biotic and abiotic degradation: unknown
- Aerobic and anaerobic degradation: unknown
- Persistence: hazard of platinum persistency in the environment

Accumulation :

- Bioaccumulation potential: hazard of platinum accumulation
- Biomagnification: potential hazard of platinum magnification

Short and long term effects on :

Ecotoxicity:

- Aquatic organisms: unknown
- Soil organisms: unknown
- Plants and terrestrial animals: unknown

Other adverse effects :

- Ozone depletion potential: does not contain ozone depleting substances
- Photochemical ozone creation potential: not applicable
- Global warming potential: not applicable
- Effects on waste water treatment plants: unknown

13. DISPOSAL CONSIDERATIONS

Disposer must comply with state and local laws. This material can be metallurgically recycled by Impala Platinum, South Africa, which is a pre-authorized facility for the environmentally sound recovery of metals.

14. TRANSPORT INFORMATION

NOT REGULATED FOR TRANSPORT PURPOSES

Packing : in plastic bags sealed in tins which in turn are sealed in boxes

UN-Nr.: not applicable

IMDG-Code: not applicable

ICAO / IATA : not applicable

RID / ADR : not applicable

PAGE 5 of 5	Doc No: MSDS-Pt	PLATINUM METALS REFINERY
REVISION: 3	HAZARD DATA SHEET – PLATINUM	

15. REGULATORY INFORMATION

Danger symbol: classified as hazardous

Risk phrases: irritant; potential allergen (soluble salts)

Safety phrases :

S22 : do not breathe dust

S36 : wear suitable protective clothing

Labelling references:

Each box / container should be labelled as follows:

“WARNING ! MAY CAUSE ALLERGIC REACTION IF DISSOLVED IN ACIDS

Before use read Materials Safety Data Sheet.

If melted do not breathe furnace fume.

If dissolved do not breathe mists and avoid solution contact with eyes, skin and clothing.

If dissolved ensure adequate enclosure and/or ventilation.”

16. OTHER INFORMATION :

Hazard Information References :

- RTECS : Registry of toxic effects of Chemical Substances, NIOSH, edition January 1999

- Sax’s Dangerous Properties of Industrial Materials (8th edition), R J Lewis Sr.

Chem Alert Report : Platinum foil and wire

The buyer assumes all risks with the use and handling of the material.

The seller assumes no responsibility or liability in connection with the information supplied in this sheet or for any damage or injury caused by the material; reasonable safety procedures should be followed.

The seller assumes no responsibility for injury or damage caused by use of the material even if reasonable safety procedures are followed. The information contained in this sheet is developed from what is believed to be accurate and reliable sources but the seller makes no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.

Impala Platinum Ltd. have exercised reasonable care in the preparation of the information contained in this MSDS, however, it assumes no responsibility or liability to the accuracy and suitability of such information, for application to the Buyer’s intended purposes or consequences of its use. As regulatory standards and guideline recommendations are revised from time to time, Impala gives no assurance that the information contained in this MSDS will be current at the time that the MSDS is used. It is the responsibility of the Buyer/User to ensure that the most recent version of this document is available.

The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with other materials and in any process. Impala assumes no responsibility for any physical or chemical changes, which the Buyer/User may make to the material designated in this MSDS. Since use of this MSDS information and the opinions and conditions of the use of the product are not within the control of Impala Platinum Ltd., the Buyer/User is obligated to determine the conditions of safe use of the product.