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REVISION Nº.: 1

PRECIOUS METAL REFINERIES

IMPALA SPRINGS

ISSUED DATE: 9 September 2025

WORK PROCEDURE TASK **SAFETY DATA SHEET – PLATINUM**

SECTION: RUPT - VAULTS

DOCUMENT NO.: **SDS-015**

DISTRIBUTION CONTROL SHEET

Nº	LOCATION	TITLE
1	SHEQ Manger	SHEQ Manager (Electronic)
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Product code	:	Not applicable
Version	:	1
Date of issue	:	28/02/2020
Date of previous issue	:	No previous validation

SECTION 1: Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name	:	Platinum Sponge / Platinum Ingot
Synonyms	:	Impala Platinum. Platinum Metal
EC number	:	Not applicable
UK (GB) REACH Registration number	:	Not applicable
Legal Identity	:	Not Applicable
CAS number	:	Not applicable
Product code	:	Not applicable
Product type	:	Not applicable
Other means of identification	:	Not applicable

1.2. Relevant Relevant identified uses of the substance or mixture and uses advised against Specific uses

Manufactureof Platinum chemicals for use in catalysts, as metal and/or in alloys for jewellery, electrical contacts, thermocouples, medical and petroleum industries.

1.3. Details of the supplier of the safety data sheet

Supplier Name	:	Impala Platinum Ltd – Refineries
Address	:	Base Metals Refinery P.O. Box 222 SPRINGS 1560 GAUTENG Republic of South Africa
Contact Person (s)	:	Laboratory Manager – Jamie Welman Tel: +27 11 360 3255 E-mail: jamie.welman@implats.co.za
	:	Platinum Section Manager – Annelie Jager Tel: +27 11 360 3127 E-mail: annelie.jager@implats.co.za

1.4. Emergency telephone number

For emergency information – see above for Impala Platinum contacts.
South Africa Poisons Information Centre (24 hours) 0861-555-777 (South Africa only)

SECTION 2: Hazard Identification

2.1. Classification of the substance or mixture
GHS Classification (sans 10234)

Health Hazard:

Acute toxicity, oral	Category 1	H303	May be harmful if swallowed
Respiratory sensitisation	Category 1	H333	May be harmful if inhaled
Skin sensitisation	Category 1	H317	Prolonged skin contact may cause an allergic reaction

Environmental Hazard:

Category 1	H413	May cause long lasting harmful effects in aquatic life

Physical hazards: : Not classified for physical hazards

Health hazards: : May be harmful if swallowed and/or inhaled.
May cause skin irritation**.**

Environmental hazards : May cause long lasting adverse effects in aquatic environment.

Specific hazards : If dissolved, ensure adequate enclosure or ventilation do not breathe mists and avoid solution contact with eyes, skin and clothing – may cause sensitization or allergic reaction. If melted do not breath furnace fumes.

2.2. Label elements

Hazard Pictograms :

Signal word : *Danger*

Hazard statements : H303 – May be harmful if swallowed.
: H317 – May cause an allergic skin reaction.
: H333 – May be harmful if inhaled.

Precautionary statements
Prevention : P201 – Obtain special instructions before use.
: P202 – Do not handle until all safety precautions have been read and understood.
: P261 – Avoid breathing dust.
: P264 – Wash thoroughly after handling.
: P270 – Do not eat, drink or smoke when using this product.
: P273 – Avoid release to the environment.
: P280 – Wear protective gloves, protective clothing and eye protection.
: P285 – In case of inadequate ventilation wear respiratory protection.

Response : P330 – Rinse mouth
: P363 – Wash contaminated clothing before re-use.
: P302+P352 – IF ON SKIN: Wash well with plenty of soap and water.
: P308+P313 – If exposed or concerned get medical advice / attention.

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Response continues : P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

: P333+P313 – If skin irritation or rash occurs get medical advice / attention.

Storage : Not applicable.

Disposal : P501–Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label elements : Not applicable.

2.3. Other Hazards

: Take care when dissolving platinum metal / sponge.

: Ensure to get the necessary safety data for the specific salts in solution.

: Wear the required personal protective equipment when doing so.

SECTION 3: Composition / Information on Ingredients

3.1. Substances

Ingredient	:	Platinum
Formula	:	Pt
CAS Nº	:	7440-06-4
Poison Sched	:	None Allocated
Conc.Pt	:	≥99.95%
RTECS Nº	:	TP 2160000
EC No	:	231-116-1
ICSN N	:	1396
Hazchem	:	None Allocated
UN Nº	:	None Allocated
D.G.Class	:	None Allocated
PKG Group	:	None Allocated
EPG	:	None Allocated
Sub/Tert. Risk	:	None Allocated

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact : Flush gently with running water for a minimum of 15 minutes.
Seek medical attention if irritation develops.

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

Skin contact : Remove contaminated clothing and gently flush affected areas with soap and water.
Seek medical attention if irritation develops.
Launder clothing before re-use.

Ingestion : If ingestion occurs, contact the medical department / doctor for assistance.
First Aid Facilities : Eye wash facilities should be available.

SECTION 5: Firefighting measures

5.1. Fire Fighting

Flash Point	:	Not applicable
Flammable Limits	:	Not applicable
Auto-ignition Point	:	Not applicable
Fire Extinguishing Media	:	Not applicable
Special Fire Fighting Procedures	:	Not applicable
Hazardous Chemical Code	:	Non allocated

Note: Unlike some finely divided Platinum powder supplied by other companies the material supplied by Impala Platinum is non-flammable and therefore DOES NOT present a fire hazard.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear all necessary personal protective equipment for the specific environment and task.

6.2. Environmental precautions

Environmental precautions : May cause long harmful effects in aquatic life

6.3 Methods and material for containment and cleaning up

Sweep up

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Protective measures / Packing material : Packed in plastic bags sealed in tins which in turn are sealed I boxes.

Handling
: Before use, read the product label.
: Use safe work practices to avoid eye or skin contact and inhalation of dust or fumes.
: Observe good personal hygiene.
: Prohibit eating, drinking and smoking in contaminated areas (e.g. if container is damaged.)
: Wash hands before eating or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area, removed from oxidizing agents (e.g. hypochlorite's), acids (sulfuric acid), heat sources and foodstuffs.
Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.
Large storage areas should have appropriate ventilation systems.

Transport: : Not regulated for transport purposes.

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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Occupational Exposure Limit: (ACGIH, edition 2008)

Exposure limit values
TLV-TWA: Pt (metal/dust) 1mg/m^3 – Pt (soluble salts) 0.002mg/m^3

8.2. Exposure controls

Respiratory protection : Use an appropriate and approved respirator for dust 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.
: The 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.

Exposure Controls : Do not inhale dust / powder.
: Use with adequate natural ventilation.
: Where a dust inhalation hazard exists, mechanical extraction Ventilation is recommended.
: Maintain dust / fume levels below the recommended exposure standard.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1. Information on basic physical and chemical properties

Appearance	:	Pale Gray coarse powder that is both malleable and ductile
Odour	:	Odourless
Flammability (Solid, gs)	:	Non-Flammable
Flash Point	:	Not relevant
Lower Explosion Limit	:	Not relevant
Upper Explosion Limit	:	Not relevant
Auto Ignition Temperature	:	Not relevant
Boiling Point	:	3825ºC
Melting Point	:	1768 ºC
Evaporation Rate	:	Not relevant
pH	:	Not relevant
%Volatiles	:	Not relevant
Specific Gravity	:	21.45
Vapour Pressure	:	Not relevant

Relative density	:	2.1-2-8 (variable)
Solubility (water)	:	Insoluble
Molecular Weight	:	195.08g/mole
Pt concentration	:	≥99.95%

SECTION 10: Stability and reactivity

10.1. Reactivity

The material is stable under normal circumstances. When exposed to air, it does not tarnish or corrode. It is not attacked by most acids but will dissolve in aqua regia. Aqua regia is a mixture of hydrochloric and nitric acids. Platinum also dissolves in very hot alkalis e.g. sodium hydroxide.

10.2. Chemical stability

The material is stable under normal circumstances.

10.3. Possibility of hazardous reactions

No specific data.

10.4. Conditions to avoid

Avoid contact with acids.

10.5. Incompatible materials

No specific data.

10.6. Hazardous decomposition products

Exposure to high temperatures (>1000 ºC), generation of dust. Will evolve toxic metal oxides when heated to decomposition.

10.7. Flammability

Non-flammable. May evolve toxic metal oxides when heated. Vey fine dusts may explode in very high concentrations if exposed to high energy heat or ignition sources (highly unlikely in current form). May evolve flammable-explosive hydrogen gas in contact with strong acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Health Hazard Summary:	:	*Platinum dust and some compounds can have mild health effects.*
	:	*If inhaled, they can cause sneezing, irritation of the nose, and shortness of breath.*
	:	*If spilled on the skin, they can cause a rash and skin irritation.*
***Eye**:*	:	*Irritant*
	:	*Exposure may result in eye irritation, lachrymation, burning sensation and conjunctivitis.*
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 sensitizers.
Skin Irritation:	:	Non-irritant
	:	Platinum metal is relatively inert, though there has been one case of sensitization.

Skin irritation continues : Direct contact with platinum **salts** may result in irritation and skin sensitization.

Respiratory or Skin Sensitization

Non-irritant: : 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.

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 sensitization 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.

Reproductive Cell Mutagenicity

The effects of Platinum salts have not been fully investigated.

Carcinogenicity

Conclusion / summary : Non-carcinogenic: Platinum salts are listed as a non-carcinogenic in (all U.S.)

(i) in the National Toxicity Program (NTP) Report of Carcinogens.
(ii) in the International Agency for Research on Cancer (IARC) monographs.
(iii) by the Occupation Safety and Health Administration (OSHA).

Reproductive toxicity – Platinum Salt

Maternal toxicity	***Fertility***	***Developmental toxin***	***Species***	***Dose***	***Exposure***
Positive	-		Pregnant woman	-	-

Conclusion / summary : May cross the placenta and affect the foetus.
: Pregnant women should avoid contact with Platinum **salt.**
: Effect have not been fully investigated.

Teratogenicity

Conclusion / summary : Not classified

Platinum **salts** may cause possible lung and kidney damage. However, the effects have not been fully investigated.

Specific target organ toxicity (repeated exposure)

Platinum **salts** may cause possible lung and kidney damage. However, the effects have not been fully investigated.

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SECTION 12:Ecological information

13.1. Toxicity

Platinum Sponge toxicity

Result	Species	Exposure
LC50 2.5 mg/l	Fish	96 hours
LC50 Scud 0.11mg/l	Scud	96 hours
EC50 0.82mg/l	Daphnia	48 hours
EC50 0.25 mg/l	Bacteria	
Unknown	Soil Organisms	
Unknown, no data available	Plants and terrestrial animals	

Conclusion / Summary : Due to the very low solubility of Platinum sponge it does not directly pose any ecological threat.
However, if converted to soluble Platinum salts it may have the following effects

Aquatic organisms: : Very toxic to aquatic organism.
May cause long term adverse effects in the aquatic.

13.2. Persistence and degradability

Conclusion / summary : Hazard of platinum persistency in the environment

13.3. Bioaccumulate potential

Conclusion / summary : Hazard of Platinum accumulation

13.4. Mobility in soil

Mobility : Unknown

13.5. Other adverse effects

Biomagnification: : Potential hazard of platinum magnification
Biodegradability: : No information available
Ozone depletion potential: : does not contain ozone depleting substances.
Photochemical ozone creation potential: : Not applicable
Global warming potential: : Not applicable
Effects on wastewater treatment plants: : Unknown; no data available

The environmental effects of Platinum and its compounds have not been fully evaluated.

SECTION 13:Disposal considerations

13.1. Waste treatment methods

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

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: Collect and re-use where possible.
: Minimise dust generation.
: Contact Impala Refineries Laboratory Manager on +27 11 360 3255 or Platinum Section Manager on +27 360 3127.

Legislation: : Dispose of in accordance with relevant local legislation.

SECTION 14:Transport information

14.1. UN number

ADR/RID	ADN	IMDG	IATA
N/A	N/A	N/A	N/A

Not classified as a dangerous good
Not regulated for Transport Purposes

Packing: In plastic bags sealed in tins which in turn are sealed in boxes
IMDG-Code: Not applicable
ICAO / IATA: Not applicable
RID / ADR: Not applicable

SECTION 15:Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

United States: CERCLA Sections: 102a/103 (40 CFR 302.4); Nor regulated
Canada: WHMIS Classification: D2B (tox material)
EU/EC Classification: XN (Harmful), not classified in Annex I of Directive 67/548/EEC (will change with implementation of GHS/REACH).

15.2 Chemical Safety Assessment

Regulation
EC no. 1907/2006 of the European Parliament and the Council of December 2006.

SECTION 16:Other information

Abbreviations and acronyms :

mg/m³ : : milligrams per cubic metre
ppm: : parts per million
TWA/ES: : Time Weighted Average of Exposure Standard
pH: : Relates to hydrogen ion concentration – this value will relate to a scale of 0-14, where 0 is highly acidic and 14 is highly alkaline.
CAS Nº: : Chemical Abstract Service number – used to uniquely identify chemical compounds.
M: : Moles per litre, a unit of concentration.
IARC: : International Agency for Research on Cancer.
RTECS: : The Registry of Toxic Effects of Chemical Substances.
ICSC: : International Chemical Safety Card.
EC No: : European Commission Number
EU: : European Union
AUS: : Australia

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Health Effect from Exposure: : It should be noted that the effects from exposure to this will depend on sever factors including:
: Frequency and duration of use
: Quantity used
: Effectiveness of control measures
: Protective equipment used and method of application.
: Given that it is impractical to prepare a Chem Alert report which encompasses all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

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Hazzard information References:

RTECS: Registry of toxic effects of Chemical Substances, NIOSH, edition January 1999
Sax's Dangerous Properties of Industrial Material (8th edition), R J Lewis Sr.
Material Safety Data Sheet: Platinum Standard solution National Institute of Standards and Technology (USA) August 2006
Screening of Platinum Group Metals; Pt, Rh, Pd SWECO VIAK Screening Report 2007: 2 (For Swedish Environmental Protection Agency).
ECOTOX database, http://cfpub.epa.gov/ecotox
ENVIRONMENTAL HEALTH CRITERIA 125 Platinum WHO:
http://www.inchem.org/documents/ehc/ehc/ehc125.htm

Report Status:

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