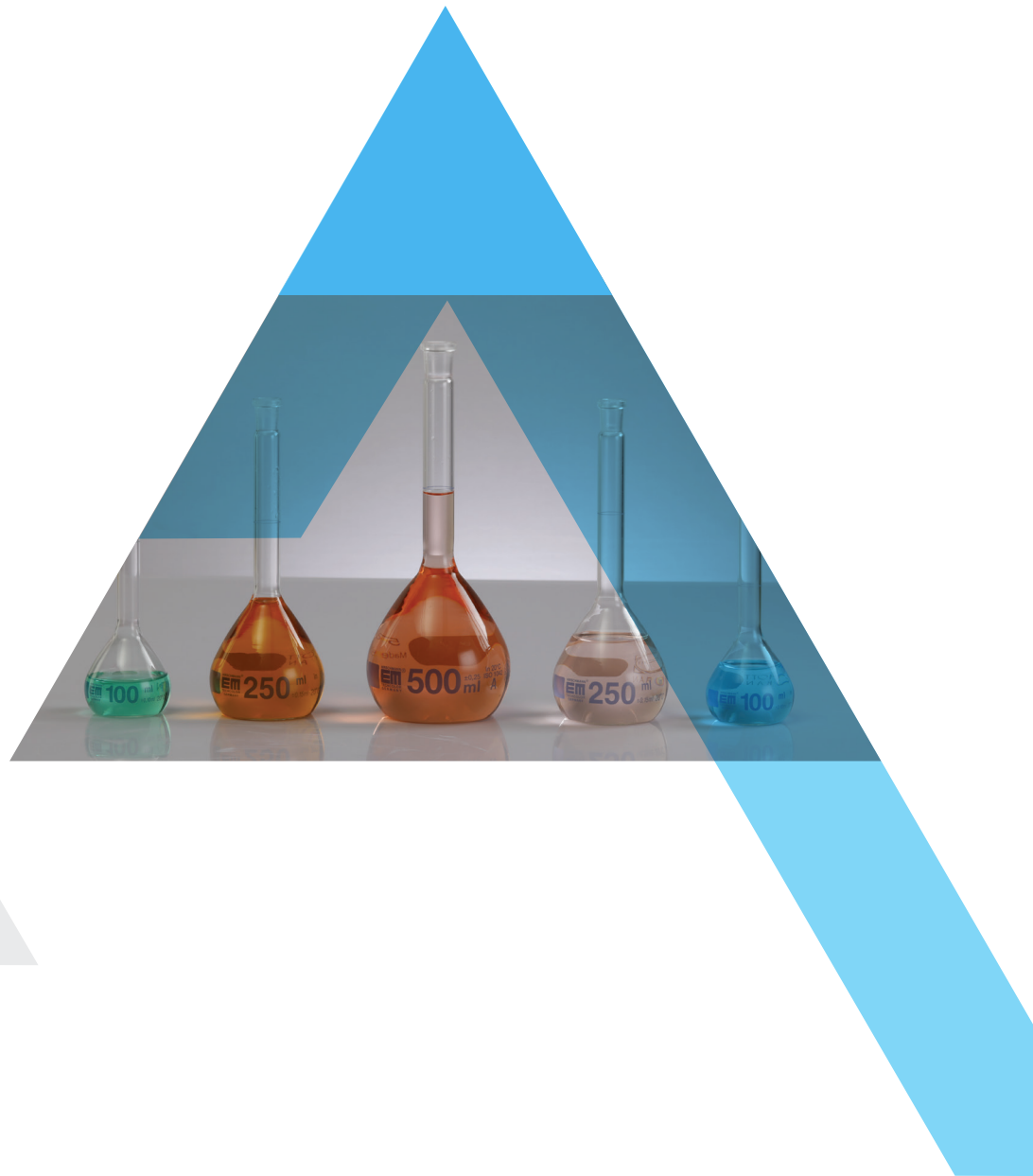




Hindustan Platinum

Precious Metal Salts and Solutions





Hindustan Platinum



REFINING SERVICES | CATALYST & CHEMICALS | ELECTRICAL CONTACTS | NITRO TECHNOLOGIES | ENGINEERED PRODUCTS





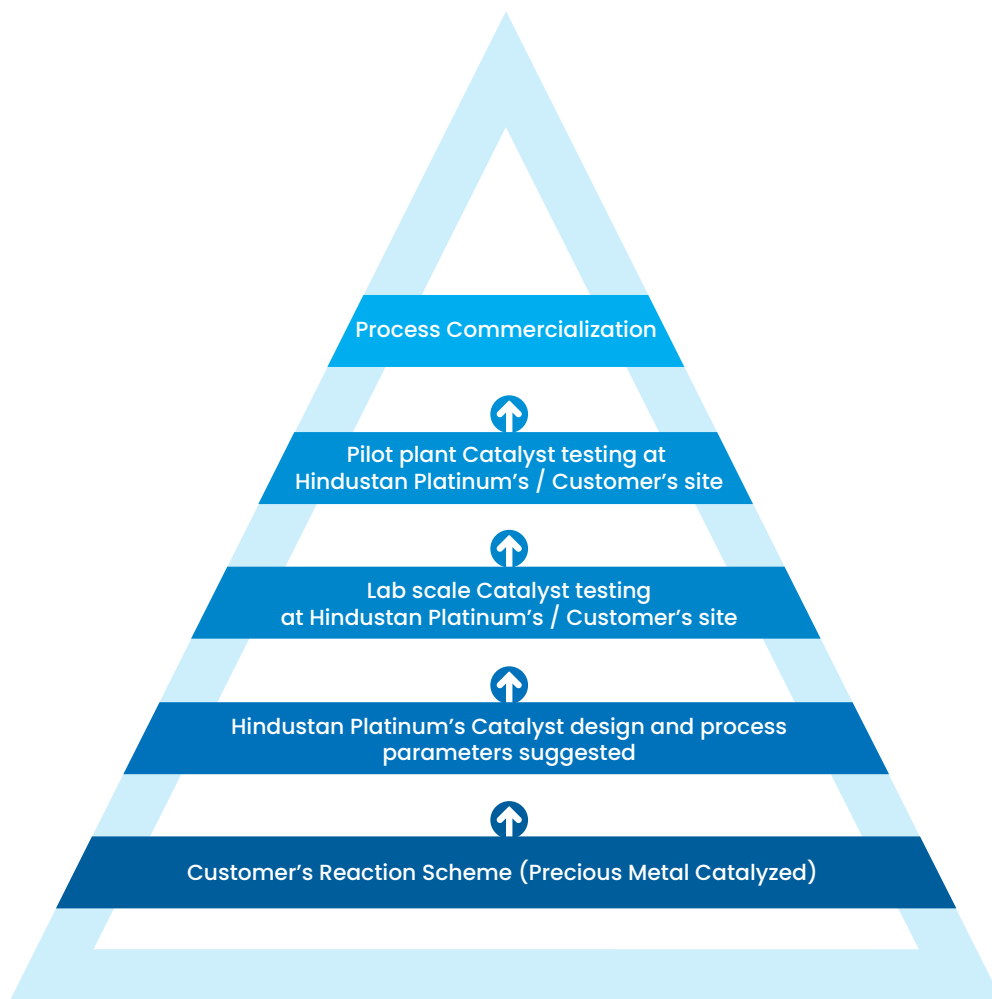
Hindustan Platinum

Founded in 1961, Hindustan Platinum has emerged as a premier manufacturer and refiner of precious metal products that find versatile industrial applications. Over six decades, Hindustan Platinum has cultivated a substantial customer base spanning across India, the USA, Europe, the UK, and Asia. With a global reach, the company has established itself as a key player in the precious metal products, processes, and services industry, offering a comprehensive spectrum from catalyst manufacturing to PGM refinery.

Hindustan Platinum oversees the retrieval of precious metals, starting from the moment we receive used catalysts until we deliver the recovered metals. We conduct a monthly inventory assessment for our clients, enabling them to stay informed about their stock levels. This approach also grants our clients the flexibility to utilize the provided metal for various applications, subsequently reducing the stock they need to maintain on their premises.

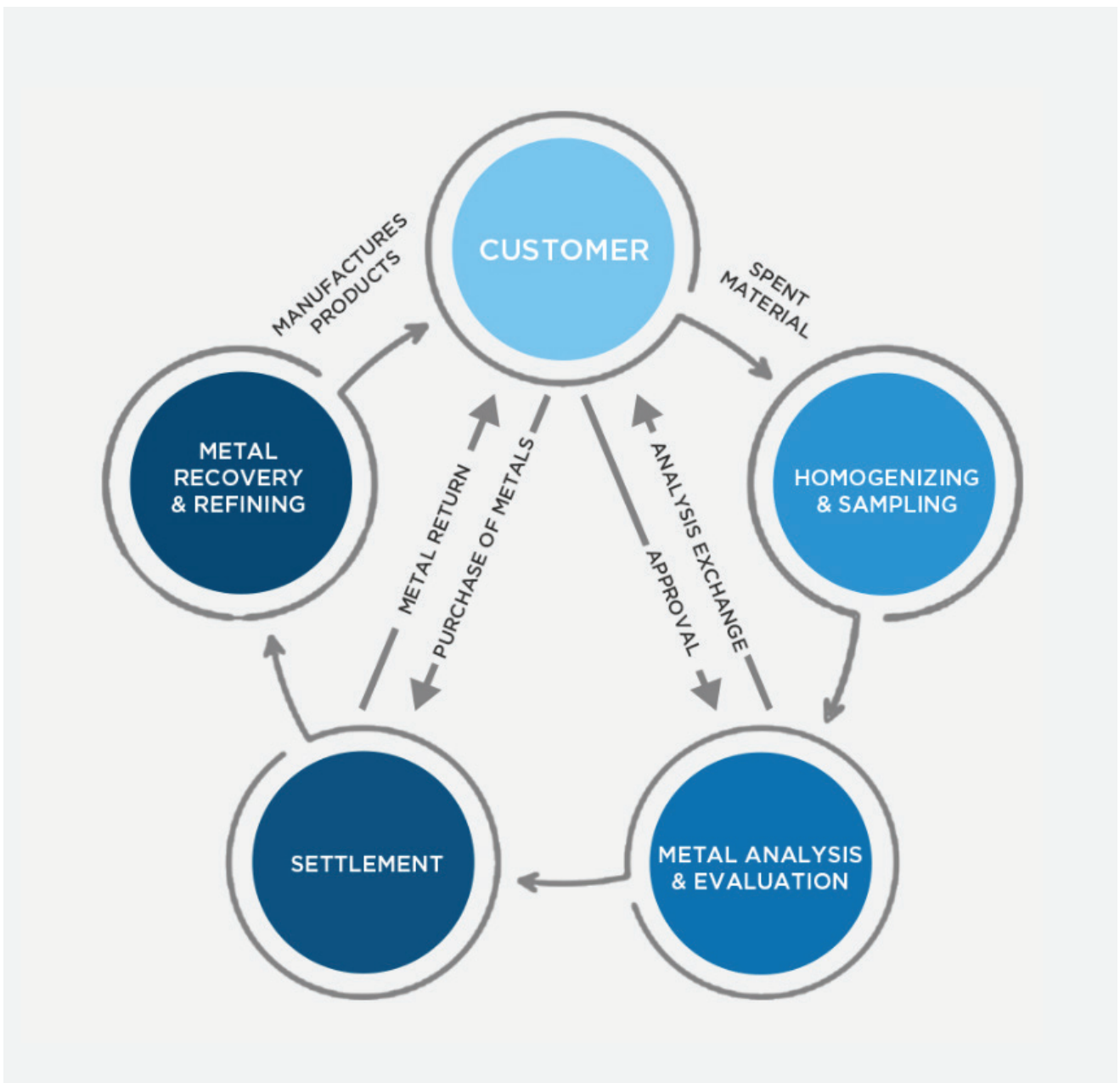
Catalyst Development Process

Hindustan Platinum collaborates closely with customers while maintaining strict confidentiality to create products that align with market demands. The catalyst development process is outlined below.



Recovery Cycle of Precious Metals

Hindustan Platinum monitors recovery of precious metals, from the time we receive used catalysts to the time we supply back recovered metals. A monthly check-up of the client's inventory allows customers to be up to date with their stock. This also gives clients, the flexibility to use the given metal for multiple products thereby reducing stock held at their end.



PRECIOUS METAL SALTS AND SOLUTIONS

Platinum



Sr. No	Product Name	CAS	Mol. Form	Mol. Wt.	% Metal Content	Properties
1.	Ammonium hexachloroplatinate(IV)	16919-58-7	$(\text{NH}_4)_2\text{PtCl}_6$	443.89	43.95	Slightly soluble in water
2.	Ammonium tetrachloroplatinate(II)	13820-41-2	$(\text{NH}_4)_2\text{PtCl}_4$	372.98	52.29	Water
3.	Dihydrogen hexachloroplatinate (IV)	26023-84-7	$\text{H}_2\text{PtCl}_6 \cdot 6\text{H}_2\text{O}$	409.82		Water, acetone, alcohol
4.	Iodotrimethylplatinum (IV)	14364-93-3	$(\text{CH}_3)_3\text{PtI}$	367.09	53.1	
5.	Platinum chloride (II)	10025-65-7	PtCl_2	266	73	HCl, NH_4OH
6.	Platinum chloride (IV)	13454-96-1	PtCl_4	336.9	57.9	H_2O , HCl, acetone
7.	Platinum (IV) oxide	1314-15-4	$\text{PtO}_2 \cdot x\text{H}_2\text{O}$	227.09	80-84	
8.	Potassium tetrachloroplatinate	10025-99-7	K_2PtCl_4	415.11	46.99	Water
9.	Sodium hexachloroplatinate (IV)	19583-77-8	$\text{Na}_2\text{PtCl}_6 \cdot 6\text{H}_2\text{O}$	453.79	34	Water, acetone, alcohol
10.	Tetraammineplatinatate (II) chloride	13933-32-9	$\text{Pt}(\text{NH}_3)_4\text{Cl}_2 \cdot \text{H}_2\text{O}$	334.11	55.4	Water
11.	Platinum Nitrate Solution		$\text{Pt}(\text{NO}_3)_4$		100-300 gm/kg	Air, light and heat Sensitive
12.	Karstedt catalyst 1% Pt solution in Toluene	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.01	Air, light and heat Sensitive
13.	Karstedt catalyst 3% Pt solution in Toluene	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.03	Air, light and heat Sensitive
14.	Karstedt catalyst 5% Pt solution in Toluene	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.05	Air, light and heat Sensitive
15.	Karstedt catalyst 1% Pt solution in Xylene	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.01	Air, light and heat Sensitive
16.	Karstedt catalyst 3% Pt solution in Xylene	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.03	Air, light and heat Sensitive
17.	Karstedt catalyst 5% Pt solution in Xylene	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.05	Air, light and heat Sensitive
18.	Karstedt catalyst 1% Pt solution in Hexane	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.01	Air, light and heat Sensitive
19.	Karstedt catalyst 3% Pt solution in Hexane	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.03	Air, light and heat Sensitive
20.	Karstedt catalyst 5% Pt solution in Hexane	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.05	Air, light and heat Sensitive
21.	Karstedt catalyst 2% Pt solution in Toluene	68478-92-2	$\text{Si}[(\text{CH}_3)_2\text{CH}-\text{CH}_3]_2$		0.02	Air, light and heat Sensitive
22.	NEW Platinum Sulfite Acid (PSA) 15% W/W	61420-92-6	$\text{H}_4\text{O}_2\text{PtS}_2$		0.15	Air, light and heat Sensitive

Palladium

Sr. No	Product Name	CAS	Mol. Form	Mol. Wt.	% Metal Content	Properties
1.	Trans - Dichlorodiammine palladium (II) Chloride	14323-43-4	$\text{Pd}(\text{NH}_3)_2\text{Cl}_2$	211.37	50.3	NH_4OH
2.	Diamminepalladium (II) nitrite	14852-83-6	$(\text{NH}_3)_2\text{Pd}(\text{NO}_2)_2$	232.47	46	
3.	Palladium (II) chloride	7647-10-1	PdCl_2	177.31	60	dil. HCl
4.	Potassium hexachloropalladate (IV)	16919-73-6	K_2PdCl_6	397.32	26.8	Slightly soluble in HCl
5.	Palladium (II) nitrate	10102-05-3	$\text{Pd}(\text{NO}_3)_2 \cdot x\text{H}_2\text{O}$	230.43	46.18	ddl, HNO_3
6.	Palladium (II) oxide	1314-08-5	PdO	122.4	87	48% HBr
7.	Potassium tetrachloropalladate (II)	10025-98-6	K_2PdCl_4	326.42	32.59	Water
8.	Potassium tetracyanopalladate (II)	14516-46-2	$\text{K}_2[\text{Pd}(\text{CN})_4] \cdot 3\text{H}_2\text{O}$	288.68	31.1	
9.	Sodium tetrachloropalladate (II)	13820-52-6	$\text{Na}_2\text{PdCl}_4 \cdot x\text{H}_2\text{O}$	294.2	36.17	Water, $\text{C}_2\text{H}_5\text{OH}$
10.	Palladium Nitrate Solution		$\text{Pd}(\text{NO}_3)_2$		50-150 gm/kg	

Rhodium

Sr. No	Product Name	CAS	Mol. Form	Mol. Wt.	% Metal Content	Properties
1.	Ammonium hexachlororhodate (III)	15336-18-2	$(\text{NH}_4)_3\text{RhCl}_6 \cdot x\text{H}_2\text{O}$	369.74	27.83	Water
2.	Potassium hexachlororhodate (III)	13845-07-3	K_3RhCl_6	432.93	23.77	
3.	Rhodium (II) acetate, dimer	15956-28-2	$[\text{Rh}(\text{CO}_2\text{CH}_3)_2]_2$	441.99	46.57	Water
4.	Rhodium (III) chloride	20765-98-4	$\text{RhCl}_3 \cdot x\text{H}_2\text{O}$	209.26	39	Water, Alcohol, HCl
5.	Rhodium (III) sulphate 10% solution	10489-46-0	$\text{Rh}_2(\text{SO}_4)_3$	494	41.66	
6.	Rhodium octanoate dimer	73482-96-9	$[\text{Rh}(\text{C}_7\text{H}_{15}\text{COO})_2]_2$	778.62	26.46	Hot Alcohol, CH_2Cl_2 , Toluene, Acetic Acid
7.	Rhodium Nitrate Solution	*	$\text{Rh}(\text{NO}_3)_3$		70-100 gm/kg	Air, light and heat Sensitive
8.	Rhodium Iodide	15492-36-3	RhI_3	483.62	0.212	Air, and moisture Sensitive

Iridium

Sr. No	Product Name	CAS	Mol.Form	Mol. Wt.	% Metal Content	Properties
1.	Ammonium hexachloroiridate (III)	15752-05-3	$(\text{NH}_4)_3\text{IrCl}_6 \cdot x\text{H}_2\text{O}$	459.06	41.9	
2.	Iridium chloride hydrate	14996-61-3	$\text{IrCl}_3 \cdot x\text{H}_2\text{O}$	298.58	64.4	Water, Alcohol
3.	Iridium (IV) oxide	12030-49-8	IrO_2	224.2	85.7	
4.	Sodium hexachloroiridate (III)	123334-23-6	$\text{Na}_3\text{IrCl}_6 \cdot x\text{H}_2\text{O}$	473.89	40.6	
5.	Potassium hexachloroiridate (IV)	16920-56-2	K_2IrCl_6	483.12	39.8	
6.	Iridium Acetate Solution 5-% W/W	52705-52-9	$\text{C}_{14}\text{H}_{24}\text{Ir}_3\text{O}_{18}$		5	Air, light and heat Sensitive

Gold

Sr. No	Product Name	CAS	Mol.Form	Mol. Wt.	% Metal Content	Properties
1.	Ammonium tetrachloroaurate (III)	13874-04-9	$(\text{NH}_4)\text{AuCl}_4 \cdot x\text{H}_2\text{O}$	356.82	55.2	Water, Alcohol
2.	Gold (I) chloride	10294-29-8	AuCl	232.42	84.75	
3.	Gold (I) cyanide	506-65-0	AuCN	222.98	88.33	
4.	Hydrogen tetrachloroaurate (III)	27988-77-8	$\text{HAuCl}_4 \cdot x\text{H}_2\text{O}$	339.79	50	HNO_3
5.	Sodium tetrachloroaurate (III)	13874-02-7	$\text{NaAuCl}_4 \cdot 2\text{H}_2\text{O}$	361.77	49.5	Water, Alcohol, Ether
6.	Potassium tetrachloroaurate (III)	13682-61-6	KAuCl_4	377.88	52.1	Water

Ruthenium

Sr. No	Product Name	CAS	Mol.Form	Mol. Wt.	% Metal Content	Properties
1.	Potassium pentachlororuthenate (III)	14404-33-2	$\text{K}_2\text{RuCl}_5 \cdot x\text{H}_2\text{O}$	356.54	28.3	
2.	Ruthenium (III) Chloride	14898-67-9	$\text{RuCl}_3 \cdot x\text{H}_2\text{O}$	207.43	38- 43	Water, Alcohol
3.	Ruthenium (III) Chloride	13815-94-6	$\text{RuCl}_3 \cdot x\text{H}_2\text{O}$	261.46	38.66%	Air Sensitive and Hygroscopic
4.	Ruthenium oxide (55%)	12036-10-1	$\text{RuO}_2 \cdot x\text{H}_2\text{O}$	133.07	55.00%	
5.	Ruthenium oxide (39%)	12036-10-1	$\text{RuO}_2 \cdot x\text{H}_2\text{O}$	133.07	39.00%	
6.	NEW Ruthenium Acetate 5%W/W Solution	55466-76-7	$\text{Ru}(\text{OAC})_n$		0.05	Air, light and heat Sensitive
7.	Ammonium Perrhenate	13598-65-7	NH_4ReO_4	268.23	69.4	

Silver Solutions

Sr. No	Product Name	CAS	Mol.Form	Mol. Wt.	% Metal Content	Properties
1.	Silver bromide	7785-23-1	AgBr	187.78	57.44	Partially soluble in NH_3
2.	Silver (I) chloride	7783-90-6	AgCl	143.32	75.26	NH_3 , alkali cyanide
3.	Silver (I) fluoride	7775-41-9	AgF	126.87	85	HF , NH_3 , CH_3CN
4.	Silver (I) iodide	7783-96-2	AgI	234.77	45.95	Wkali cyanides & iodides
5.	Silver (I) nitrate	7761-88-8	AgNO_3	169.87	63.5	Water, alcohol
6.	Silver (I) oxide	20667-12-3	Ag_2O	231.74	93	dil. HNO_3 , NH_3
7.	Silver powder	7440-22-4	Ag	107.86	99.99	dil. HNO_3
8.	Silver acetate	563-63-3	AgCOOCH_3	168.9	64.63	dilute nitric acid
9.	Silver lactate	128-00-7	$\text{AgCOOCH}(\text{OH})\text{CH}_3$	197.7	50-55	Water
10.	Silver carbonate	534-16-7	Ag_2CO_3	275.75	78.23	all acids

Pure Metals

Sr. No	Product Name	CAS	Mol.Form	Mol. Wt.	% Metal Content	Properties
1.	Platinum black	07440-06-4	Pt	195.08	98	
2.	Platinum sponge	07440-06-4	Pt	195.08	99.95+	Aquaregia
3.	Palladium black	07440-05-3	Pd	106.4	98	
4.	Palladium sponge	07440-05-3	Pd	106.4	99.95+	
5.	Rhodium black	7440-16-6	Rh	102.9	98	
6.	Rhodium sponge	7440-16-6	Rh	102.9	99.9+	
7.	Iridium black	7439-88-5	Ir	192.22		
8.	Iridium sponge	7439-88-5	Ir	192.22	99.9	
9.	Gold powder	7440-57-5	Au	196.97	99.95+	
10.	Silver powder	7440-22-4	Ag	107.86	99.99	dil. HNO_3
11.	Ruthenium black	7440-18-8	Ru	101.07		
12.	Ruthenium powder	7440-18-8	Ru	101.07	99.9	



Hindustan Platinum

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