

HOMOGENEOUS PALLADIUM CATALYSTS

| Grades | Catalyst | CAS No. |
|-----------|--|------------|
| NCAT 1001 | Palladium (II) Oxide | 1314-08-5 |
| NCAT 1002 | Palladium (II) Chloride | 7647-10-1 |
| NCAT 1003 | Palladium (II) Nitrate Solution | 10102-05-3 |
| NCAT 1004 | Palladium (II) Acetate | 3375-31-3 |
| NCAT 1005 | Chlorobis Trans-Dichlorobis (Tris Triphenylphosphine) Palladium (II) | 13965-03-2 |
| NCAT 1006 | Tetrakis (Tris Triphenylphosphine) Palladium (0) | 14221-01-3 |
| NCAT 1007 | Palladium Acetylacetonate | 14024-61-4 |
| NCAT 1008 | Pddppf [1,1'-Bis (diphenylphosphino)ferrocene] dichloropalladium (II) | 72287-26-4 |
| NCAT 1009 | Pddppf. DCM Complex [1,1'-Bis (diphenylphosphino)ferrocene] dichloropalladium (II) DCM complex | 95464-05-4 |

SAFETY & STORAGE

- Always wear safety Apparels(Safety Goggles, Hand gloves, Face shield, helmet and Safety shoes)
- Always store in cool & shaded place, away from solvent & acid fumes.
- Ensure that the material remains in sealed condition, after removal of part catalyst.
- Ensure removal of organic solvents from Spent catalyst and ensure adequate washing with water
- Spent catalyst should be stored in HDPE drums and in a separate demarcated area properly labeled with details including inputs. (Do not use paper or corrugated boxes for storage).
- Ensure the spent catalyst drums are properly labeled & sealed during transportation.

HANDLING TIPS

- Check & ensure the reactor is clean & purged with Nitrogen
- Employ engineering & environmental controls – probes, alarms etc.
- Check all the pressure regulators, valves etc. are leak proof
- Plan, train & communicate adequately

HOMOGENEOUS PLATINUM CATALYSTS

| Grades | Catalyst | CAS No. |
|-----------|---|------------|
| NCAT 2001 | Platinum (IV) Oxide | 52785-06-5 |
| NCAT 2002 | Platinum (IV) Oxide Anhydrous | 1314-15-4 |
| NCAT 2003 | Di Hydrogen Hexachloro Platinate (IV) Hydrate (Chloroplatinic Acid Hydrate) | 26023-84-7 |
| NCAT 2004 | Platinum Tetrachloride | 13454-96-1 |
| NCAT 2005 | Tetra-ammine Platinum (II) Chloride solution "TPC Pt" | 13933-32-9 |
| NCAT 2006 | Potassium Tetrachloro Platinate (II) [PTCP] | 10025-99-7 |
| NCAT 2007 | Pt-A Salt Solution Bis (Ethanol Ammonium) Hexa Hydroxo Platinum | 68133-90-4 |
| NCAT 2008 | Karstedt's Catalyst Divinyl Tetramethyl Disiloxane Pt (0) | 68478-92-2 |

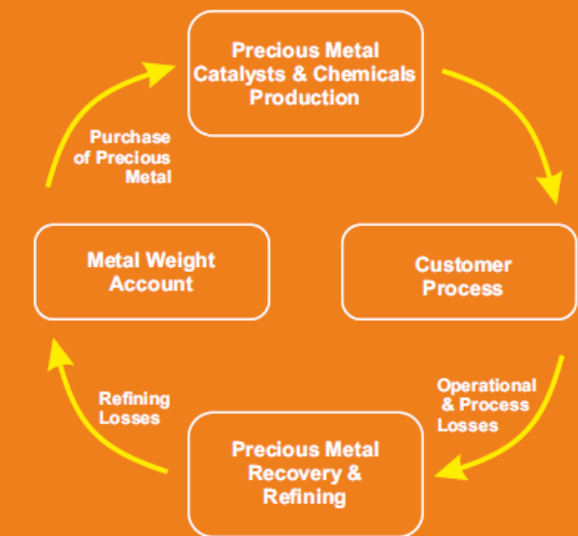
HOMOGENEOUS RUTHENIUM CATALYSTS

| Grades | Catalyst | CAS No. |
|-----------|---|-------------|
| NCAT 3001 | Ruthenium (III) Chloride Hydrate | 14898-67-0 |
| NCAT 3002 | Ruthenium Acetylacetonate | 14284-93-6 |
| NCAT 3003 | Triruthenium dodecacarbonyl | 15243-33-1 |
| NCAT 3004 | Dichloro(1,5-cyclooctadiene) ruthenium(II), Polymer | 50982-12-2 |
| NCAT 3005 | Ru Binap complex Diacetato((R)-(+)-2,2'- bis(diphenylphosphino)-1,1'- binaphthyl)ruthenium(II) | 325146-81-4 |

HOMOGENEOUS RHODIUM CATALYSTS

| Grades | Catalyst | CAS No. |
|-----------|-------------------------------|------------|
| NCAT 4001 | Rhodium(III) Chloride Hydrate | 20765-98-4 |
| NCAT 4002 | Rhodium(II) Acetate Dimer | 15956-28-2 |
| NCAT 4003 | Rhodium(II) Octanoate Dimer | 73482-96-9 |

PRECIOUS METAL CYCLE



- We offer the best recoveries in the industry from precious metal spent as well as spent from homogeneous catalysts.
- We also recover Ru and Rh from homogeneous and heterogeneous catalyst spent.
- We can provide high purity(>99.95%) precious metals and precious metal salts.