

SAFETY DATA SHEET

SECTION 1: PRODUCT & COMPANY IDENTIFICATION

1.1	Product description	:	PRECIOUS METAL CATALYST
1.2	Grade Name	:	NCAT 3111
1.3	CAS No	:	This product is a mixture. For CAS No please refer Section 3
1.4	Chemical Formula	:	NA
1.5	Synonyms	:	Ruthenium compound, with carbon
1.6	Manufacturer Name	:	Neocat Pvt. Ltd.
1.7	Address	:	N-72, Additional Ambernath MIDC, Anandnagar Ambernath (East), Thane 421506, India
1.8	Contact Details	:	Email: info@neocat.in Website: www.neocat.in

SECTION 2: HAZARDS IDENTIFICATION

2.1	GHS Classification	:	Not classified as dangerous for supply / use here because of storage with water.
2.2	EC Classification	:	Flammable solid when dry. Product is not classified as flammable here, due to passive layer of water to avoid contact with air (EC) No. 1272/2008 (CLP)
2.3	Hazard Summary	:	May cause irritation to skin & eye. May cause irritation to respiratory system.
2.4	Hazard Symbol	:	
2.5	Hazard Statement	:	H228: Flammable solid May form combustible dust concentrations in air.
2.6	Precautionary Statement	:	Keep away from heat/sparks/open flames/hot surfaces. - No smoking Keep contents under water Ground/bond container and receiving equipment Use explosion-proof electrical/ventilating/lighting equipment Wear protective gloves/protective clothing/eye protection/face protection

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1	Appearance	:	Black powder												
3.2	EC No. CAS No.	:	<table border="1"> <thead> <tr> <th>Components</th><th>Composition</th><th>EC No.</th><th>CAS No.</th></tr> </thead> <tbody> <tr> <td>Ruthenium</td><td>1-10%</td><td>231-127-1</td><td>7440-18-8</td></tr> <tr> <td>Carbon</td><td>90-99%</td><td>231-153-3</td><td>7440-44-0</td></tr> </tbody> </table>	Components	Composition	EC No.	CAS No.	Ruthenium	1-10%	231-127-1	7440-18-8	Carbon	90-99%	231-153-3	7440-44-0
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SECTION 4: FIRST AID MEASURES

4.1	Eye contact	:	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
4.2	Skin contact	:	Take off immediately all contaminated clothing. Rinse with water thoroughly. Get medical advice if irritation develops or persists.
4.3	Inhalation	:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
4.4	Ingestion	:	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt, or waistband. Get medical attention

SECTION 5: FIRE FIGHTING MEASURES

5.1	Specific Hazards	:	Flammable, Risk of ignition, fine dust dispersed in air may ignite. Keep product container away from heat and sources of ignition.
5.2	Hazardous Combustion Products	:	Not known. Ambient fire may release toxic vapours.
5.3	Extinguishing Media	:	Water, foam, CO ₂ , dry chemical. Use extinguishing media appropriate for surrounding fire conditions.
5.4	Fire-fighting equipment	:	The following protective equipment for fire fighters is recommended when this material is present in a fire: Self-contained breathing apparatus (SCBA), chemical goggles, Body-covering protective clothing, chemical resistant gloves.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment, and emergency procedures	:	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
6.2	Environmental precautions	:	Use appropriate container to avoid environmental contamination.
6.3	Methods and materials for	:	Sweep up and shovel. Contain spillage, and then collect

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	containment and cleaning up	:	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.
6.4	Reference to other sections	:	For disposal see section 13.
6.5	Large Spill	:	Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keeps substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements, or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

SECTION 7: HANDLING & STORAGE

7.1	Precautions	:	Handle & open container with care. Avoid formation of dust particles. Avoid contact with skin & eyes. Provide an electrical ground connection during loading & transfer operation to avoid static discharge in an explosion atmosphere & to prevent persons handling the product from receiving static shocks.
7.2	Storage	:	In solid form this material poses no special problems. Store metal in a dry area. Do not store adjacent to acids

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

8.1	Engineering control	:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels
8.2	Respiratory Protection	:	Use a NIOSH- approved dust respirator where dust occurs. Observe OSHA regulations for respiratory use.
8.3	Personal Protection in case of large spill	:	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
8.4	Exposure Limits	:	TWA: 1 CEIL: 2 from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance	:	Black Solid powder
9.2	Form	:	Solid

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9.3	Colour	:	black
9.4	Odour	:	odourless
9.5	Odour Threshold	:	No data available
9.6	pH	:	No data available
9.7	Melting / Freezing Point (°C)	:	Not Relevant
9.8	Boiling Point (°C)	:	Not Relevant
9.9	Vapor Pressure (mm Hg)	:	Not Relevant
9.10	Evaporation rate	:	Not Relevant
9.11	Flash Point	:	Not Relevant
9.12	Autoignition Temp	:	120 °C / 248 °F
9.13	Lower Flammable Limit	:	Not Relevant
9.14	Upper Flammable Limit	:	Not Relevant
9.15	Explosive Properties	:	Not Relevant
9.16	Oxidizing Properties	:	Not Relevant
9.17	Vapour Density (Air=1)	:	Not Relevant
9.18	Relative Density (Water =1)	:	Not Relevant
9.19	Solubility	:	Insoluble in cold water, hot water, methanol, diethyl ether
9.20	Partition Coefficient (n-octanol/water)	:	No data available

SECTION 10: STABILITY & REACTIVITY

10.1	Stability	:	Stable under normal conditions.
10.2	Conditions to avoid	:	Sudden contact with high concentration of chemicals having high heats of absorption such as olefins, HCl etc. when first wetted, the product can heat up to the boiling point of water. Flood with water to cool material
10.3	Materials to Avoid	:	Strong acids, Strong bases, Chlorine trifluoride, Ethylene oxide
10.4	Hazardous decomposition Product	:	Combustion or thermal decomposition will evolve toxic vapors. Decomposition products may include carbon oxides
10.5	Special remarks on Reactivity	:	Not available

SECTION 11: TOXICOLOGICAL INFORMATION:

11.1	Acute Toxicity	:	Not classified
11.2	Skin corrosion/irritation	:	Not classified
11.3	Serious eye damage/irritation	:	Not classified.
11.4	Respiratory or skin sensitization	:	Not classified.

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11.5	Germ cell mutagenicity	:	Not classified.
11.6	Carcinogenicity	:	Not classified.
11.7	Reproductive toxicity	:	Not classified.
11.8	Specific target organ toxicity (single exposure)	:	Not classified.
11.9	Specific target organ toxicity (repeated exposure)	:	Not classified.
11.10	Aspiration hazard	:	Not classified.
11.11	Symptoms/injuries after inhalation	:	May cause irritation to the respiratory tract.
11.12	Symptoms/injuries after skin contact	:	May cause skin irritation.
11.13	Symptoms/injuries after eye contact	:	May cause eyes irritation.
11.14	Symptoms/injuries after ingestion	:	No information available.

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	:	No additional information available
12.2	Persistence and degradability	:	No additional information available
12.3	Bioaccumulative potential	:	No additional information available
12.4	Mobility in soil	:	No additional information available
12.5	Other adverse effects Effect on ozone layer Effect on the global warming	:	No additional information available No known ecological damage caused by this product

SECTION 13: DISPOSAL CONSIDERATION

13.1	Waste Disposal Method	:	Normal disposal is via incineration operated by an accredited disposal contractor. Collect and return all waste products to supplier. Containers must be decontaminated in accordance with all applicable regulations. Collect as much as possible in clean container for reuse or disposal.
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SECTION 14: TRANSPORT INFORMATION

Classification for Road transport According to DOT regulations

Classification for Sea transport According to IMO-IMDG regulations

Classification for Air transport According to IATA/ICAO regulations

		:	DOT	IMDG	IATA
14.1	UN Number	:	UN3178	UN3178	UN3178
14.2	Proper Shipping name	:	Flammable solid, inorganic	Flammable solid, inorganic	Flammable solid, inorganic

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14.3	Transport Hazard Classes	:	4.1	4.1	4.1
14.4	Packing Group	:	II	II	II

SECTION 15: REGULATORY INFORMATION

International Inventories:

United States: This product or its ingredients are listed on or compliant with the TSCA Inventory

Canada: This product or its ingredients are listed on or compliant with the DSL.

Europe: This product or its ingredients are listed on or compliant with EINECS.

Japan: This product or its ingredients are listed on or compliant with MITI.

Australia: This product or its ingredients are listed on or compliant with AICS.

Korea: This product or its ingredients are listed on or compliant with the ECL

SECTION 16: DISCLOSURE

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. It is responsibility of transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. Users should make their own investigations to determine the suitability of the information for their purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.