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----------ISO 9001: 2015----------

MATERIAL SAFETY DATA SHEET

SECTION 1 Product identifiers
Product name : Rhodium foil, 0.025 mm thick, 99.9%
Product Code: R 4770
CAS-No. : 7440-16-6

SECTION 2: Hazards identification
2.1 Classification of the substance or mixture
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
2.2 Label elements
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients
3.1 Substances
Formula : Rh
Molecular weight : 102,91 g/mol
CAS-No. : 7440-16-6
EC-No. : 231-125-0
No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures
4.1 Description of first-aid measures
If inhaled
After inhalation: fresh air.
In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures
5.1 Extinguishing media
Suitable extinguishing media
Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.
5.2 Special hazards arising from the substance or mixture
Rhodium/rhodium oxides
Combustible.
Development of hazardous combustion gases or vapours possible in the event of fire.
5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.
5.4 Further information
None

SECTION 6: Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.
6.2 Environmental precautions
No special precautionary measures necessary.
6.3 Methods and materials for containment and cleaning up
Observe possible material restrictions (see sections 7 and 10).
6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage
7.1 Precautions for safe handling
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
No data available
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection
8.1 Control parameters
Ingredients with workplace control parameters
8.2 Exposure controls
Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Skin protection
not required
Respiratory protection
Not required; except in case of aerosol formation.
Control of environmental exposure
No special precautionary measures necessary.

SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties

a) Appearance Form:	powder Color: gray
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: 1.966 °C - lit.
f) Initial boiling point and boiling range	3.727 °C - lit.
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	12,41 g/mL - lit.
Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	not auto-flammable
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
s) Explosive properties	No data available
t) Oxidizing properties	none
Particle Size Distribution	D10 = 23 µm D50 = 179 µm D90 = 534 µm Type of distribution: volume distribution Measurement method: ISO 13320 Measurement technique: laser diffraction

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity
10.1 Reactivity
No data available
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature)
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
no information available
10.5 Incompatible materials
Strong oxidizing agents, Halogens, Chlorine trifluoride, Oxygen difluoride
10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information
11.1 Information on toxicological effects
Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:
Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg
Inhalation LC50 Rat: > 50mg/L.
Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.
Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).
Special Remarks on Toxicity
to Animals: Not available.
Special Remarks on Chronic Effects on Humans: Not available.
Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information
12.1 Toxicity
No data available
12.2 Persistence and degradability
The methods for determining biodegradability are not applicable to inorganic substances.
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Endocrine disrupting properties
Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7 Other adverse effects
No data available

SECTION 13: Disposal considerations
13.1 Waste treatment methods
Product
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information
14.1 UN number

ADR/RID: 3089	IMDG: 3089	IATA: 3089

14.2 UN proper shipping name

ADR/RID:	METAL POWDER, FLAMMABLE, N.O.S.
IMDG:	METAL POWDER, FLAMMABLE, N.O.S.
IATA:	Metal powder, flammable, n.o.s.

14.3 Transport hazard class(es)

ADR/RID: 4.1	IMDG: 4.1	IATA: 4.1

14.4 Packaging group

ADR/RID: II	IMDG: II	IATA: II

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for user
No data available

SECTION 15: Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

Section 16: Other Information
This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.