

GELEST, INC.

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MATERIAL SAFETY
DATA SHEET

EMERGENCY TELEPHONE
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **RHENIUM CARBONYL - INRE030**

CHEMICAL NAME: RHENIUM CARBONYL

SYNONYMS: DIRHENIUMDECACARBONYL

CHEMICAL FAMILY: RHENIUM CARBONYL

FORMULA: C₁₀O₁₀Re₂

HMIS CODES HEALTH: 3 FLAMMABILITY: 2 REACTIVITY: 1

INGREDIENTS

IDENTITY	CAS NO.	%	TLV	OSHA PEL
RHENIUM CARBONYL	14285-68-8	>97	not established	
	Gelest recommendation: (0.1mg/m ³ as Re)			

PHYSICAL DATA

Boiling Point: >50°C at 0.1mm-sub.	Melting Point: 170°C-decomposes
Specific Gravity: 2.87	Vapor Pressure, 20°: <0.1mm
Vapor Density (air=1): >1	Solubility in water: reacts
% volatiles: <10	Evaporation rate: NA
Molecular Weight: 652.51	Other: NA
Appearance & Color: White to pale yellow crystals	

FIRE & EXPLOSION DATA

Flash Point, COC: not determined Autoignition Temp.: not determined
Flammability Limits: not determined

Extinguishing Media: Water spray or fog, foam, carbon dioxide, dry chemical.

Special Fire Fighting Procedures: Avoid eye and skin contact. Do not breathe fumes or inhale vapors.

Unusual Fire and Explosion Hazards: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

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ENVIRONMENTAL INFORMATION

Spill response: Sweep material and transfer to a suitable container for disposal.

Recommended Disposal: In a well ventilated area, treat a dilute basic (pH 10-11) slurry of the material with 50% excess of sodium hypochlorite (laundry bleach). Control temperature by rate of addition. Absorb slurry onto clay or other inert material and landfill in accordance with regulations.

HEALTH HAZARD DATA

Eye Contact: May cause immediate or delayed severe eye irritation.

Skin contact: May produce irritation or contact dermatitis. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects.

Inhalation: Inhalation may irritate the respiratory tract.

Acute Toxicity: While no toxicity data is available, it is reasonable to assume that the carbonyl will generate carbon monoxide which complexes with hemoglobin.

Oral Toxicity: Not determined

Chronic Toxicity: Not Determined

SUGGESTED FIRST AID

EYES: In case of contact, immediately flush eyes with flowing water for at least 15 minutes. Get medical attention.

SKIN: Flush with water, then wash with soap and water.

INHALATION: Move exposed individual to fresh air. Administer oxygen if needed. Call a physician.

INGESTION: Never give fluids or induce vomiting if patient is unconscious or having convulsions. To conscious individual give one full cup of water to dilute ingested material. Get medical attention.

REACTIVITY DATA

Stability: Stable when stored in the dark in sealed containers.

Conditions to avoid: Decomposes at temperatures exceeding 50°C. Material decomposes slowly in contact with moist air or with water liberating carbon monoxide. Avoid contact with oxidizing agents.

Hazardous decomposition products: Carbon monoxide, rhenium and rhenium oxide.

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SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV, NIOSH approved organic vapor respirator.

Eye and Face Protection: Chemical worker's goggles. Do not wear contact lenses.

Other Clothing and Equipment: Rubber, neoprene or nitrile gloves. An eyewash and emergency shower should be available. Launder clothing before reuse.

OTHER PRECAUTIONS

For research and industrial use only.

Storage and Handling: Store away from light in sealed containers <5°.

TRANSPORTATION

DOT SHIPPING NAME: METAL CARBONYLS, SOLID, N.O.S. (RHENIUM CARBONYL)

DOT HAZARD: 6.1

DOT LABEL: FTOXIC

DOT ID No: UN3466

PG: II

Prepared by safety and environmental affairs

ISSUE DATE INRE030: 3/16/09

SUPERSEDES: none

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