

Printing date 07/19/2021

Reviewed on 07/19/2021

1 Identification

- · Product name
- · Trade name: Iridium powder (99.8%)
- Item number: 77-2500
- · CAS Number:
- 7439-88-5
- *EC number:* 231-095-9
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Strem Chemicals, Inc.
 7 Mulliken Way NEWBURYPORT, MA 01950

USA info@strem.com

- · Information department: Technical Department
- Emergency telephone number: EMERGENCY: CHEMTREC: + 1 (800) 424-9300 During normal opening times: +1 (978) 499-1600

2 Hazard(s) identification

Classification of the substance or mixture GHS02 Flame

Flam. Sol. 2 H228 Flammable solid.

· Label elements

- · GHS label elements
- *The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms*



· Signal word Warning

· Hazard statements

H228 Flammable solid.

· Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- *P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

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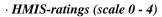
Trade name: Iridium powder (99.8%)

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· Classification system: · NFPA ratings (scale 0 - 4)



Fire = 0Reactivity = 0



IEALTH	0	Health = 0
		Fire = 0
REACTIVITY	0	Reactivity =

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

0

- · Chemical characterization: Substances
- · CAS No. Description
- 7439-88-5 iridium
- · Identification number(s)
- · EC number: 231-095-9

4 First-aid measures

- · Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- *After skin contact: Generally the product does not irritate the skin.*
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 *Fire-fighting measures*

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures
- Wear protective equipment. Keep unprotected persons away.
- · Environmental precautions: No special measures required.

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4.7 mg/m3
51 mg/m3
310 mg/m3

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

• **Penetration time of glove material** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Safety glasses

9 Physical and chemical properties

General Information		
Appearance:	Develop	
Form: Color:	Powder Grev	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition		
Melting point/Melting range:	2.410 °C (36 °F)	
Boiling point/Boiling range:	4.130 °C (39 °F)	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Flammable.	
Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	
Danger of explosion:	Not determined.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not applicable.	
Density at 20 °C (68 °F):	22.421 g/cm ³ (187.10325 lbs/gal)	
Relative density	Not determined.	
Vapor density	Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with Water:	Insoluble.	
Partition coefficient (n-octanol/wat		
Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
Solvent content:		
Organic solvents:	0.0 %	

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VOC	content:
VOC	content:

0.0 g/l / 0.00 lb/gl

100.0 %

Solids content: · Other information

No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes: Not known to be hazardous to water.
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

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13 Disposal considerations

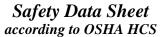
· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

UN-Number	
DOT, IMDG, IATA	UN3089
UN proper shipping name	
DOT	Metal powders, flammable, n.o.s.
IMDG, IATA	METAL POWDER, FLAMMABLE, N.O.S.
Transport hazard class(es)	
DOT	
Class	4.1 Flammable solids, self-reactive substances and sol desensitised explosives
Label	4.1
Class	4.1 Flammable solids, self-reactive substances and sol
Label	<i>desensitised explosives</i> <i>4.1</i>
	7.1
Packing group DOT, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Flammable solids, self-reactive substances and sol desensitised explosives
Segregation groups	Heavy metals and their salts (including their organometall compounds), powdered metals
Stowage Category	A
Handling Code	H1 Keep as dry as reasonably practicable



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• Segregation Code	SG17 Stow "separated from" class 5.1 SG25 Stow "separated from" goods of classes 2.1 and 3. SG26 In addition: from goods of classes 2.1 and 3 when stowed of deck of a containership a minimum distance of two container space athwartship shall be maintained, when stowed on ro-ro ships of distance of 6 m athwartship shall be maintained.
• Transport in bulk according to Annex . MARPOL73/78 and the IBC Code	II of Not applicable.
· Transport/Additional information:	
· IMDG	
· Limited quantities (LQ)	5 kg
$\cdot Excepted$ quantities (\widetilde{EQ})	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· UN ''Model Regulation'':	UN 3089 METAL POWDERS, FLAMMABLE, N.O.S., 4.1, III

15 Regulatory information

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65

• Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

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· Hazard pictograms GHS02 · Signal word Warning · Hazard statements H228 Flammable solid. · Precautionary statements P210 *Keep away from heat/sparks/open flames/hot surfaces. No smoking.* P280 Wear protective gloves/protective clothing/eye protection/face protection. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. P403+P233 Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations. P501 · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Technical Department.
- · Contact: Technical Director
- · Date of preparation / last revision 07/19/2021 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit Flam. Sol. 2: Flammable solids – Category 2

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