SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 04/29/2026 **Revision Number** 7

1. Identification

Product identifier

Product Name Cadmium (pieces)

Other means of identification

Safety data sheet number 05036

UN number or ID number UN2570

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Physical vapor deposition of thin films

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address
Kurt J Lesker Company

Manufacturer Address
Kurt J Lesker Company
1925 Route 51
Jefferson Hills, PA 15025
+1 412-387-9200

Kurt J Lesker Company LTD
United Kingdom
Austin House
Sidney Little Road
Churchfields Industrial Estate
St Leonards on Sea, East Sussex, TN38 9PU, United Kingdom
Customer Service: +44 (0) 1424 458100

E-mail msds@lesker.com

Emergency telephone number

Emergency Telephone North America [USA, Canada, Mexico]: 1-866-519-4752
Mainland China: (+86) 4001 2001 74
Europe: { int'l call prefix} -1-760-476-3961
Asia Pacific: { int'l call prefix} -1-760-476-3960
Middle East & Africa: { int'l call prefix} -1-760-476-3959
South Korea: +080-880-0455
Philippines: (+63) 2 83953471

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Gases)	Category 2
Acute toxicity - Inhalation (Vapors)	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1A
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Danger

Hazard statements

Toxic if swallowed.
Fatal if inhaled.
Suspected of causing genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements - Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection and face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dust.
Use only outdoors or in a well-ventilated area.
Wear respiratory protection.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention.
Specific treatment (see .? on this label).
Specific treatment is urgent (see .? on this label).
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor.
IF SWALLOWED: Immediately call a POISON CENTER or doctor.
Rinse mouth.

Precautionary Statements - Storage

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Other information
Very toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Chemical name	CAS No.	Weight-%	Trade secret
Cadmium (pieces)	7440-43-9	100	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention.

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh air. Do not breathe dust. If breathing is difficult, (trained personnel should) give oxygen.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing.

Effects of Exposure May cause cancer. May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility. Mutagenic effects. Causes damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not breathe dust. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH

Cadmium (pieces) 7440-43-9	TWA: 0.01 mg/m³ TWA: 0.002 mg/m³ respirable particulate matter	TWA: 5 µg/m³ (vacated) STEL: 0.3 ppm fume Ceiling: 0.3 mg/m³ fume applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect Ceiling: 0.6 mg/m³ dust applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect	IDLH: 9 mg/m³ dust

Biological occupational exposure limits

Chemical name	ACGIH
Cadmium (pieces) 7440-43-9	5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not breathe dust. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid
Appearance solid
Color silver
Odor No characteristic odour
Odor threshold No information available

Property	Values	Remarks • Method
pH	No data available	
pH (as aqueous solution)		
Melting point / freezing point	321 °C / 609.8 °F	321°C/609.8°F
Initial boiling point and boiling range	765 °C / 1409.0 °F	765°C/1409°F @ 760 mm Hg

Flash point	No data available
Evaporation rate	No data available
Flammability	No data available
Flammability Limit in Air	
Upper flammability or explosive limits	No data available
Lower flammability or explosive limits	No data available
Vapor pressure	No data available
Relative vapor density	No data available
Relative density	8.64 @ 25°C
Water solubility	Insoluble in water
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	
Kinematic viscosity	No data available
Dynamic viscosity	No data available

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	112.4
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Excessive heat.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components).

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Coughing and/ or wheezing. Difficulty in breathing.

Acute toxicity Fatal if inhaled. Toxic if swallowed.

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Cadmium (pieces) 7440-43-9	= 1140 mg/kg (Rat)	-	= 25 mg/m³ (Rat) 30 min

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity Contains a known or suspected mutagen. Classification based on data available for ingredients. Suspected of causing genetic defects.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Cadmium (pieces) 7440-43-9	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
Occupational Safety and Health Administration of the US Department of Labor
X - Present

Reproductive toxicity Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Target organ effects Kidney, Respiratory system, Blood, Lungs, prostate.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Cadmium (pieces) 7440-43-9	-	LC50: =0.003mg/L (96h, Oncorhynchus mykiss) LC50: =0.006mg/L (96h, Oncorhynchus mykiss) LC50: =0.002mg/L (96h, Cyprinus carpio) LC50: =4.26mg/L (96h, Cyprinus carpio) LC50: =0.24mg/L (96h, Cyprinus carpio) LC50: =21.1mg/L (96h, Lepomis macrochirus) LC50: =0.016mg/L (96h, Oryzias latipes) LC50: 0.0004 - 0.003mg/L (96h, Pimephales promelas)	-	EC50: =0.0244mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT

Notes **No components found suitable for Technical Name.**
UN number or ID number UN2570
Proper shipping name Cadmium compounds
Transport hazard class(es) 6.1

Packing group	II
Reportable Quantity (RQ)	(Cadmium (pieces): RQ (kg)= 4.54) Cadmium (pieces): RQ (lb)= 10
Reportable quantity (kg) (calculated)	Cadmium (pieces): RQ (kg)= 5
Reportable quantity (lbs) (calculated)	Cadmium (pieces): RQ (lb)= 10
Special Provisions	IB8, IP2, IP4, T3, TP33
DOT Marine Pollutant	NP
Description	UN2570, Cadmium compounds, 6.1, II
Emergency Response Guide Number	154

TDG

Notes	**No components found suitable for Technical Name.**
UN number or ID number	UN2570
UN proper shipping name	Cadmium compound
Transport hazard class(es)	6.1
Packing group	II
Special Provisions	16
Description	UN2570, Cadmium compound, 6.1, II

MEX

Notes	**No components found suitable for Technical Name.**
UN number or ID number	UN2570
UN proper shipping name	Cadmium compound
Transport hazard class(es)	6.1
Packing group	II
Description	UN2570, Cadmium compound, 6.1, II
Special Provisions	274

ICAO (air)

Notes	**No components found suitable for Technical Name.**
UN number or ID number	UN2570
UN proper shipping name	Cadmium compound
Transport hazard class(es)	6.1
Packing group	II
Description	UN2570, Cadmium compound, 6.1, II
Special Provisions	A3, A5

IATA

UN number or ID number	UN2570
UN proper shipping name	Cadmium compound
Transport hazard class(es)	6.1
Packing group	II
Description	UN2570, Cadmium compound, 6.1, II
Special Provisions	A5
ERG Code	6L

IMDG

Notes	**No components found suitable for Technical Name.**
UN number or ID number	UN2570
UN proper shipping name	Cadmium compound
Transport hazard class(es)	6.1
Packing group	II
EmS-No.	F-A, S-A
Special Provisions	274
Marine pollutant	NP
Description	UN2570, Cadmium compound, 6.1, II

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Cadmium (pieces)	7440-43-9	Present	Active

DSL/NDSL Contact supplier for inventory compliance status.
EINECS/ELINCS Contact supplier for inventory compliance status.
ENCS Contact supplier for inventory compliance status.
IECSC Contact supplier for inventory compliance status.
KECI Contact supplier for inventory compliance status.
PICCS Contact supplier for inventory compliance status.
AIIC Contact supplier for inventory compliance status.
NZIoC Contact supplier for inventory compliance status.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Cadmium (pieces) - 7440-43-9	0.1

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Cadmium (pieces) 7440-43-9	-	X	X	-

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Cadmium (pieces)	10 lb	-	RQ 10 lb final RQ

7440-43-9			RQ 4.54 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Cadmium (pieces) - 7440-43-9	Carcinogen Developmental Male Reproductive

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Cadmium (pieces) 7440-43-9	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 4	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 4 *	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Chronic Hazard Star Legend ** = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 04/29/2026
Revision Note No information available.
Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet