



SAFETY DATA SHEET
Cadmium Tellurium (pieces)

1. Identification

Product identifier

Product name Cadmium Tellurium (pieces)

Internal identification Replaces M-2230-045

CAS number 1306-25-8

Recommended use of the chemical and restrictions on use

Application Exterior surface coating.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Supplier Kurt J Lesker Company

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

Kurt J Lesker Company LTD
 United Kingdom
 15-16 Burgess Road
 Hastings, East Sussex, TN35 4NR
 England
 Customer Service: +44 (0) 1424 458100
 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

Access Code - 333594

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

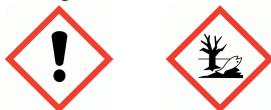
Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Label elements

Cadmium Tellurium (pieces)

Pictogram



Signal word

Warning

Hazard statements

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing vapor/ spray.
 P273 Avoid release to the environment.
 P301+P310 If swallowed: Immediately call a poison center/ doctor.
 P302+P352 If on skin: Wash with plenty of water.
 P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a poison center/ doctor if you feel unwell.

Contains

Cadmium Telluride (pieces)

Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

3. Composition/information on ingredients

Mixtures

Cadmium Tellurium (pieces)	0 - 100%
CAS number: 1306-25-8	
M factor (Acute) = 1	M factor (Chronic) = 1
Classification	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	
Aquatic Acute 1 - H400	
Aquatic Chronic 1 - H410	

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information

If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

Inhalation

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion

Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention.

Cadmium Tellurium (pieces)

Skin Contact It is important to remove the substance from the skin immediately. Remove contamination with soap and water or recognized skin cleansing agent. Get medical attention.

Eye contact Rinse with water. Get medical attention if any discomfort continues.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.

Ingestion May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

Skin contact May cause discomfort.

Eye contact No specific symptoms known. May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards This product is toxic.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Toxic gases or vapors.

Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Avoid inhalation of dust and vapors. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

Environmental precautions

Cadmium Tellurium (pieces)

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class Toxic storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection

Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Cadmium Tellurium (pieces)

Hand protection	Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid.
Color	Black.
Odor	No characteristic odor.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point	1092°C
Initial boiling point and range	Not available.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	6.2 @ 25°C
Bulk density	Not available.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not applicable.

Cadmium Tellurium (pieces)

Decomposition Temperature	Not available.
Viscosity	Not applicable.
Molecular weight	240.01

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀)	Acute Tox. 4 - H302 Harmful if swallowed.
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Notes (dermal LD₅₀)	Acute Tox. 4 - H312 Harmful in contact with skin.
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀)	Acute Tox. 4 - H332 Harmful if inhaled.
ATE inhalation (dusts/mists mg/l)	1.5

Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.
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Serious eye damage/irritation

Serious eye damage/irritation	Based on available data the classification criteria are not met.
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Respiratory sensitization

Respiratory sensitization	Based on available data the classification criteria are not met.
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Skin sensitization

Skin sensitization	Based on available data the classification criteria are not met.
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Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
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Carcinogenicity

Cadmium Tellurium (pieces)

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant. Solid.
<u>General information</u>	
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin Contact	May cause discomfort.
Eye contact	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

12. Ecological information

Toxicity	Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.
<u>Persistence and degradability</u>	
Persistence and degradability	The degradability of the product is not known.
<u>Bioaccumulative potential</u>	
Bio-Accumulative Potential	No data available on bioaccumulation.
Partition coefficient	Not applicable.
<u>Mobility in soil</u>	
Mobility	No data available.
<u>Other adverse effects</u>	
Other adverse effects	None known.

13. Disposal considerations

Waste treatment methods

Cadmium Tellurium (pieces)

General information	The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
Disposal methods	Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

UN Number

UN No. (TDG)	2570
UN No. (IMDG)	2570
UN No. (ICAO)	2570
UN No. (DOT)	2570

UN proper shipping name

Proper shipping name (TDG)	CADMIUM COMPOUND
Proper shipping name (IMDG)	CADMIUM COMPOUND
Proper shipping name (ICAO)	CADMIUM COMPOUND
Proper shipping name (DOT)	CADMIUM COMPOUND

Transport hazard class(es)

TDG class	6.1
TDG label(s)	6.1
IMDG Class	6.1
ICAO class/division	6.1

Transport labels



Packing group

TDG Packing Group	III
IMDG packing group	III
ICAO packing group	III
DOT packing group	III

Environmental hazards

Environmentally Hazardous Substance
No.

Cadmium Tellurium (pieces)

Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS

F-A, S-A

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

SARA 313 Emission Reporting

Yes

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

FDA - Precursor Chemical

None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories

Acute
Chronic

OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

WARNING



Cancer and Reproductive harm - www.p65warnings.ca.gov

California Air Toxics "Hot Spots" (A-I)

None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances

All the ingredients are listed or exempt.

Massachusetts "Right To Know" List

All the ingredients are listed or exempt.

Cadmium Tellurium (pieces)

Rhode Island "Right To Know" List

All the ingredients are listed or exempt.

Minnesota "Right To Know" List

None of the ingredients are listed or exempt.

New Jersey "Right To Know" List

All the ingredients are listed or exempt.

Pennsylvania "Right To Know" List

None of the ingredients are listed or exempt.

Inventories

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

Philippines - PICCS

All the ingredients are listed or exempt.

New Zealand - NZIOC

All the ingredients are listed or exempt.

16. Other information

Revision date	8/31/2018
Revision	2
Supersedes date	1/5/2016
SDS No.	4766
Hazard statements in full	H302 Harmful if swallowed. H312 Harmful in contact with skin. H332 Harmful if inhaled. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.

End of SDS