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Revision No: 2

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Product name:** CADMIUM STANDARD SOLUTION 1000 PPM**Product code:** 21309**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of substance / mixture:** PC21: Laboratory chemicals.**1.3. Details of the supplier of the safety data sheet****Company name:** EDT directiON Limited

The Old Silo Store

St. Radigund's Abbey Farm

Dover

Kent, UK, CT15 7DL

Tel: 01304 829960 **Email:** Info@edt.co.uk**1.4. Emergency telephone number****Emergency tel:** +44(0)1304829960**Section 2: Hazards identification****2.1. Classification of the substance or mixture****Classification under CHIP:** T: R45; T: R46; Xn: R20; -: R52/53**Classification under CLP:** Carc. 1B: H350; Aquatic Chronic 2: H411; Muta. 1B: H340**Most important adverse effects:** May cause cancer. May cause heritable genetic damage. Harmful by inhalation. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**2.2. Label elements****Label elements under CLP:****Hazard statements:** H340: May cause genetic defects.

H350: May cause cancer.

H411: Toxic to aquatic life with long lasting effects.

Signal words: Danger**Hazard pictograms:** GHS08: Health hazard

GHS09: Environmental



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Precautionary statements: P202: Do not handle until all safety precautions have been read and understood.
P273: Avoid release to the environment.
P281: Use personal protective equipment as required.
P308+313: IF exposed or concerned: Get medical advice/attention.
P391: Collect spillage.
P405: Store locked up.

Label elements under CHIP:

Hazard symbols: Toxic.



Risk phrases: R45: May cause cancer.
R46: May cause heritable genetic damage.
R20: Harmful by inhalation.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S36/37: Wear suitable protective clothing and gloves.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.

Precautionary phrases: Restricted to professional users.

2.3. Other hazards

PBT: This product is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

CADMIUM NITRATE TETRAHYDRATE

EINECS	CAS	CHIP Classification	CLP Classification	Percent
233-710-6	10022-68-1	O: R8; T: R45; T: R46; T: R60; T: R61; T: R25; T+: R26; T: R23; Xn: R48; N: R50/53	Acute Tox. 1: H330; Acute Tox. 3: H301; Muta. 1B: H340; Carc. 1B: H350; Repr. 1B: H360FD; STOT RE 1: H372; Aquatic Chronic 1: H410; Aquatic Acute 1: H400	<1%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin.
Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.

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Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: May cause genetic defects. May cause cancer.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Alcohol resistant foam. Carbon dioxide. Dry chemical powder. Water spray. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: The product itself does not burn. Nitrogen Oxides(NOx). Cadmium/ cadmium Oxides.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

[cont...]

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6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area.
 Do not handle in a confined space. Avoid the formation or spread of mists in the air. PPE To be worn. See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

CADMIUM NITRATE TETRAHYDRATE

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
IE	0.025 mg/m3	-	-	-

8.1. DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of work day.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency. Use a full face respirator with multi purpose combination type ABEK (EN14387)respirator cartridges.

Hand protection: Impermeable gloves. Glove material: Nitrile. Layer thickness:0.15mm. Breakthrough time:>480min. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection: Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

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Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Odourless

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
 Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Incompatible products.

10.5. Incompatible materials

Materials to avoid: Reducing agents. Copper. Organic materials. Phosphorus. Products that are incompatible with water.

10.6. Hazardous decomposition products

Haz. decomp. products: Does not decompose when used for intended uses.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

CADMIUM NITRATE TETRAHYDRATE

Inhalation	RAT	2H LC50	>0.0045	mg/kg
Inhalation	RAT	4H LC50	0.0501	mg/kg
ORAL	RAT	LD50	60.2	mg/kg

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Relevant effects for mixture:

Effect	Route	Basis
Acute toxicity (harmful)	INH	Hazardous: calculated
Carcinogenicity	--	Hazardous: calculated
Mutagenicity	--	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. **Delayed /**

immediate effects: May cause genetic defects. May cause cancer.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

CADMIUM NITRATE TETRAHYDRATE

Daphnia pulex-static test	48H EC50	0.048	mg/l
Ictalurus punctatus	96H LC50	4.48	mg/l

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms. Toxic to soil organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

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Section 14: Transport information

14.1. UN number

UN number: UN3082

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CADMIUM NITRATE TETRAHYDRATE)

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 3

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3: H301: Toxic if swallowed.

H330: Fatal if inhaled.

H340: May cause genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H350: May cause cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H360FD: May damage fertility. May damage the unborn child.

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H372: Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H410: Very toxic to aquatic life with long lasting effects.

H411: Toxic to aquatic life with long lasting effects.

R8: Contact with combustible material may cause fire.

R20: Harmful by inhalation.

R23: Toxic by inhalation.

R25: Toxic if swallowed.

R26: Very toxic by inhalation.

R45: May cause cancer.

R46: May cause heritable genetic damage.

R48: Danger of serious damage to health by prolonged exposure.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R60: May impair fertility.

R61: May cause harm to the unborn child.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.