# SAFETY DATA SHEET

**Product Identifier: Cell-ID™ Cisplatin**
**Catalog ID number: 201064**

## SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Contact information**

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| **General** | Fluidigm Corporation<br>7000 Shoreline Court Suite 100, South San Francisco, CA 94080<br>Main (U.S.): +1 (650) 266-6000<br>E-mail: techsupport@fluidigm.com |
| **Emergency telephone number** | + (650) 266-6100 (outside US)<br>+ (866) 358-4354 (toll free) |

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|---|---|
| **Product identifier** | Cell-ID™ Cisplatin |
| **Synonyms** | None identified |
| **Trade names** | None identified |
| **Chemical family** | Mixture is a suspension of cisplatin, a cytotoxic agent, in DMSO |
| **Relevant identified uses of the substance or mixture and uses advised against** | For research use only. Not for use in diagnostic procedures. |
| **Note** | This SDS is written to address potential health and safety issues associated with the handling of the formulated product. |
| **Issue Date** | 23 June 2015 |

## SECTION 2 - HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

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| **Globally Harmonized System [GHS]** | Flammable liquid - Category 4. Germ Cell Mutagenicity - Category 1B. Carcinogenic - Category 1B. Irritant (skin) - Category 2. |
| **AU Hazard Classification (NOHSC)** | Hazardous substance. Non-hazardous goods. |

**Label elements**

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| **CLP/GHS hazard pictogram** |  |
| **CLP/GHS signal word** | Danger |
| **CLP/GHS hazard statements** | H227 - Combustible liquid. H315 - Causes skin irritation. H340 - May cause genetic defects. H350 - May cause cancer. |
| **CLP/GHS precautionary statements** | P201 - Obtain special instructions before use. P210 - Keep away from heat/sparks/ open flames/hot surfaces. - No smoking. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves/eye protection/face protection. P302 + P352 - If on skin: Wash with plenty of soap and water. P321 - Specific treatment (see First Aid information on product label and/or Section 4 of the SDS). P308 + P313 - If exposed or concerned: get medical advice/attention. P332 + P313 - If skin irritation occurs: Get medical advice/attention. P362 - Take off contaminated clothing and wash before reuse. P370 +P378 - In case of fire: Use water spray (fog), foam, dry powder or carbon dioxide for extinction. P403 + P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents/container to location in accordance with local/regional/national/ international regulations. |

**Other hazards**

Mixture contains cisplatin, a cytotoxic anticancer agent.

The most common adverse effects reported in with clinical use of cisplatin include severe nausea and vomiting, peripheral neuropathies (pain or numbness in the extremities), kidney toxicity, myelosuppression (characterized by decreases in white blood cells and platelets), hearing loss, and ocular toxicity. Cumulative renal insufficiency is the major dose-limiting toxicity of cisplatin. Allergic reactions, including facial swelling, wheezing, fast heart rate, and hypotension, have also been reported and may occur within minutes of drug administration. Other reported adverse effects have included hair loss, malaise, cardiac abnormalities, rash, and asthenia (weakness). Cisplatin and other platinum-containing salts are considered to be to irritating and corrosive to skin after direct contact, capable of inducing a burning sensation in the eyes, lacrimation, and conjunctival hyperemia (increased blood flow into the eyeball), and irritating to the respiratory tract following inhalation. Cisplatin exposure has been associated with decreased spermatogenesis and abnormal Leydig cell function in men. Sperm production was found to return to normal in 50-60% of men between 1 and 3 years following treatment cessation. Based on its mechanism of action and the embryotoxicity noted in animals, cisplatin may adversely affect a developing fetus.

**Note**

This mixture is classified as hazardous according to Regulation EC No 1272/2008 (EU CLP) and Hazard Communication Standard No. 1910.1200 (US OSHA).

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient | CAS # | EINECS/ ELINCS# | Amount | GHS Classification |
|---|---|---|---|---|
| Cisplatin | 15663-27-1 | 239-733-8 | 0.15% | ATO2: H300; STOT-S1: H370; STOT-S3: H335; STOT-R1: H372; RT1A: H360FD; GCM1B: H340; Carc1B: H350; SC1: H314; EC1: H318 |
| Dimethyl sulfoxide | 67-68-5 | 200-664-3 | ~99.9% | SI2: H315 |

**Note**

The ingredients listed above are considered hazardous. The remaining components are non-hazardous and/or present at amounts below reportable limits. See Section 16 for full text of GHS classifications.

## SECTION 4 - FIRST AID MEASURES

**Description of first aid measures**

**Immediate Medical Attention Needed**

Yes

**Eye Contact**

If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.

**Skin Contact**

Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.

**Inhalation**

Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.

**Ingestion**

Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.

**Protection of first aid responders**

See Section 8 for Exposure Controls/Personal Protection recommendations.

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| **Most important symptoms and effects, both acute and delayed** | See Sections 2 and 11. |
| **Indication of immediate medical attention and special treatment needed, if necessary** | Contains the cytotoxic agent, cisplatin. Medical conditions aggravated by exposure: Myelosuppression. Renal impairment. Hypersensitivity to cisplatin or platinum-containing compounds. Treat symptomatically and supportively. If accidental exposure occurs to an individual who is also taking one or more concomitant medications, consult the respective package or prescribing information for potential drug interactions. |

## SECTION 5 - FIREFIGHTING MEASURES

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| **Extinguishing media** | Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials. |
| **Specific hazards arising from the substance or mixture** | No information identified. May emit carbon monoxide, carbon dioxide, oxides of nitrogen, sulfur and platinum-containing compounds. |
| **Flammability/ Explosivity** | Combustible liquid and vapor. Keep away from heat and flame. Vapors are heavier than air and may flow along surfaces to remote ignition sources and flashback. |
| **Advice for firefighters** | In case of a fire, keep containers cool with water and remove from fire area. Wear full protective clothing and an approved, positive pressure, self-contained breathing apparatus. Wash all equipment thoroughly after use. Dike area if possible to contain water for later disposal. |

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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| **Personal precautions, protective equipment and emergency procedures** | If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Area should be adequately ventilated. Do not breathe mist/vapors/spray. |
| **Environmental precautions** | Do not empty into drains. Avoid release to the environment. |
| **Methods and material for containment and cleaning up** | Remove sources of ignition. Dike area to contain spill. Maintain ventilation until all vapors have been eliminated. Take precautions as necessary to prevent contamination of ground and surface waters. Absorb and/or contain spill with inert materials (e.g., sand, vermiculite or other appropriate material), then place in appropriate container. For large spills, use water spray to disperse vapors; flush spill area. Do not flush to sewer. Prevent run-off from entering drains, sewers, or waterways. |
| **Reference to other sections** | See Sections 8 and 13 for more information. |

## SECTION 7 - HANDLING AND STORAGE

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| **Precautions for safe handling** | If vials are crushed or broken, drug substance may be released into the air. Minimize generation and accumulation of airborne material. Follow recommendations for handling bulk formulated/packaged cytotoxic pharmaceutical agents (i.e., use of engineering controls and/or other personal protective equipment if needed). Wash thoroughly after handling. Avoid breathing vapor or mist. Do not permit eating/drinking/smoking near this material. All materials used for transferring or preparing this product must be considered contaminated and disposed of properly. |
| **Conditions for safe storage including any incompatibilities** | Store at -20°C away from strong oxidizing agents. Keep away from heat and sources of ignition. Store locked up. Store in sealed containers that are appropriately labeled. |
| **Specific end use(s)** | No information identified. |

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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| **Note** | Dispose of broken vials/syringes in a sharps container. |

**Control Parameters/Occupational Exposure Limit Values**

| Compound | Issuer | Type | OEL |
|---|---|---|---|
| Cisplatin | ACGIH | TLV | 2 µg/m³ |
| | OSHA | PEL | 2 µg/m³ |
| | Belguim, Hungary, New Zealand | TWA | 2 µg/m³ |
| | Japan | OEL | 1 µg/m³ |
| | Switzerland | MAK | 2 µg/m³ |
| | United Kingdom | TWA | 20 µg/m³ |
| Dimethyl sulfoxide | AIHA | WEEL-TWA | 250 ppm |
| | Austria, Germany, Switzerland | MAK | 50 ppm, 160 mg/m3 |
| | Estonia, Lithuania, Sweden | STEL | 150 ppm, 500 mg/m3 |
| | Estonia, Lithuania | TWA | 50 ppm, 150 mg/m3 |
| | Sweden | TLV | 50 ppm, 150 mg/m3 |
| | Finland | TWA | 50 ppm |
| | Switzerland | STEL | 100 ppm, 320 mg/m3 |
| | Germany | Ceiling | 100 ppm, 320 mg/m3 |
| | Denmark | TWA | 50 ppm, 160 mg/m3 |
| | Slovenia | TWA | 160 mg/m3 |
| | Denmark | TWA | 50 ppm, 160 mg/m3 |

**Exposure/Engineering controls**

If handling bulk product or vials are opened/crushed/broken: Control exposures to below the OEL (if available). Otherwise, selection and use of containment devices and personal protective equipment should be based on a risk assessment of exposure potential. Open handling should not be performed when handling potent substances, or substances of unknown toxicity. Material should be handled inside a closed process, ventilated enclosure, isolator or device of equivalent or better control that is suitable for dusts and/or aerosols.

**Respiratory protection**

If handling bulk product or vials are opened/crushed/broken: Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls. For routine handling tasks, an approved and properly worn powered air- purifying respirator equipped with appropriate HEPA filters or combination filters should provide ancillary protection based on the known or foreseeable limitations of existing engineering controls. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, when exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

**Hand protection**

Wear nitrile or other impervious gloves if skin contact is possible. Double gloves should be considered. When the material is diluted in an organic solvent, wear gloves that provide protection against the solvent.

**Skin protection**

Wear appropriate gloves, lab coat, or other protective overgarment if skin contact is likely. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use.

**Eye/face protection**

Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.

**Environmental Exposure Controls**

Avoid release to the environment and operate within closed systems wherever practicable. Air and liquid emissions should be directed to appropriate pollution control devices. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.

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| **Other protective measures** | Wash hands in the event of contact with this substance, especially before eating, drinking or smoking. Protective equipment is not to be worn outside the work area (e.g., in common areas or out-of-doors). |

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

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| **Appearance** | Clear liquid |
| **Color** | Colorless |
| **Odor** | No information identified. |
| **Odor threshold** | No information identified. |
| **pH** | No information identified. |
| **Melting point/freezing point** | 16.1-18.9°C (61-66°F) |
| **Initial boiling point and boiling range** | 189°C (372°F) |
| **Flash point** | No information identified. |
| **Evaporation rate** | No information identified. |
| **Flammability (solid, gas)** | No information identified. |
| **Upper/lower flammability or explosive limits** | No information identified. |
| **Vapor pressure** | 0.41 mmHg @ 20°C (68°F) |
| **Vapor density** | 1.1 g/cm³ |
| **Relative density** | No information identified. |
| **Water solubility** | Miscible in water. |
| **Solvent solubility** | No information identified. |
| **Partition coefficient (*n-octanol/water*)** | No information identified. |
| **Auto-ignition temperature** | No information identified. |
| **Decomposition temperature** | No information identified. |
| **Viscosity** | No information identified. |
| **Explosive properties** | No information identified. |
| **Oxidizing properties** | No information identified. |

**Other information**

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| **Molecular weight** | 300.05 (cisplatin) |
| **Molecular formula** | $Cl_2H_6N_2Pt$ (cisplatin) |

## SECTION 10 - STABILITY AND REACTIVITY

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| **Reactivity** | No information identified. |
| **Chemical stability** | Stable under normal temperatures and pressures. |

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| **Possibility of hazardous reactions** | No information identified. |
| **Conditions to avoid** | Avoid direct sunlight and conditions that might generate heat. Avoid flames, sparks, and other sources of ignition such as shock or friction. Avoid dispersion as a dust cloud. |
| **Incompatible materials** | Strong oxidizing agents |
| **Hazardous decomposition products** | No information identified. |

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

**Route of entry** May be absorbed by inhalation, skin contact and ingestion.

**Acute toxicity**

| Compound | Type | Route | Species | Dose |
|---|---|---|---|---|
| Cisplatin | $LD_{50}$ | Oral | Rat | 14.5 mg/kg |
| | $LD_{50}$ | Oral | Mouse | 32.7 mg/kg |
| | $LD_{50}$ | Intravenous (IV) | Rat | 8 mg/kg |
| | $LD_{50}$ | Intravenous (IV) | Mouse | 11 mg/kg |
| | $LC_{50}$ | Inhalation | Rat | 40250 ppm |
| Dimethyl sulfoxide | $LD_{50}$ | Oral | Rat | 14.5 g/kg |
| | $LD_{50}$ | Oral | Rat | 28.3 g/kg |
| | $LD_{50}$ | Oral | Mouse | 7.9 g/kg |
| | $LD_{50}$ | Oral | Mouse | 21.4 g/kg |

**Irritation/Corrosion** Cisplatin can cause eye, skin and/or respiratory tract irritation. Dimethyl sulfoxide is a skin irritant in humans and animals.

**Sensitization** No information identified.

**STOT-single exposure** In rats, single intraperitoneal (IP) injections up to 12.2 mg/kg cisplatin caused leukopenia (characterized by decreases in neutrophils, lymphocytes, and platelets) and bone marrow depression, generalized lymphoid depletion, and intestinal/renal tubular injury, which were most severe 2-4 days post-injection. Similar target organ effects were noted in dogs following single IV doses of 2.5 mg/kg or 5 consecutive intravenous (IV) doses of 0.75 mg/kg/day. Heart effects and sperm degeneration were also seen in monkeys following acute exposure. Three groups of male rats were exposed to an aerosol of 1600 $mg/m^3$ DMSO for four hours. Groups were sacrificed immediately after exposure, 24 hours after exposure, or two weeks after exposure. There was no mortality and none of the animals displayed outward signs of toxicity during and after exposure to DMSO. Organs appeared normal at necropsy. Single IV injections of undiluted DMSO were administered to groups of male and female rats. Dose levels were 2.5, 5.0, and 10 g/kg. Each dose was administered over a 1-minute interval. Animals were observed for 14 days following DMSO administration. With one exception, deaths occurred within the first 24 hours. Non- lethal doses of DMSO produced decreased motor activity and myasthenia.

**STOT-repeated exposure/Repeat-dose toxicity** Male rats were exposed to 200 $mg/m^3$ DMSO for seven hours/day, five days a week, over six weeks for 30 exposures. There were no outward toxic signs noted in any of the exposed animals throughout the experimental period of six weeks and no effects on blood parameters were reported. DMSO was administered dermally to normal and abraded rabbit skin for 26 weeks at a dose of 1 or 5 g/kg/day. At 23 weeks, treatment was withheld from some animals due to ocular changes; the remaining animals continued to receive DMSO applications for the scheduled 26 weeks. Mortality was high in all groups, however there was no significant differences in mortality between groups. There were no clinical signs to suggest systemic toxicity. DMSO was administered as a 90% solution to rhesus monkeys by gastric intubation, seven days a week for up to 87 weeks. Doses administered were equivalent to 990, 2970, and 8910 mg/kg/day. The principal physical signs seen in the animals given DMSO orally included excess salivation and emesis. These

signs occurred sporadically and did not appear to be related to the dose except in the group receiving higher volume of compound. Anorexia occurred at high oral doses but was not evident at the two lower dose levels. No DMSO-related changes were found in the treated monkeys during physical examinations.

**Reproductive toxicity** Similar adverse effects on spermatogenesis seen in humans were noted in monkeys administered cisplatin (additional details not provided). DMSO has been extensively used as a cryoprotectant in the freezing of early experimental animal and human embryos. The viability and apparent normalcy of frozen embryos after thawing suggests that DMSO exposure is not toxic to the early embryo.

**Developmental toxicity** In rats, IP doses of cisplatin ≥0.25 mg/kg/day before mating through gestation increased the number of resorptions and decreased the post-natal viability and exploratory behavior of surviving offspring; doses of 0.5 mg/kg/day caused embryolethality and growth retardation. In rabbits, embryolethality was noted at IP doses >0.125 mg/kg/day, but no teratogenic effects were seen at doses up to 0.5 mg/kg/day. In mice, IP doses of 10 mg/day administered during organogenesis led to retarded growth and bone formation, but caused no major malformations. A single IP dose of ³ 3 mg/kg of cisplatin on day 8 of pregnancy was fetal to ~30% of fetuses. Surviving offspring showed growth retardation and had a number of minor skeletal abnormalities. DMSO has been associated with teratogenic and/or embryotoxic effects in the hamster, rat, mouse, and chick at high doses. In the hamster, the injection of 500 to 800 mg/kg on the 8th day of gestation was associated with a wide variety of congenital defects, including exencephaly, microphthalmia, bone and limb abnormalities, and as cleft lip. Increased frequencies of fetal death were observed when pregnant rats or rabbits were treated with doses of 5-10 or 1-3 g/kg/day, respectively. However, fetal death was not increased in another study after intraperitoneal treatment of pregnant rats with 6.9 g/kg/day of dimethyl sulfoxide. No malformations were observed in the offspring of rats treated with dimethyl sulfoxide at doses of 0.2-5 g/kg/day during pregnancy.

**Genotoxicity** Cisplatin was mutagenic in bacteria and produced chromosomal aberrations, micronuclei, and sister chromatid exchanges (SCEs) in cultured animal and human cells. It also induced SCEs *in vivo* in rodents, but did not cause *in vivo* dominant lethal mutations in mice. DMSO was negative for genotoxicity in an Ames bacterial cell mutagenicity assay and a sister chromatid exchange assay in Chinese hamster ovary cells. Dimethyl sulfoxide was negative for genotoxicity in an Ames bacterial cell mutagenicity assay and a sister chromatid exchange assay in Chinese hamster ovary cells.

**Carcinogenicity** Weekly IP injections of a 0.85% cisplatin solution in mice (delivering cisplatin doses equivalent to 1.62 mg/kg) for 16 weeks significantly increased lung adenomas; skin papillomas were increased when cisplatin was co-administered with croton oil as a promoter twice weekly for 52 weeks. In two rat studies, multiple IP injections (3 times 1 mg/kg/week for 3 weeks) induced leukemia. Overall, cisplatin was carcinogenic to rodents at low, occupationally relevant doses. Cisplatin is also listed as a carcinogen by OSHA, IARC (Group 2A - "Probably carcinogenic to humans"), and NTP ("Reasonably anticipated to be a human carcinogen").

**Aspiration hazard** No data available.

**Human health data** See Section 2 - "Other hazards"

## SECTION 12 - ECOLOGICAL INFORMATION

**Toxicity**

| Compound | Type | Species | Concentration |
|---|---|---|---|
| Cisplatin | $LC_{50}$ (96 h) | Fish | 34 g/L |
| Dimethyl sulfoxide | $EC_{50}$/96h | Skeletonema costatum (Diatom) | 12.35 - 25.5 g/L |
| | $LC_{50}$/96h | Pimephales promelas | 34 g/L |
| | $LC_{50}$/96h | Oncorhynchus mykiss | 33-37 g/L (static) |
| | $LC_{50}$/96h | Lepomis macrochirus | >40 g/L (static) |
| | $LC_{50}$/96h | Cyprinus carpio | 41.7 g/L |
| | $EC_{50}$/24h | Daphnia magna | 7 g/L |

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| **Persistence and Degradability** | Cisplatin is not readily biodegradable. |
| **Bioaccumulative potential** | No data identified. |
| **Mobility in soil** | No data identified. |
| **Results of PBT and vPvB assessment** | Not performed. |
| **Other adverse effects** | No data identified. |
| **Note** | The environmental characteristics of the formulated product have not been fully investigated. Releases to the environment should be avoided. |

## SECTION 13 - DISPOSAL CONSIDERATIONS

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| **Waste treatment methods** | Dispose of wastes in accordance to prescribed federal, state, and local guidelines, e.g., appropriately permitted chemical waste incinerator. Do not send down the drain or flush down the toilet. All wastes containing the material should be properly labeled. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, e.g., appropriately permitted municipal or on- site wastewater treatment facility. |

## SECTION 14 - TRANSPORT INFORMATION

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| **Transport** | De minimis exemption. Hazardous ingredients are in excepted quantity. The concentration of hazardous material in this product's composition is below that which is regulated for transport. |
| **UN number** | None assigned. |
| **UN proper shipping name** | None assigned. |
| **Transport hazard classes and packing group** | None assigned |
| **Environmental hazards** | Based on the available data, this mixture is not regulated as an environmental hazard or a marine pollutant. |
| **Special precautions for users** | Avoid release to the environment. |
| **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable. |
| **Hazardchem Code/HIN** | None assigned. |

## SECTION 15 - REGULATORY INFORMATION

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| **Safety, health and environmental regulations /legislation specific for the substance or mixture** | This SDS complies with the requirements under US, EU and GHS (EU CLP - Regulation EC No 1272/2008) guidelines. Consult your local/regional authorities for more information. |
| **Chemical safety assessment** | Not conducted. |
| **OSHA Hazardous** | Contains the cytotoxic drug, cisplatin. Combustible liquid and vapor. Harmful if swallowed. Causes skin irritation. Can cause damage to immune, hematological, gastrointestinal, and central nervous systems. Possible cancer hazard - contains material which may cause cancer. Potential mutagenicity hazard - contains material which may be mutagenic. Reproductive hazard - can cause adverse reproductive effects in males. Possible developmental hazard - may cause adverse developmental effects and birth defects (based on animal data). |
| **WHMIS classification** | FL4: H227; GCM1B: H340; Carc1B: H350; SI2: H315 |
| **TSCA status** | Drugs are exempt from TSCA. |

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| **SARA section 313** | Not listed. |
| **California proposition 65** | Cisplatin is listed as carcinogenic. |
| **Component Analysis - State** | Cisplatin is listed as hazardous in CA, MA, ME, MN, NJ, PA, and RI. |
| **Component Analysis – Chemical Inventory** | Cisplatin is listed in the chemical inventory of the following countries: Australia, China, Canada, and EU. |

## SECTION 16 - OTHER INFORMATION

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| **NFPA Ratings** | **Cisplatin** | **Health:** 3 | **Fire:** 0 | **Reactivity:** 0 |
| | **DMSO** | **Health:** 0 | **Fire:** 2 | **Reactivity:** 0 |

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| **Full text of H phrases, P phrases and GHS classification** | FL4 - Flammable Liquid Category 4. ATO2 - Acute Toxicity (Oral) Category 2. SC1 - Skin corrosion Category 1. EC1 - Eye corrosion Category 1. STOT-S1 - Specific Target Organ Toxicity Following Single Exposure Category 1. STOT-S3 - Specific Target Organ Toxicity Following Single Exposure Category 3. STOT-R1 - Specific Target Organ Toxicity Following Repeat Exposure Category 1. RT1A - Reproductive toxicity Category 1A. GCM1B - Germ Cell Mutagenicity Category 1B. Carc1B - Carcinogenic Category 1B. H227 - Combustible liquid. H300 - Fatal if swallowed. H314 - Causes severe skin burns and eye damage. H318 - Causes serious eye damage. H335 - May cause respiratory irritation. H340 - May cause genetic defects. H350 - May cause cancer. H360FD - May damage fertility. May damage the unborn child. H370 - Causes damage to immune, hematological, gastrointestinal, and central nervous systems. H372 - Causes damage to immune, hematological, gastrointestinal, and central nervous systems through prolonged or repeated exposure. |
| **Sources of data** | Information from published literature and internal company data. |
| **Abbreviations** | ACGIH - American Conference of Governmental Industrial Hygienists; ADR/RID - European Agreement Concerning the International Carriage of Dangerous Goods by Road/Rail; AIHA - American Industrial Hygiene Association; CA – California; CAS# - Chemical Abstract Services Number; CLP - Classification, Labelling, and Packaging of Substances and Mixtures; DNEL - Derived No Effect Level; DOT - Department of Transportation; EINECS - European Inventory of New and Existing Chemical Substances; ELINCS - European List of Notified Chemical Substances; EU - European Union; GHS - Globally Harmonized System of Classification and Labeling of Chemicals; IARC - International Agency for Research on Cancer; IDLH - Immediately Dangerous to Life or Health; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; LOEL - Lowest Observed Effect Level; LOAEL - Lowest Observed Adverse Effect Level; MA – Massachusetts; ME – Maine; MN – Minnesota; NJ – New Jersey; NIOSH - The National Institute for Occupational Safety and Health; NOEL - No Observed Effect Level; NOAEL - No Observed Adverse Effect Level; NOHSC – National Occupational Health and Safety Commission; NTP - National Toxicology Program; OEL - Occupational Exposure Limit; OSHA - Occupational Safety and Health Administration; PA – Pennsylvania; PNEC - Predicted No Effect Concentration; RI – Rhode Island; SARA - Superfund Amendments and Reauthorization Act; STEL - Short Term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; WHMIS - Workplace Hazardous Materials Information System |
| **Revisions** | This is the first version of this SDS. |
| **Disclaimer** | The statements contained herein are offered for informational purposes only and are based upon technical data. Fluidigm Corporation believes them to be accurate at the date of publication, but does not purport to be all-inclusive. The above-stated product is intended for use only by persons having the necessary technical skills and facilities for handling the product at their discretion and risk. Since conditions and manner of use are outside our control, we (Fluidigm Corporation) make no warranty of merchantability or any such warranty, express or implied with respect to information and we assume no liability resulting from the above product or its use. Users should perform their own investigations to determine suitability of information and product for their particular purposes. |