

SAFETY DATA SHEET

Preparation Date: 1/18/2016

Revision Date: Not Applicable

Revision Number: Not Applicable

1. IDENTIFICATION

Product identifier

Product code: D2516
Product Name: N,N-DIMETHYLFORMAMIDE-D7, 99.5 ATOM PERCENT D

Other means of identification

Synonyms: N,N-Di(2H3)methyl(2H)formamide
CAS #: 4472-41-7
RTECS # LQ2100000 (For CAS no. 68-12-2 - N,N-Dimethylformamide)
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 1
Flammable liquids	Category 3

Label elements

Danger

Hazard statements

Harmful if swallowed

Toxic if inhaled

Causes serious eye irritation

May damage fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure

Flammable liquid and vapor



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

May be harmful in contact with skin

Causes mild skin irritation

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapors/spray

Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting/ .? /equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

In case of fire: Use CO₂, dry chemical, or foam to extinguish.

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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Call a POISON CENTER or doctor/physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

Store locked up

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
N,N-Dimethylformamide-d7 4472-41-7	4472-41-7	100

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms

Severe skin and eye irritation or burns

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Carbon dioxide (CO₂). Dry chemical. Alcohol-resistant foam. Water spray.

Unsuitable Extinguishing Media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

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Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon monoxide, Carbon dioxide; nitrogen oxides, dimethylamine

Specific hazards:

Flammable
May be ignited by heat, sparks or flames
Vapor may travel considerable distance to source of ignition and flash back
Vapors may form explosive mixtures with air
Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks)
Container explosion may occur under fire conditions or when heated

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

7. HANDLING AND STORAGE

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Reducing agents. Acids. Alkali Metals. Sodium. Bromine. Phosphorous trioxide. Chlorine. Sodium borohydride. Sodium tetrahydroborate. Sodium hydride. Ethylene bromide. Hexachlorobenzene. Cyanuric chloride. Lithium azide. Triethylaluminum. chlorinated hydrocarbons. Diisocyanatomethane. Methylene diisocyanate. halogenated hydrocarbons. Nitrates. Carbon tetrachloride. alkylaluminum compounds. Sodium hydroborate and heat. Sulfinyl chloride and traces of zinc or iron. 2,4,6-Trichloro-1,3,5-triazine. 2,5-dimethylpyrrole and phosphorus oxychloride.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
N,N-Dimethylformamide-d7 4472-41-7	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA 30 mg/m ³ TWA	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA 30 mg/m ³ TWA	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
N,N-Dimethylformamide-d7 4472-41-7	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA 30 mg/m ³ TWA	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA	For CAS no. 68-12-2 - N,N- Dimethylformamide: 10 ppm TWAEV 30 mg/m ³ TWAEV

Australia and Mexico

Components	Australia	Mexico
N,N-Dimethylformamide-d7 4472-41-7	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA 30 mg/m ³ TWA	For CAS no. 68-12-2 - N,N-Dimethylformamide: 10 ppm TWA 30 mg/m ³ TWA 20 ppm STEL 60 mg/m ³ STEL

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment**Personal Protective Equipment**

- Eye protection:** Goggles.
- Skin and body protection:** Chemical resistant apron. Long sleeved clothing. Gloves.
- Respiratory protection:** Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.	Appearance: No information available	Color: Colorless.
Odor: Amine-like. Fishy.	Taste No information available	Formula: DCON(CD3)2
Molecular/Formula weight: 80.14	Flammability: Flammable	Flash point (°C): 57.778
Flashpoint (°C/°F): 57.778 °C/136 °F 67 °C/152.6 °F	Flash Point Tested according to: Closed cup Open cup	Autoignition Temperature (°C/°F): 445°C/833°F
Lower Explosion Limit (%): 2.2%	Upper Explosion Limit (%): 15.2%	pH: 6.7
Melting point/range(°C/°F): -61 °C/-77.8 °F	Boiling point/range(°C/°F): 153 °C/307.4 °F @ 760 mm Hg	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Density (g/cm3): 0.9445-0.95	Specific gravity: 0.949
Vapor pressure @ 20°C (kPa): 0.3466	Evaporation rate: No information available	Vapor density: 2.51
VOC content (g/L): No information available	Odor threshold (ppm): 100	Partition coefficient (n-octanol/water): -1.01
Viscosity: No information available	Miscibility: Miscible with water Miscible with many organic solvents	Solubility: Soluble in Ether Soluble in Chloroform Soluble in Benzene Soluble in hot alcohol Soluble in Acetone

10. STABILITY AND REACTIVITY

Reactivity

Dimethylformamide forms explosive reactions with: Bromine, Potassium permanganate, Lithium azide, Triethylaluminum and heat, and Uranium perchlorate

Reacts vigorously with oxidizing agents

Reactive with reducing agents

Reactive with acids

Chemical stability

Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Oxidizing agents. Reducing agents. Acids. Alkali Metals. Sodium. Bromine. Phosphorous trioxide. Chlorine. Sodium borohydride. Sodium tetrahydroborate. Sodium hydride. Ethylene bromide. Hexachlorobenzene. Cyanuric chloride. Lithium azide. Triethylaluminum. chlorinated hydrocarbons. Diisocyanatomethane. Methylene diisocyanate. halogenated hydrocarbons. Nitrates. Carbon tetrachloride. alkylaluminum compounds. Sodium hydroborate and heat. Sulfinyl chloride and traces of zinc or iron. 2,4,6-Trichloro-1,3,5-triazine. 2,5-dimethylpyrrole and phosphorus oxychloride.

Hazardous decomposition products: When heated to decomposition it emits toxic fumes. Carbon monoxide. Nitrogen oxides (NOx). Dimethylamine.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: Pure Dimethylformamide is essentially noncorrosive to metals. However, copper, tin and their alloys should be avoided

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Skin. Inhalation.

Acute Toxicity

Component Information

N,N-Dimethylformamide-d7 - 4472-41-7

LD50/oral/rat = For CAS no. 68-12-2 - N,N-Dimethylformamide:

2800 mg/kg (LOLI)

2000 mg/kg (RTECS)

4000 mg/kg (RTECS)

LD50/oral/mouse = For CAS no. 68-12-2 - N,N-Dimethylformamide:

2900 mg/kg (RTECS)

4000 mg/kg (RTECS)

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LD50/dermal/rat = For CAS no. 68-12-2 - N,N-Dimethylformamide:

1100 mg/kg (LOLI)

>3.2 g/kg (RTECS)

LD50/dermal/rabbit = For CAS no. 68-12-2 - N,N-Dimethylformamide:

4720 mg/kg (RTECS)

LC50/inhalation/rat = For CAS no. 68-12-2 - N,N-Dimethylformamide:

3421 ppm 1hr (RTECS)

1948 ppm 4 hr (RTECS)

LC50/inhalation/mouse = For CAS no. 68-12-2 - N,N-Dimethylformamide:

9.4 g/m³2 hr (RTECS)

Other LD50 or LC50 information = For CAS no. 68-12-2 - N,N-Dimethylformamide:

5000 mg/kg oral LD50 Rabbit (LOLI)

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 2000mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 2900mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 4720mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = 1100mg/kg

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = 1948ppm (4-hr)

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = 9400 mg/m³2 hr

Symptoms

Skin Contact:

May cause skin irritation. Mild skin irritation. It can be absorbed through the skin. May be harmful in contact with skin. It may facilitate the absorption of other dissolved substances. Absorption through the skin may cause systemic effects similar to those of inhalation or ingestion.

Eye Contact:

Causes eye irritation. Severe eye irritation. Causes conjunctivitis. Lachrymator (substance which increases the flow of tears).

Inhalation

Toxic by inhalation. May cause irritation of respiratory tract. Symptoms may include coughing and wheezing. Can cause dyspnea (shortness of breath and difficulty breathing). Causes lacrimation. May cause conjunctival irritation. May cause loss of appetite. May cause nausea, vomiting. May cause abdominal pain. May cause diarrhea or constipation. May cause cyanosis. May cause methemoglobinemia (the formation of methemoglobin in the blood which causes deficient oxygenation of the blood due to decreased available hemoglobin). Methemoglobinemia can lead to cyanosis (bluish skin and lips due to deficient oxygenation of the blood). May cause carboxyhemoglobinemia (the binding of hemoglobin to carbon monoxide in place of oxygen - also known as carbon monoxide poisoning). May affect the brain. It may affect behavior/central nervous system (convulsions). May affect behavior/central nervous system (somnolence). May affect behavior/central nervous system (central nervous system depression, headache, confusion, fatigue, irritability, muscle weakness, coma). It may affect the cardiovascular system (bradycardia, hypotension). May affect the kidneys. It may affect the liver (hepatotoxin - enlarged liver, elevated liver enzymes, jaundice). It may affect the blood (changes in serum composition). Exposure to dimethylformamide can cause ethanol intolerance. When occupationally exposed workers also ingest ethanol, it can cause flushing of the face and neck, abnormal taste (dysgeusia), and palpitations.

Ingestion

Harmful if swallowed. Ingestion may cause nausea, vomiting. May cause abdominal pain. May cause loss of appetite. May affect liver. May affect urinary system (kidneys). It may affect the blood (leukocytosis). May affect behavior/central nervous system (somnolence, ataxia, tetany, general anesthetic, muscle weakness). May affect the cardiovascular system (hypertension).

Aspiration hazard

No information available

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

Prolonged or repeated ingestion may affect metabolism (cause anorexia, weight loss)
Prolonged or repeated ingestion may affect the liver, and kidneys
Prolonged or repeated inhalation may affect the cardiovascular system (degenerative changes in the myocardium)
Prolonged or repeated inhalation may cause central nervous system effects
Prolonged or repeated inhalation may cause loss of appetite
Prolonged or repeated inhalation may affect metabolism (weight loss)
Prolonged or repeated inhalation may affect the brain
Prolonged or repeated inhalation may affect the kidneys
Prolonged or repeated inhalation may affect the liver
Prolonged or repeated skin absorption may affect the liver and kidneys
Prolonged or repeated exposure may affect the autonomic nervous system
Chronic intensive skin contact may cause dermatitis
Prolonged or repeated inhalation or ingestion may affect the blood (decrease in platelets and longer blood coagulation times, leukopenia, lymphocytosis, anemia, polycythemia)

Sensitization:

No information available

Mutagenic Effects:

Mutagenic effects in mammalian somatic cells
Experiments with animal lymphocytes have shown mutagenic effects
Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects
Cytogenetic Analysis: human lymphocyte

Carcinogenic effects: May cause cancer based on animal test data. Not classifiable as a human carcinogen. Not classifiable as to its carcinogenicity to humans.

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
N,N-Dimethylformamide-d7	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity May damage fertility or the unborn child

Reproductive Effects: May cause adverse reproductive effects
May impair fertility
Experiments have shown reproductive toxicity effects on laboratory animals

Developmental Effects: May cause harm to the unborn child
May cause adverse developmental effects based on animal data

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.
Target Organs: Liver. Kidneys. Cardiovascular system. Nervous system. Central nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
N,N-Dimethylformamide-d7	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2265
Proper Shipping Name: N,N-Dimethylformamide
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: None
ERG No: 129
Marine Pollutant: No data available
DOT RQ (lbs): No information available

TDG (Canada)

UN-No: UN2265
Proper Shipping Name: N,N-Dimethylformamide
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

ADR

UN-No: UN2265
Proper Shipping Name: N,N-Dimethylformamide
Hazard Class: 3
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN2265
Proper Shipping Name: N,N-Dimethylformamide
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-E
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN2265
Proper Shipping Name: N,N-Dimethylformamide
Hazard Class: 3
Subsidiary Risk: 3
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2265
Proper Shipping Name: N,N-Dimethylformamide

Product code: D2516

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Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN2265
Proper Shipping Name: N,N-Dimethylformamide
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 3L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>N,N-Dimethylformamide-d7</i>	Not Listed	Not present	Not present	Not present	Present	Not present	Present 224-745-8

U.S. Regulations

N,N-Dimethylformamide-d7

Massachusetts RTK: Present (For CAS no. 68-12-2 - N,N-Dimethylformamide)
New Jersey RTK Hazardous Substance List: 0759 (For CAS no. 68-12-2 - N,N-Dimethylformamide)
New Jersey (EHS) List: 0759 500 lb. TPQ (For CAS no. 68-12-2 - N,N-Dimethylformamide)
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Present (For CAS no. 68-12-2 - N,N-Dimethylformamide)
Minnesota - Hazardous Substance List: Present (For CAS no. 68-12-2 - N,N-Dimethylformamide)
New York Release Reporting - List of Hazardous Substances:
 1 lb. RQ (For CAS no. 68-12-2 - N,N-Dimethylformamide)
Louisiana Reportable Quantity List for Pollutants: 100 lb./45.4 kg final RQ (For CAS no. 68-12-2 - N,N-Dimethylformamide)
California Directors List of Hazardous Substances: Present (For CAS no. 68-12-2 - N,N-Dimethylformamide)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>N,N-Dimethylformamide-d7</i>	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
<i>N,N-Dimethylformamide-d7</i>	100 lb./45.4 kg final RQ (For CAS no. 68-12-2 - N,N-Dimethylformamide)	None	None	None	1.0% (For CAS no. 68-12-2 - N,N-Dimethylformamide)

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
N,N-Dimethylformamide-d7	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

B3 Combustible liquid
D1B Toxic materials
D2B Toxic materials
D2A Very toxic materials

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	Canada (DSL)	Canada (NDSL)
N,N-Dimethylformamide-d7	Not Listed	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
N,N-Dimethylformamide-d7	Not listed	Not listed

EU Classification

R-phrase(s)

R36 - Irritating to eyes.
R61 - May cause harm to the unborn child.
R20/21 - Harmful by inhalation and in contact with skin.

S -phrase(s)

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.

Components	Classification	Concentration Limits:	Safety Phrases
N,N-Dimethylformamide-d7		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful.
Xi - Irritant.



16. OTHER INFORMATION

Preparation Date: 1/18/2016
Revision Date: Not Applicable
Prepared by: Sonia Owen

Disclaimer: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet