



Safety Data Sheet

Canada

Section 1. Identification

Product name Tag A; part of 'ATAC Seq -20 C Kit'

Catalogue Number 29738932



9 0 2 9 7 3 8 9 3 2

Product type Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Laboratory chemicals
Scientific research and development
Analytical chemistry.

Supplier Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 1494 508000

Importer Cytiva Canada
1055 Vernon Dr
Vancouver BC V6A 3P4
Canada
+1 778-956-2584

In case of emergency INFOTRAC
Outside of the United States, call 24 Hour number: 001-352-323-3500 (Call Collect)
In the United States, call 24 Hour number: 1-800-535-5053

Section 2. Hazard identification

Classification of the substance or mixture CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms



Signal word Danger

Hazard statements May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

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, face protection, or hearing protection. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response IF exposed or concerned: Get medical advice or attention.

Storage Store locked up.



9 5 2 9 7 3 8 9 3 2 7

| | |
|-----------------|---|
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
|-----------------|---|

Section 3. Composition/information on ingredients

Substance/mixture Mixture

Other means of identification Not available.

| Ingredient name | Synonyms | % (w/w) | CAS number |
|-----------------------|---|-------------------|--------------|
| N,N-Dimethylformamide | dimethyl formamide; Formamide, N,N-dimethyl-; Dimethyl formamide-Formamide, N,N-dimethyl-; DMF; 2-hydroxybenzonitrile (CAS RN 611-20-1), in the form of a solution in N,N-dimethylformamide (CAS RN 68-12-2), containing by weight 45 % or more but not more than 55 % of 2-hydroxybenzonitrile; preparations consisting predominantly of ethylene glycol (CAS RN 107-21-1) and: — either diethylene glycol (CAS RN 111-46-6), dodecandioic acid and ammonia water, — or N,N-dimethylformamide (CAS RN 68-12-2), — or γ -butyrolactone (CAS RN 96-48-0), — or silicon oxide, — or ammonium hydrogen azelate, — or ammonium hydrogen azelate and silicon oxide, — or dodecandioic acid, ammonia water and silicon oxide, for the manufacture of electrolytic capacitors | $\geq 1 - \leq 5$ | CAS: 68-12-2 |
| Dimethyl sulfoxide | Methane, 1,1'-sulfinylbis-; Methane, sulfinylbis-; Dimethyl sulphoxide; (methylsulfinyl)methanedimethyl sulfoxide; Methyl sulfoxide; METHYLSULFINYLMETHANE; SULFINYLBIS(METHANE); DMSO; Methyl sulfoxide; Sulfinylbismethane; SULFOXIDE, DIMETHYL | ≤ 0.1 | CAS: 67-68-5 |

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

| | |
|---------------------|--|
| Eye contact | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Skin contact | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

| | |
|--------------------|---|
| Eye contact | No known significant effects or critical hazards. |
| Inhalation | No known significant effects or critical hazards. |



| | |
|--|---|
| Skin contact | No known significant effects or critical hazards. |
| Ingestion | No known significant effects or critical hazards. |
| <u>Over-exposure signs/symptoms</u> | |
| Eye contact | No specific data. |
| Inhalation | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |
| Skin contact | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |
| Ingestion | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |

Indication of immediate medical attention and special treatment needed, if necessary

| | |
|-----------------------------------|---|
| Notes to physician | In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | No specific treatment. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures**Extinguishing media**

| | |
|---|---|
| Suitable extinguishing media | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous thermal decomposition products | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides |
| Special protective actions for fire-fighters | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

| | |
|------------------------------------|--|
| For non-emergency personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| Environmental precautions | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. |



Methods and materials for containment and cleaning up

| | |
|--------------------|---|
| Small spill | Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. |

Section 7. Handling and storage**Precautions for safe handling**

| | |
|---|---|
| Protective measures | Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| Conditions for safe storage, including any incompatibilities | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |

Section 8. Exposure controls/personal protection**Control parameters****Occupational exposure limits****Ingredient name**

N,N-Dimethylformamide

Exposure limits**CA Saskatchewan Provincial (Canada, 4/2021)**

Absorbed through skin.

STEL 15 minutes: 15 ppm.

TWA 8 hours: 10 ppm.

CA British Columbia Provincial (Canada, 9/2024)

Carc 2A. Absorbed through skin.

TWA 8 hours: 5 ppm.

CA Ontario Provincial (Canada, 6/2019) Absorbed through skin.

TWA 8 hours: 10 ppm.

CA Quebec Provincial (Canada, 2/2024) C3.

Absorbed through skin.

TWAEV 8 hours: 5 ppm.

CA Alberta Provincial (Canada, 3/2023) Absorbed through skin.OEL 8 hours: 30 mg/m³.

OEL 8 hours: 10 ppm.

Dimethyl sulfoxide

OARS WEEL (United States, 9/2024)

TWA 8 hours: 250 ppm.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

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.

Individual protection measures

| | |
|-------------------------------|--|
| Hygiene measures | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Eye/face protection | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. |
| Skin protection | |
| Hand protection | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| Body protection | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Other skin protection | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. |

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

| | |
|---|----------------|
| Physical state | Liquid. |
| Color | Colourless |
| Odor | Not available. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | Not available. |
| Boiling point or initial boiling point and boiling range | Not available. |
| Flash point | Not available. |

| | Ingredient name | Closed cup | | | Open cup | | |
|--|-----------------------|------------|-------|-----------|----------|-------|--------|
| | | °C | °F | Method | °C | °F | Method |
| | N,N-dimethylformamide | 57.5 | 135.5 | DIN 51755 | 56.85 | 134.3 | |

| | |
|---|-----------------|
| Burning time | Not applicable. |
| Burning rate | Not applicable. |
| Evaporation rate | Not available. |
| Flammability | Not available. |
| Lower and upper explosive (flammable) limits | Not available. |
| Vapor pressure | Not available. |

| | Ingredient name | Vapor Pressure at 20°C | | | Vapor pressure at 50°C | | |
|--|-----------------------|------------------------|------|--------|------------------------|-----|--------|
| | | mm Hg | kPa | Method | mm Hg | kPa | Method |
| | water | 17.5 | 2.3 | | | | |
| | N,N-dimethylformamide | 3.7 | 0.49 | | | | |

| | |
|--|-----------------|
| Relative vapor density | Not available. |
| Relative density | Not available. |
| Solubility in water | Not available. |
| Partition coefficient: n-octanol/ water | Not applicable. |
| Auto-ignition temperature | Not available. |

| | Ingredient name | °C | °F | Method |
|--|-----------------------|-----|-----|--------|
| | N,N-dimethylformamide | 445 | 833 | |

| | |
|----------------------------------|----------------|
| Decomposition temperature | Not available. |
| SADT | Not available. |



| | |
|-----------------------------|--|
| Viscosity | Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available. |
| Flow time (ISO 2431) | Not available. |

Particle characteristics

| | |
|-----------------------------|-----------------|
| Median particle size | Not applicable. |
|-----------------------------|-----------------|

Section 10. Stability and reactivity

| | |
|---|--|
| Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | The product is stable. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | No specific data. |
| Incompatible materials | No specific data. |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information**Information on toxicological effects****Acute toxicity**

| Product/ingredient name | Result |
|-------------------------------------|---|
| N,N-Dimethylformamide | Rabbit - Dermal - LD50 4720 mg/kg Rat - Oral - LD50 2000 mg/kg Rat - Inhalation - LC50 Gas. 3421 ppm [1 hours] Rat - Inhalation - LC50 Gas. 1948 ppm [4 hours] Rat - Oral - LD50 14500 mg/kg Toxic effects: Eye - Hemorrhage Eye - Conjunctive irritation Rat - Dermal - LD50 40000 mg/kg |
| Dimethyl sulfoxide | |
| Conclusion/Summary [Product] | Not available. |

Skin corrosion/irritation

Not available.

| | |
|-------------------------------------|----------------|
| Conclusion/Summary [Product] | Not available. |
|-------------------------------------|----------------|

Serious eye damage/eye irritation

| Product/ingredient name | Result |
|-------------------------|---|
| N,N-Dimethylformamide | Rabbit - Eyes - Severe irritant <u>Amount/concentration applied:</u> 0.1 MI |

| | |
|-------------------------------------|----------------|
| Conclusion/Summary [Product] | Not available. |
|-------------------------------------|----------------|

Respiratory corrosion/irritation

Not available.

| | |
|-------------------------------------|----------------|
| Conclusion/Summary [Product] | Not available. |
|-------------------------------------|----------------|

Respiratory or skin sensitization

Not available.



Skin

Conclusion/Summary [Product] Not available.

Respiratory

Conclusion/Summary [Product] Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] Not available.

Classification

| | | | |
|--------------------------------|-------------|------------|--------------|
| Product/ingredient name | IARC | NTP | ACGIH |
| N,N-Dimethylformamide | 2A | - | A3 |

Reproductive toxicity

Not available.

Conclusion/Summary [Product] Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

| | |
|--------------------------------|---|
| Product/ingredient name | Result |
| N,N-Dimethylformamide | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 |

Aspiration hazard

Not available.

Information on the likely routes of exposure Not available.

Potential acute health effects

| | |
|---------------------|---|
| Eye contact | No known significant effects or critical hazards. |
| Inhalation | No known significant effects or critical hazards. |
| Skin contact | No known significant effects or critical hazards. |
| Ingestion | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|--------------------|---|
| Eye contact | No specific data. |
| Inhalation | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |



| | |
|---------------------|---|
| Skin contact | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |
| Ingestion | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Long term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Potential chronic health effects

Not available.

| | |
|-------------------------------------|---|
| Conclusion/Summary [Product] | Not available. |
| General | Causes damage to organs through prolonged or repeated exposure. |
| Carcinogenicity | May cause cancer. Risk of cancer depends on duration and level of exposure. |
| Mutagenicity | No known significant effects or critical hazards. |
| Reproductive toxicity | May damage fertility or the unborn child. |

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|-------------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| Tag A; part of 'ATAC Seq -20 C Kit' | 96200.1 | 227032.2 | 216450.2 | N/A | N/A |
| N,N-Dimethylformamide | 2000 | 4720 | 4500 | N/A | N/A |
| Dimethyl sulfoxide | 14500 | 40000 | N/A | N/A | N/A |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result |
|-------------------------|--|
| N,N-Dimethylformamide | Acute - LC50 - Fresh water Fish - Bluegill - <i>Lepomis macrochirus</i> - Juvenile (Fledgling, Hatchling, Weanling) <u>Weight</u> : 0.912 g 7100 mg/l [96 hours] <u>Effect</u> : Mortality Chronic - NOEC - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> <u>Age</u> : <24 hours 1500 mg/l [21 days] <u>Effect</u> : Reproduction Chronic - NOEC - Fresh water Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i> - Embryo 0.1 ml/l [30 days] <u>Effect</u> : Mortality Acute - EC50 - Fresh water ASTM Daphnia - Water flea - <i>Daphnia magna</i> <u>Age</u> : ≤6 hours 4500 mg/l [48 hours] <u>Effect</u> : Intoxication |
| Dimethyl sulfoxide | Acute - LC50 - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> <u>Age</u> : 31 days; <u>Size</u> : 15.8 mm; <u>Weight</u> : 0.062 g 34 g/l [96 hours] |



Effect: Mortality
Chronic - NOEC - Fresh water
 Fish - Guppy - *Poecilia reticulata* - Adult
 6 ppb [16 weeks]
Effect: Mortality
Acute - EC50 - Marine water
 OECD
 Algae - Diatom - *Nitzschia pungens*
 18.299 mg/l [96 hours]
Effect: Population
Chronic - NOEC - Marine water
 OECD
 Algae - Diatom - *Nitzschia pungens*
 3323 µg/l [96 hours]
Effect: Population
Acute - LC50 - Marine water
 OECD
 Crustaceans - Brine shrimp - *Artemia sp.*
Age: ≤24 hours
 37.437 mg/l [48 hours]
Effect: Mortality
Chronic - NOEC - Fresh water
 OECD
 Daphnia - Water flea - *Daphnia magna* - Juvenile (Fledgling, Hatchling, Weanling)
Age: 6 days
 100 µl/l [21 days]
Effect: Reproduction

Conclusion/Summary [Product] Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|-----------------|------------------|
| N,N-Dimethylformamide | - | >90%; 28 day(s) | Readily |
| Dimethyl sulfoxide | - | 31%; 28 day(s) | Not readily |

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|------|-----------|
| N,N-Dimethylformamide | -1.01 | 0.79 | Low |
| Dimethyl sulfoxide | -1.35 | 3.16 | Low |

Bioaccumulative potential

Mobility in soil

Soil/Water partition coefficient Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



Section 14. Transport information

| | TDG Classification | DOT Classification | ADR/RID | IMDG | IATA |
|-----------------------------------|---------------------------|---|----------------|----------------|----------------|
| UN number | Not available. | UN3082 | Not available. | Not available. | Not available. |
| UN proper shipping name | Not available. | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-dimethylformamide) | Not available. | Not available. | Not available. |
| Transport hazard class(es) | Not available. | 9  | Not available. | Not available. | Not available. |
| Packing group | - | III | - | - | - |
| Environmental hazards | No. | No. | No. | No. | No. |
| Additional information | - | Reportable quantity - 4810 lbs / 2183.7 kg. The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials. | | | |

Special precautions for user **Transport within user's premises:** 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.

Transport in bulk according to IMO instruments Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI The following components are listed: N,N-dimethylformamide
CEPA Toxic substances None of the components are listed.

International regulationsChemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.



Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

| | |
|----------------------|---|
| Canada | At least one component is not listed in DSL but all such components are listed in NDSL. |
| United States | All components are active or exempted. |

Section 16. Other information**History**

| | |
|---------------------------------------|-----------------------|
| Date of printing | 2/19/2026 |
| Date of issue/Date of revision | 2/19/2026 |
| Date of previous issue | 6/28/2023 |
| Version | 1.01 |
| | sds_author@cytiva.com |

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Procedure used to derive the classification

| Classification | Justification |
|---|----------------------|
| CARCINOGENICITY - Category 1B | Calculation method |
| TOXIC TO REPRODUCTION - Category 1B | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 3 | Calculation method |

References

Not available.



Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

