



SAFETY DATA SHEET

New Zealand

Section 1. Identification

Product name

ATAC Seq -20 C Kit

Catalogue Number

29738932



9 0 2 9 7 3 8 9 3 2

Other means of identification Not available.

Product type Liquid.

Identified uses

Laboratory chemicals
Scientific research and development
Analytical chemistry.

Supplier

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

Cytiva New Zealand
Buddle Findlay, Level 18, Pricewaterhousecooper Tower,
188 Quay Street,
Auckland, Auckland, 1010
New Zealand

Person who prepared the SDS :

sds_author@cytiva.com

Emergency telephone number (with hours of operation)

0800 733 893
(10am - 7pm)

Section 2. Hazards identification

HSNO Classification

ACUTE TOXICITY (inhalation) - Category 4
REPRODUCTIVE TOXICITY - Category 1
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 89.4%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 89.4%

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS label elements

Signal word Danger

Hazard statements

Harmful if inhaled.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General

Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

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. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapour.

Response

IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Storage

Store locked up.

Disposal

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



Symbol

Other hazards which do not result in classification None known.

Section 3. Composition/information on ingredients

Substance/mixture	Mixture	
Other means of identification	Not available.	
Ingredient name	% (w/w)	Identifiers
Formamide, N,N-dimethyl-	<2.1	CAS: 68-12-2 EC: 200-679-5
Dimethyl sulphoxide	0.075 - 0.1	CAS: 67-68-5 EC: 200-664-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment 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

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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.
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.
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.
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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation	Harmful if inhaled.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Ingestion	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Skin	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Eyes	No specific data.



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

Specific treatments	Not available.
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.
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. Firefighting measures

Extinguishing media

Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	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
Hazchem code	Not available.
Special precautions 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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialised 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 spilt 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 material 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 the 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 spilt 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 vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 unlabelled 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

Formamide, N,N-dimethyl-

Exposure limits

HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023) Absorbed through skin.
WES-TWA 8 hours: 5 ppm.
WES-TWA 8 hours: 15 mg/m³.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

Use only with adequate ventilation. 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.
Colour	Colourless
Odour	Not available.
Odour 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	°C	°F	Closed cup		Open cup	
			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.								
Vapour pressure	Not available.								
	Vapour Pressure at 20°C				Vapour pressure at 50°C				
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa			
	water	17.5	2.3						
	N,N-dimethylformamide	3.7	0.49						
Relative vapour 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 likely routes of exposure

Inhalation	Harmful if inhaled.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Ingestion	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Skin contact	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Eye contact	No specific data.

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

Acute toxicity

Product/ingredient name	Result



Formamide, N,N-dimethyl-	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 sulphoxide	

Conclusion/Summary[Product] Not available.

Skin corrosion/irritation

Not available.

Conclusion/Summary[Product] Not available.

Serious eye damage/eye irritation

Product/ingredient name

Formamide, N,N-dimethyl-

Result

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 0.1 Ml

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.

Potential chronic health effects

General	May cause damage to organs through prolonged or repeated exposure.
Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	May damage fertility.

Chronic toxicity

Not available.

Conclusion/Summary[Product] Not available.

Carcinogenicity



Not available.

Conclusion/Summary[Product] Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary[Product] Not available.

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

Formamide, N,N-dimethyl-

Result

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1

Aspiration hazard

Not available.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
ATAC Seq -20 C Kit	10201.1	5610.6	9935.8	N/A	N/A
Formamide, N,N-dimethyl-	2000	1100	1948	N/A	N/A
Dimethyl sulphoxide	14500	40000	N/A	N/A	N/A

Section 12. Ecological information

Ecotoxicity

This material is harmful to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name

Formamide, N,N-dimethyl-

Result

Acute - LC50 - Fresh water

Fish - Bluegill - *Lepomis macrochirus* - Juvenile (Fledgling, Hatchling, Weanling)

Weight: 0.912 g

7100 mg/l [96 hours]

Effect: Mortality

Chronic - NOEC - Fresh water

Daphnia - Water flea - *Daphnia magna*

Age: <24 hours

1500 mg/l [21 days]

Effect: Reproduction

Chronic - NOEC - Fresh water

Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss* - Embryo

0.1 ml/l [30 days]

Effect: Mortality

Acute - EC50 - Fresh water

ASTM

Daphnia - Water flea - *Daphnia magna*

Age: ≤6 hours

4500 mg/l [48 hours]

Effect: Intoxication

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 31 days; Size: 15.8 mm; Weight: 0.062 g

34 g/l [96 hours]

Effect: Mortality

Chronic - NOEC - Fresh water

Fish - Guppy - *Poecilia reticulata* - Adult

Dimethyl sulphoxide



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/degradability

Not available.

Conclusion/Summary[Product] Not available.

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

Bioaccumulative potential

Product/ingredient name	LogP_{ow}	BCF	Potential
N,N-dimethylformamide	-1.01	0.79	Low
dimethyl sulfoxide	-1.35	3.16	Low

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 minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*
New Zealand Class	Not available.	Not available.	Not available.	-
		No.		
IATA Class	Not available.	Not available.	Not available.	-
		No.		
IMDG Class	Not available.	Not available.	Not available.	-
		No.		



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

HSNO Approval Number HSR002596

HSNO Group Standard Laboratory Chemicals and Reagent Kits

HSNO Classification ACUTE TOXICITY (inhalation) - Category 4

REPRODUCTIVE TOXICITY - Category 1

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

International regulations**Chemical 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

New Zealand All components are listed or exempted.

Australia All components are listed or exempted.

United States All components are active or exempted.

Canada inventory At least one component is not listed in DSL but all such components are listed in NDSL.

China All components are listed or exempted.

Japan **Japan inventory (CSCL):** Not determined.

Japan inventory (ISHL): Not determined.

Section 16. Other information**History**

Date of printing 19 February 2026

Date of issue/ Date of revision 19 February 2026

Date of previous issue 6/30/2023

Version 1.01

Key to abbreviations

ADG = Australian Dangerous Goods

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

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)

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

UN = United Nations

References

Not available.

 Indicates information that has changed from previously issued version.

Notice to reader

9 5 2 9 7 3 8 9 3 2

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.



9 5 2 9 7 3 8 9 3 2