

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code SUBSTRATE B
Product name Substrate B

Company/Undertaking Identification

INVITROGEN CORPORATON
5791 VAN ALLEN WAY
PO BOX 6482
CARLSBAD, CA 92008
760-603-7200

INVITROGEN CORPORATION
5250 MAINWAY DRIVE
BURLINGTON, ONT
CANADA L7L 6A4
800-263-6236

GIBCO PRODUCTS
INVITROGEN CORPORATION
3175 STALEY ROAD P.O. BOX 68
GRAND ISLAND, NY 14072
716-774-6700

2. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous/Non-hazardous Components**

Chemical Name	CAS-No	Weight %
N,N-dimethylformamide	68-12-2	20-40

We recommend handling all chemicals with caution.

3. HAZARDS IDENTIFICATION**Emergency Overview**

May cause harm to the unborn child.
Irritating to eyes
Harmful by inhalation and in contact with skin.

Form
Liquid

3. HAZARDS IDENTIFICATION

Principle Routes of Exposure/

Potential Health effects

Eyes	Irritating to eyes.
Skin	Harmful in contact with skin.
Inhalation	Harmful by inhalation.
Ingestion	No information available

Specific effects

Carcinogenic effects	No information available
Mutagenic effects	No information available
Reproductive toxicity	May cause harm to the unborn child..
Sensitization	No information available

Target Organ Effects

No information available

HMIS

Health	2
Flammability	1
Reactivity	0

4. FIRST AID MEASURES

Skin contact	Wash off immediately with plenty of water. Consult a physician if necessary.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Ingestion	Never give anything by mouth to an unconscious person. Consult a physician if necessary.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical
Special protective equipment for firefighters	Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment
Methods for cleaning up	Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling	Always wear recommended Personal Protective Equipment. Avoid contact with skin and eyes.
Storage	Keep in properly labelled containers

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Exposure limits

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
N,N-dimethylformamide	10 ppm 30 mg/m ³	-	10 ppm	-

Engineering measures Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment
Hand protection	Protective gloves
Eye protection	Safety glasses with side-shields
Skin and body protection	Lightweight protective clothing.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice
Environmental exposure controls	Prevent product from entering drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form Liquid

Important Health Safety and Environmental Information

Boiling point/range	°C No data available	°F No data available
Melting point/range	°C No data available	°F No data available
Flash point	°C No data available	°F No data available
Autoignition temperature	°C No data available	°F No data available
Oxidizing properties	No information available	
Water solubility	No data available	

10. STABILITY AND REACTIVITY

Stability	No information available.
Materials to avoid	No information available
Hazardous decomposition products	No information available
Polymerization	No information available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
N,N-dimethylformamide	2800 mg/kg (Rat)	4720 mg/kg (Rabbit)	No data available

**Principle Routes of Exposure/
Potential Health effects**

Eyes	Irritating to eyes.
Skin	Harmful in contact with skin.
Inhalation	Harmful by inhalation.
Ingestion	No information available

Specific effects

Carcinogenic effects	No information available
Mutagenic effects	No information available
Reproductive toxicity	May cause harm to the unborn child..

Sensitization

No information available

Target Organ Effects

No information available

12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

No information available.

Mobility

No information available.

Biodegradation

No information available.

Bioaccumulation

No information available

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION**IATA****Proper shipping name**

Not classified as dangerous in the meaning of transport regulations

Hazard Class

No information available

Subsidiary Class

No information available

Packing group

No information available

UN-No

No information available

15. REGULATORY INFORMATION**International Inventories**

Chemical Name	TSCA	PICCS	ENCS	DSL	NDSL	AICS
N,N-dimethylformamide	Listed	Listed	Listed	Listed	-	Listed

U.S. Federal Regulations**SARA 313**

This product is not regulated by SARA.

Chemical Name**CAS-No****Weight %**

N,N-dimethylformamide

68-12-2

20-40

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

Chemical Name**CAS-No****Weight %**

N,N-dimethylformamide

68-12-2

20-40

U.S. State Regulations

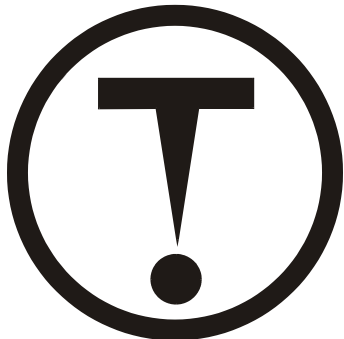
Chemical Name	Massachusetts - RTK	New Jersey - RTK	Pennsylvania - RTK	Illinois - RTK	Rhode Island - RTK
N,N-dimethylformamide	Listed	-	Listed	Listed	Listed

California Proposition 65

This product does not contain chemicals listed under Proposition 65

WHMIS hazard class:

D2A Very toxic materials



This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. OTHER INFORMATION

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

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End of Safety Data Sheet