



# Estradiol ELISA Kit

Kit Product

## Kit identification

Product name : Estradiol ELISA Kit  
Product code : 402110  
Part Number(s) : 402110

## Details of the supplier of the Kit safety information sheet

Neogen Corporation  
620 Leshar Place  
Lansing, Michigan 48912  
United States of America  
T 800.234.5333  
[sds@neogen.com](mailto:sds@neogen.com) - <https://www.neogen.com/>

## General information

Restrictions on use : Do not use kit components from one kit with any other kit.  
General description : This is a test kit that is comprised of several individual components, listed below, each of which may have its own Safety Data Sheet (SDS). Articles, and otherwise immobilized and inaccessible chemicals, do not have a Safety Data Sheet in this packet.

## Kit contents

Name	GHS classification
K-Blue Advanced TMB Substrate	Repr. 1B, H360
Estradiol Standard	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation:dust,mist), H331 Eye Irrit. 2, H319 Repr. 1B, H360 STOT SE 1, H370 STOT RE 1, H372
10X Wash Buffer	Not classified
EIA Buffer	Not classified
Estradiol Conjugate	Not classified
Extraction Buffer 5X	Not classified





## Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
<b>UN Number</b>			
UN3316	UN3316	3316	3316

# Estradiol ELISA Kit

## Kit Safety Information Sheet (SIS)

TDG	DOT	IMDG	IATA
<b>UN Proper Shipping Name</b>			
CHEMICAL KIT	Chemical kit	CHEMICAL KIT	Chemical kit
<b>Transport document description</b>			
UN3316 CHEMICAL KIT, 9, II	UN3316 Chemical kit, 9	UN 3316 CHEMICAL KIT, 9	UN 3316 Chemical kit, 9
<b>Transport hazard class(es)</b>			
9	9	9	9
			
<b>Packing group, if applicable</b>			
II	Not applicable	Not applicable	Not applicable
<b>Environmental hazards</b>			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

### Special precautions for user

<b>TDG</b>	
UN-No. (TDG)	: UN3316
TDG Special Provisions	: 65 - (1) A chemical kit or first aid kit must be included in the packing group that is the most stringent packing group assigned to any one of the dangerous goods in the kit, and the kit must not contain (a) dangerous goods that are not allowed to be transported as limited quantities or that are forbidden for transport in Schedule 1 or Schedule 3; (b) dangerous goods that react dangerously with each other; or (c) a total quantity of dangerous goods that is greater than 1 L or 1 kg. (2) A chemical kit or first aid kit containing dangerous goods in inner packagings that do not exceed the quantity limits for limited quantities applicable to individual substances as specified in column 6(a) of Schedule 1 may be transported in accordance with section 1.17 of Part 1 (Coming into force, Repeal, Interpretation, General Provisions and Special Cases), 141 - (1) Any dangerous goods may be transported under any of these shipping names if (a) the dangerous goods are contained in a chemical kit, first aid kit or polyester resin kit; and (b) the quantities do not exceed the limits that apply to the dangerous goods as determined in accordance with column 6(b) of Schedule 1 and the table to subsection 1.17.1(2). (2) Despite paragraph (1)(b), in the case of dangerous goods that are included in Class 5.2, Organic Peroxides, the quantity limits must be determined using the alphanumeric code E2.
Explosive Limit and Limited Quantity Index	: See SP65
Excepted quantities (TDG)	: See SP141
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 10 kg
Emergency Response Guide (ERG) Number	: 171
<b>DOT</b>	
UN-No. (DOT)	: UN3316

# Estradiol ELISA Kit

## Kit Safety Information Sheet (SIS)

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DOT Special Provisions (49 CFR 172.102)	: 15 - This entry applies to Chemical kits and First aid kits containing one or more compatible items of hazardous materials in boxes, cases, etc. that are used for medical, analytical, diagnostic or testing purposes. For transportation by aircraft, materials forbidden for transportation by passenger aircraft or cargo aircraft may not be included in the kits. Chemical kits and first aid kits are excepted from the specification packaging requirements of this subchapter when packaged in combination packaging. Chemical kits and first aid kits are also excepted from the labeling and placarding requirements of this subchapter, except when offered for transportation or transported by air. Chemical and first aid kits may be transported in accordance with the consumer commodity and ORM exceptions in 173.156, provided they meet all required conditions. Kits that are carried on board transport vehicles for first aid or operating purposes are not subject to the requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 161
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 161
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 10 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 10 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### IMDG

Special provision (IMDG)	: 251, 340
Limited quantities (IMDG)	: SP251
Excepted quantities (IMDG)	: SP340
Packing instructions (IMDG)	: P901
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-P - SPILLAGE SCHEDULE Papa - SUBSTANCES DANGEROUS WHEN WET (COLLECTABLE ARTICLES)
Stowage category (IMDG)	: A

### IATA

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y960
PCA limited quantity max net quantity (IATA)	: 1kg
PCA packing instructions (IATA)	: 960
PCA max net quantity (IATA)	: 10kg
CAO packing instructions (IATA)	: 960
CAO max net quantity (IATA)	: 10kg
Special provision (IATA)	: A44, A163
ERG code (IATA)	: 9L

### Transport in bulk according to Annex II of MARPOL 73/78<sup>9</sup> and the IBC Code<sup>10</sup>

Not applicable



# 10X Wash Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Issue date: 06-25-2025 Revision date: 08-28-2025 Supersedes: 06-25-2025 Version: 2.0

### SECTION 1 Identification

#### 1.1. GHS Product identifier

Product form : Mixture  
Trade name : 10X Wash Buffer  
Type of product : Life Sciences -- [Life Sciences]  
Product code : 25001

#### 1.2. Other means of identification

Part Number(s) : 25001|25112|27038|301176|301177

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals, Scientific research and development  
Restrictions on use : Do not use kit components from one kit with any other kit.

#### 1.4. Supplier's details

Neogen Corporation  
620 Leshar Place  
Lansing, Michigan 48912  
United States of America  
T 800.234.5333  
[sds@neogen.com](mailto:sds@neogen.com) - <https://www.neogen.com/>

#### 1.5. Emergency phone number

Emergency number : 24 hours:  
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)  
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

### SECTION 2 Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Not classified

#### 2.2. GHS label elements, including precautionary statements

##### GHS CA labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

### SECTION 3 Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of schedule 1, item 3 of the Hazardous Products Regulations.

# 10X Wash Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 4 First-aid measures

#### 4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures general	: If you feel unwell, seek medical advice.
Personal protection for first-aid responders.	: First aid workers will be equipped with suitable personal protective equipment.

#### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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

Other medical advice or treatment	: Treat symptomatically.
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### SECTION 5 Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

#### 5.3. Special protective actions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6 Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
Environmental precautions	: Avoid release to the environment.

#### 6.2. Methods and materials for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.
For further information refer to section 13.	

# 10X Wash Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 7 Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.  
Storage conditions : Keep cool. Protect from sunlight.  
Packaging materials : Store always product in container of same material as original container.

### SECTION 8 Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures, such as personal protective equipment (PPE)

##### Personal protective equipment:

Wear recommended personal protective equipment.

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

##### Personal protective equipment symbol(s):



### SECTION 9 Physical and chemical properties

#### 9.1. Basic physical and chemical properties

Physical state : Liquid

# 10X Wash Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Appearance	: Liquid.
Color	: Clear Colorless
Odor	: Odorless Slight
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: No additional information available
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

## SECTION 11 Toxicological information

### 11.1. Likely routes of exposure

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

10X Wash Buffer	
Unknown acute toxicity (GHS CA)	1.31% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 1.31% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 1.31% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

# 10X Wash Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

## SECTION 12 Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

### 12.2. Persistence and degradability

#### 10X Wash Buffer

Persistence and degradability	Not rapidly degradable
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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

## SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

## SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
<b>14.1. UN Number</b>			
Not regulated for transport			
<b>14.2. UN Proper Shipping Name</b>			
Not regulated	Not regulated	Not regulated	Not regulated

# 10X Wash Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

TDG	DOT	IMDG	IATA
<b>14.3. Transport hazard class(es)</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group, if applicable</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

### 14.6. Special precautions for user

#### TDG

Not regulated

#### DOT

Not regulated

#### IMDG

Not regulated

#### IATA

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78<sup>9</sup> and the IBC Code<sup>10</sup>

Not applicable

## SECTION 15 Regulatory information

No additional information available

## SECTION 16 Other Information

Issue date : 06-25-2025  
Revision date : 08-28-2025  
Supersedes : 06-25-2025

Safety Data Sheet (SDS), Canada

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



# EIA Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)  
Issue date: 06-27-2025 Revision date: 08-28-2025 Supersedes: 06-27-2025 Version: 2.0

### SECTION 1 Identification

#### 1.1. GHS Product identifier

Product form : Mixture  
Trade name : EIA Buffer  
Type of product : Life Sciences -- [Life Sciences]  
Product code : 25000

#### 1.2. Other means of identification

Part Number(s) : 25000|25111|21014|21328|301276|301277

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals, Scientific research and development  
Restrictions on use : Do not use kit components from one kit with any other kit.

#### 1.4. Supplier's details

Neogen Corporation  
620 Leshar Place  
Lansing, Michigan 48912  
United States of America  
T 800.234.5333  
[sds@neogen.com](mailto:sds@neogen.com) - <https://www.neogen.com/>

#### 1.5. Emergency phone number

Emergency number : 24 hours:  
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)  
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

### SECTION 2 Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Not classified

#### 2.2. GHS label elements, including precautionary statements

##### GHS CA labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

### SECTION 3 Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of schedule 1, item 3 of the Hazardous Products Regulations.

# EIA Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 4 First-aid measures

#### 4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures general	: If you feel unwell, seek medical advice.
Personal protection for first-aid responders.	: First aid workers will be equipped with suitable personal protective equipment.

#### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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

Other medical advice or treatment	: Treat symptomatically.
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### SECTION 5 Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

#### 5.3. Special protective actions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6 Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
Environmental precautions	: Avoid release to the environment.

#### 6.2. Methods and materials for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.
For further information refer to section 13.	

# EIA Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 7 Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.  
Storage conditions : Keep cool. Protect from sunlight.  
Packaging materials : Store always product in container of same material as original container.

### SECTION 8 Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures, such as personal protective equipment (PPE)

##### Personal protective equipment:

Wear recommended personal protective equipment.

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

##### Personal protective equipment symbol(s):



### SECTION 9 Physical and chemical properties

#### 9.1. Basic physical and chemical properties

Physical state : Liquid

# EIA Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Appearance	: Liquid.
Color	: Clear
Odor	: Odorless Slight
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: No additional information available
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

## SECTION 11 Toxicological information

### 11.1. Likely routes of exposure

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### EIA Buffer

Unknown acute toxicity (GHS CA)	1.31% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 1.31% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 1.31% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

# EIA Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

### SECTION 12 Ecological information

#### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified.

#### 12.2. Persistence and degradability

##### EIA Buffer

Persistence and degradability	Not rapidly degradable
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#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

### SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

### SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
<b>14.1. UN Number</b>			
Not regulated for transport			
<b>14.2. UN Proper Shipping Name</b>			
Not regulated	Not regulated	Not regulated	Not regulated

# EIA Buffer

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

TDG	DOT	IMDG	IATA
<b>14.3. Transport hazard class(es)</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group, if applicable</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

### 14.6. Special precautions for user

#### TDG

Not regulated

#### DOT

Not regulated

#### IMDG

Not regulated

#### IATA

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78<sup>9</sup> and the IBC Code<sup>10</sup>

Not applicable

## SECTION 15 Regulatory information

No additional information available

## SECTION 16 Other Information

Issue date : 06-27-2025  
Revision date : 08-28-2025  
Supersedes : 06-27-2025

Safety Data Sheet (SDS), Canada

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

### SECTION 1 Identification

#### 1.1. GHS Product identifier

Product form : Mixture  
Trade name : K-Blue® Advanced TMB Substrate  
Type of product : Life Sciences -- [Life Sciences]  
Product code : 21266

#### 1.2. Other means of identification

Part Number(s) : 21266|27090|319175|319176|319177|319257|319251|319207|319206|319212|319170-W|319171|319174-W|319189|319191|319199|319202|319210-L

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals, Scientific research and development  
Restrictions on use : Do not use kit components from one kit with any other kit.

#### 1.4. Supplier's details

##### Manufacturer

Neogen Corporation  
620 Leshler Place  
Lansing, Michigan 48912  
United States of America  
T 800.234.5333  
[sds@neogen.com](mailto:sds@neogen.com) - <https://www.neogen.com/>

#### 1.5. Emergency phone number

Emergency number : 24 hours:  
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)  
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

### SECTION 2 Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Reproductive toxicity, Category 1B H360 May damage fertility or the unborn child.  
Full text of H statements : see section 16

#### 2.2. GHS label elements, including precautionary statements

##### GHS CA labeling

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Danger

Hazard statements (GHS CA) : H360 - May damage fertility or the unborn child

Precautionary statements (GHS CA) : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

# K-Blue® Advanced TMB Substrate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

P308+P313 - IF exposed or concerned: Get medical advice or attention.  
P405 - Store locked up.  
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

### 2.3. Other hazards which do not result in classification

No additional information available

## SECTION 3 Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
2-Pyrrolidinone	2-Pyrrolidinone 2-ketopyrrolidine / 2-ketopyrrolidone / 2-oxopyrrolidine / 2-pyrol / 2- pyrrolidinone / 2- pyrrolidon usp / 2- pyrrolidone / 4- aminobutyric acid lactam / alpha- pyrrolidinone / alpha-pyrrolidone / butanoic acid, 4- amino-, lactam / butyrolactam(=2- pyrrolidone) / gamma- aminobutyric acid lactam / gamma- aminobutyric lactam / gamma- aminobutyrolacta m / gamma- butyrolactam / lam / pyrrolidon dest. / pyrrolidone	CAS-No.: 616-45-5	≥ 5 – < 10	Eye Irrit. 2, H319 Repr. 1B, H360

Full text of hazard classes and H-statements : see section 16

## SECTION 4 First-aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

# K-Blue® Advanced TMB Substrate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

First-aid measures general : IF exposed or concerned: Get medical advice/attention.  
Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.  
Symptoms/effects after skin contact : None under normal conditions.  
Symptoms/effects after eye contact : None under normal conditions.  
Symptoms/effects after ingestion : None under normal conditions.  
Chronic symptoms : May damage fertility or the unborn child.

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

Other medical advice or treatment : Treat symptomatically.

## SECTION 5 Fire-fighting measures

### 5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.  
Explosion hazard : No direct explosion hazard.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective actions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6 Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.  
Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

### 6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.  
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.  
For further information refer to section 13.

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.

# K-Blue® Advanced TMB Substrate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.  
Storage conditions : Store locked up.  
Packaging materials : Store always product in container of same material as original container.

## SECTION 8 Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

#### Personal protective equipment:

Wear recommended personal protective equipment.

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

#### Personal protective equipment symbol(s):



## SECTION 9 Physical and chemical properties

### 9.1. Basic physical and chemical properties

Physical state : Liquid  
Appearance : No data available  
Color : Clear light blue  
Odor : Characteristic  
Odor threshold : No data available  
pH : 3.1 – 3.5

# K-Blue® Advanced TMB Substrate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: No additional information available
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

## SECTION 11 Toxicological information

### 11.1. Likely routes of exposure

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

K-Blue® Advanced TMB Substrate	
Unknown acute toxicity (GHS CA)	5.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 5.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 5.6% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
2-Pyrrolidinone (616-45-5)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LD50 dermal rabbit	> 2000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation	: Not classified. pH: 3.1 – 3.5
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2-Pyrrolidinone (616-45-5)	
pH	8 – 9 (10 %)

# K-Blue® Advanced TMB Substrate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Serious eye damage/irritation : Not classified  
pH: 3.1 – 3.5

2-Pyrrolidinone (616-45-5)	
pH	8 – 9 (10 %)

Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : May damage fertility or the unborn child.  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified

2-Pyrrolidinone (616-45-5)	
NOAEL (oral,rat,90 days)	207 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified

2-Pyrrolidinone (616-45-5)	
Viscosity, kinematic	9.009 mm <sup>2</sup> /s

Symptoms/effects after inhalation : None under normal conditions.  
Symptoms/effects after skin contact : None under normal conditions.  
Symptoms/effects after eye contact : None under normal conditions.  
Symptoms/effects after ingestion : None under normal conditions.  
Chronic symptoms : May damage fertility or the unborn child.

## SECTION 12 Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified.  
Hazardous to the aquatic environment, long-term (chronic) : Not classified.

2-Pyrrolidinone (616-45-5)	
LC50 - Fish [1]	4600 – 10000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	> 500 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 algae	> 500 mg/l (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value)
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

### 12.2. Persistence and degradability

K-Blue® Advanced TMB Substrate	
Persistence and degradability	Not rapidly degradable
2-Pyrrolidinone (616-45-5)	
Persistence and degradability	Readily biodegradable in water.

# K-Blue® Advanced TMB Substrate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

2-Pyrrolidinone (616-45-5)	
Biochemical oxygen demand (BOD)	1.16 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.69 g O <sub>2</sub> /g substance
ThOD	2.44 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

2-Pyrrolidinone (616-45-5)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
BCF - Fish [1]	3.16 l/kg (BCFBFAF v3.00, Fresh water, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	-0.71 (Practical experience/observation, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)

### 12.4. Mobility in soil

2-Pyrrolidinone (616-45-5)	
Mobility in soil	17 Source: National Library of Medicine/Hazardous Substances Data Bank
Ecology - soil	Highly mobile in soil.
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.868 (log Koc, Calculated value)

### 12.5. Other adverse effects

Ozone : Not classified  
Fluorinated greenhouse gases : No

## SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Disposal must be done according to official regulations.  
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.  
Additional information : Do not re-use empty containers.

## SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
<b>14.1. UN Number</b>			
Not regulated for transport			
<b>14.2. UN Proper Shipping Name</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group, if applicable</b>			
Not regulated	Not regulated	Not regulated	Not regulated

# K-Blue® Advanced TMB Substrate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

TDG	DOT	IMDG	IATA
<b>14.5. Environmental hazards</b>			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

### 14.6. Special precautions for user

#### TDG

Not regulated

#### DOT

Not regulated

#### IMDG

Not regulated

#### IATA

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78<sup>9</sup> and the IBC Code<sup>10</sup>

Not applicable

## SECTION 15 Regulatory information

### 2-Pyrrolidinone (616-45-5)

Listed on the Canadian DSL (Domestic Substances List)

### 2-Pyrrolidinone (616-45-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on INSQ (Mexican National Inventory of Chemical Substances)

## SECTION 16 Other Information

Issue date : 06-26-2025

Revision date : 08-29-2025

Supersedes : 06-26-2025

### Full text of hazard classes and H-statements:

H319	Causes serious eye irritation
H360	May damage fertility or the unborn child

Safety Data Sheet (SDS), Canada

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



# Estradiol Conjugate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)  
Issue date: 06-30-2025 Version: 1.0

### SECTION 1 Identification

#### 1.1. GHS Product identifier

Product form : Mixture  
Product name : Estradiol Conjugate  
Type of product : Life Sciences -- [Life Sciences]  
Product code : 21221

#### 1.2. Other means of identification

Part Number(s) : 21221

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals, Scientific research and development  
Restrictions on use : Do not use kit components from one kit with any other kit.

#### 1.4. Supplier's details

Neogen Corporation  
620 Leshar Place  
Lansing, Michigan 48912  
United States of America  
T 800.234.5333  
[sds@neogen.com](mailto:sds@neogen.com) - <https://www.neogen.com/>

#### 1.5. Emergency phone number

Emergency number : 24 hours:  
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)  
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

### SECTION 2 Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Not classified

#### 2.2. GHS label elements, including precautionary statements

##### GHS CA labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

### SECTION 3 Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of schedule 1, item 3 of the Hazardous Products Regulations.

# Estradiol Conjugate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 4 First-aid measures

#### 4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures general	: If you feel unwell, seek medical advice.
Personal protection for first-aid responders.	: First aid workers will be equipped with suitable personal protective equipment.

#### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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

Other medical advice or treatment	: Treat symptomatically.
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### SECTION 5 Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

#### 5.3. Special protective actions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6 Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
Environmental precautions	: Avoid release to the environment.

#### 6.2. Methods and materials for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.
For further information refer to section 13.	

# Estradiol Conjugate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 7 Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.  
Storage conditions : Keep cool. Protect from sunlight.  
Packaging materials : Store always product in container of same material as original container.

### SECTION 8 Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures, such as personal protective equipment (PPE)

##### Personal protective equipment:

Wear recommended personal protective equipment.

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

##### Personal protective equipment symbol(s):



### SECTION 9 Physical and chemical properties

#### 9.1. Basic physical and chemical properties

Physical state : Liquid

# Estradiol Conjugate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Appearance	: No data available
Color	: Amber
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: No additional information available
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

## SECTION 11 Toxicological information

### 11.1. Likely routes of exposure

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### Estradiol Conjugate

Unknown acute toxicity (GHS CA)	100% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
---------------------------------	--

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

# Estradiol Conjugate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

## SECTION 12 Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified.

### 12.2. Persistence and degradability

Estradiol Conjugate	
Persistence and degradability	Not rapidly degradable

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

## SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

## SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
<b>14.1. UN Number</b>			
Not regulated for transport			
<b>14.2. UN Proper Shipping Name</b>			
Not regulated	Not regulated	Not regulated	Not regulated

# Estradiol Conjugate

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

TDG	DOT	IMDG	IATA
<b>14.3. Transport hazard class(es)</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group, if applicable</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

### 14.6. Special precautions for user

#### TDG

Not regulated

#### DOT

Not regulated

#### IMDG

Not regulated

#### IATA

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78<sup>9</sup> and the IBC Code<sup>10</sup>

Not applicable

## SECTION 15 Regulatory information

No additional information available

## SECTION 16 Other Information

Issue date : 06-30-2025

Safety Data Sheet (SDS), Canada

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

### SECTION 1 Identification

#### 1.1. GHS Product identifier

Product form : Mixture  
Product name : Estradiol Standard  
Type of product : Life Sciences -- [Life Sciences]  
Product code : 21302

#### 1.2. Other means of identification

Part Number(s) : 21302

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals, Scientific research and development  
Restrictions on use : Do not use kit components from one kit with any other kit.

#### 1.4. Supplier's details

Neogen Corporation  
620 Leshner Place  
Lansing, Michigan 48912  
United States of America  
T 800.234.5333  
[sds@neogen.com](mailto:sds@neogen.com) - <https://www.neogen.com/>

#### 1.5. Emergency phone number

Emergency number : 24 hours:  
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)  
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

### SECTION 2 Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Flammable liquids, Category 2	H225	Highly flammable liquid and vapor.
Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Acute toxicity (inhalation:dust,mist), Category 3	H331	Toxic if inhaled.
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.
Reproductive toxicity, Category 1B	H360	May damage fertility or the unborn child.
Specific target organ toxicity, Single exposure, Category 1	H370	Causes damage to organs.
Specific target organ toxicity, Repeated exposure, Category 1	H372	Causes damage to organs through prolonged or repeated exposure.

Full text of H statements : see section 16

#### 2.2. GHS label elements, including precautionary statements

##### GHS CA labeling

Hazard pictograms (GHS CA) : 

Signal word (GHS CA) : Danger

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Hazard statements (GHS CA)	: H225 - Highly flammable liquid and vapor H302 - Harmful if swallowed H319 - Causes serious eye irritation H331 - Toxic if inhaled H360 - May damage fertility or the unborn child H370 - Causes damage to organs. H372 - Causes damage to organs through prolonged or repeated exposure.
Precautionary statements (GHS CA)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P260 - Do not breathe dust, fume, gas, mist, vapors, spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection. P301+P312 - IF SWALLOWED: Call a POISON CENTER or a doctor if you feel unwell. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P311 - IF exposed or concerned: Call a POISON CENTER or a doctor. P308+P313 - IF exposed or concerned: Get medical advice or attention. P311 - Call a POISON CENTER or a doctor. P314 - Get medical advice or attention if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P330 - Rinse mouth. P337+P313 - If eye irritation persists: Get medical advice or attention. P370+P378 - In case of fire: Use appropriate media to extinguish. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up. P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

### 2.3. Other hazards which do not result in classification

No additional information available

## SECTION 3 Composition/information on ingredients

### 3.1. Substances

Not applicable

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### 3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Methanol	Methylalcohol 420A reagent #5 / acetone alcohol / A13-00409 / alcohol C1 / alcohol, methyl / carbinol / caswell No 552 / coat- B1400 / colonial spirit / colonial spirits / columbian spirit / columbian spirits / EPA pesticide chemical code 053801 / eureka products criosine disinfectant / eureka products, criosine / freers elm arrester / green wood spirits / holzin / HYDRANAL- standard- methanol / ideal concentrated wood preservative / manhattan spirits / methanol / methanol chromasol / methyl alcohol / methyl hydrate / methyl hydroxide / methylen / methylol / monohydroxymet hane / pyroligneous spirit / pyroxylic spirit / RCRA waste number U154 / standard wood spirits / surflo-B17 / wilbur-ellis smut- guard / wood alcohol / wood naphtha / wood spirit / X-cide 402 industrial bactericide	CAS-No.: 67-56-1	≥ 75	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:gas), H331 Acute Tox. 3 (Inhalation:dust,mist), H331 Eye Irrit. 2, H319 Repr. 1B, H360 STOT SE 1, H370 STOT RE 1, H372

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Full text of hazard classes and H-statements : see section 16

### SECTION 4 First-aid measures

#### 4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a doctor.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact	: 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.
First-aid measures after ingestion	: Rinse mouth. Call a poison center/doctor/physician if you feel unwell.
First-aid measures general	: IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders.	: First aid workers will be equipped with suitable personal protective equipment.

#### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: Toxic if inhaled.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed.
Chronic symptoms	: May damage fertility or the unborn child.

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

Other medical advice or treatment	: Treat symptomatically.
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### SECTION 5 Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

#### 5.3. Special protective actions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6 Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
Environmental precautions	: Avoid release to the environment. Notify authorities if product enters sewers or public waters.

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### 6.2. Methods and materials for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.
- For further information refer to section 13.

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
- Packaging materials : Store always product in container of same material as original container.

## SECTION 8 Exposure controls/personal protection

### 8.1. Control parameters

Methanol (67-56-1)	
<b>Canada (Alberta) - Occupational Exposure Limits</b>	
Local name	Methanol (Methyl alcohol)
OEL TWA	262 mg/m <sup>3</sup>
	200 ppm
OEL STEL	328 mg/m <sup>3</sup>
	250 ppm
Notations and remarks	Substance may be readily absorbed through intact skin.
Regulatory reference	Alberta Regulation 191/2021
<b>Canada (Quebec) - Occupational Exposure Limits</b>	
Local name	Methyl alcohol (Methanol)
VECD (OEL STEV)	328 mg/m <sup>3</sup>
	250 ppm
VEMP (OEL TWA EV)	262 mg/m <sup>3</sup>
	200 ppm
Notations and remarks	Pc

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

<b>Methanol (67-56-1)</b>	
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
<b>Canada (British Columbia) - Occupational Exposure Limits</b>	
Local name	Methanol
OEL TWA	200 ppm
OEL STEL	250 ppm
Notations and remarks	Skin (the substance that contribute significantly to the overall exposure by the skin route)
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
<b>Canada (Manitoba) - Occupational Exposure Limits</b>	
Local name	Methanol
OEL TWA	262 mg/m <sup>3</sup> 200 ppm
OEL STEL	328 mg/m <sup>3</sup> 250 ppm
Notations and remarks	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
<b>Canada (New Brunswick) - Occupational Exposure Limits</b>	
Local name	Methanol
OEL TWA	200 ppm
OEL STEL	250 ppm
Notations and remarks	Headache; eye dam; dizziness; nausea
<b>Canada (Newfoundland and Labrador) - Occupational Exposure Limits</b>	
Local name	Methanol
OEL TWA	262 mg/m <sup>3</sup> 200 ppm
OEL STEL	328 mg/m <sup>3</sup> 250 ppm
Notations and remarks	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
<b>Canada (Nova Scotia) - Occupational Exposure Limits</b>	
Local name	Methanol
OEL TWA	262 mg/m <sup>3</sup> 200 ppm
OEL STEL	328 mg/m <sup>3</sup> 250 ppm
Notations and remarks	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2025

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

<b>Methanol (67-56-1)</b>	
<b>Canada (Nunavut) - Occupational Exposure Limits</b>	
Local name	Methyl alcohol (methanol)
OEL TWA	200 ppm
OEL STEL	250 ppm
Notations and remarks	Skin
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
<b>Canada (Northwest Territories) - Occupational Exposure Limits</b>	
Local name	Methyl alcohol (methanol)
OEL TWA	200 ppm
OEL STEL	250 ppm
Notations and remarks	Skin
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
<b>Canada (Ontario) - Occupational Exposure Limits</b>	
Local name	Methanol
OEL TWAEV	200 ppm 250 ppm
Notations and remarks	Skin
Regulatory reference	Occupational Health and Safety Act, R.S.O. 1990, c. O.1 - R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents
<b>Canada (Prince Edward Island) - Occupational Exposure Limits</b>	
Local name	Methanol
OEL TWA	262 mg/m <sup>3</sup> 200 ppm
OEL STEL	328 mg/m <sup>3</sup> 250 ppm
Notations and remarks	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2025
<b>Canada (Saskatchewan) - Occupational Exposure Limits</b>	
Local name	Methyl alcohol (methanol)
OEL TWA	200 ppm
OEL STEL	250 ppm
Notations and remarks	Skin
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

#### Personal protective equipment:

Wear recommended personal protective equipment.

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

#### Personal protective equipment symbol(s):



## SECTION 9 Physical and chemical properties

### 9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Color	: Clear
Odor	: alcoholic
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 64 – 65 °C
Flash point	: 9.7 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 0.791
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: Lower explosion limit: 6 vol % Upper explosion limit: 36 vol %
Particle characteristics	: No data available

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

Reactivity	: Highly flammable liquid and vapor.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
Incompatible materials	: No additional information available
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

## SECTION 11 Toxicological information

### 11.1. Likely routes of exposure

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Inhalation:dust,mist: Toxic if inhaled.

Estradiol Standard	
ATE CA (oral)	1187.001 mg/kg body weight
ATE CA (dust,mist)	0.5 mg/l/4h
Methanol (67-56-1)	
LD50 oral rat	1187 – 2769 mg/kg body weight (BASF test, Rat, Male / female, Experimental value, 15-35 % aqueous solution, Oral, 7 day(s))
LD50 oral	1400 mg/kg
LD50 dermal rabbit	17100 mg/kg (Rabbit, Experimental value, Dermal)
LD50 dermal	15800 mg/kg
LC50 Inhalation - Rat	128.2 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE CA (oral)	1187 mg/kg body weight
ATE CA (Dermal)	15800 mg/kg body weight
ATE CA (Gases)	700 ppmV/4h
ATE CA (vapors)	3 mg/l/4h
ATE CA (dust,mist)	0.5 mg/l/4h

Skin corrosion/irritation : Not classified

Methanol (67-56-1)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye irritation.

Methanol (67-56-1)	
pH	No data available in the literature

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Carcinogenicity : Not classified  
Reproductive toxicity : May damage fertility or the unborn child.

### Methanol (67-56-1)

LOAEL (animal/male, F0/P)	2340 mg/kg body weight Monkey, Male, 3 days, daily dose
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STOT-single exposure : Causes damage to organs.

### Methanol (67-56-1)

STOT-single exposure	Causes damage to organs.
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STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

### Methanol (67-56-1)

STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
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Aspiration hazard : Not classified

### Methanol (67-56-1)

Viscosity, kinematic	0.68 – 0.747 mm <sup>2</sup> /s
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Symptoms/effects after inhalation : Toxic if inhaled.  
Symptoms/effects after skin contact : None under normal conditions.  
Symptoms/effects after eye contact : Eye irritation.  
Symptoms/effects after ingestion : Harmful if swallowed.  
Chronic symptoms : May damage fertility or the unborn child.

## SECTION 12 Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified.  
Hazardous to the aquatic environment, long-term (chronic) : Not classified.

### Methanol (67-56-1)

LC50 - Fish [1]	15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
EC50 96h - Algae [1]	22000 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
NOEC chronic fish	446.7 mg/l Test organisms (species): Pimephales promelas Duration: '28 d'
NOEC (chronic)	208 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

#### Estradiol Standard

Persistence and degradability	Not rapidly degradable
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#### Methanol (67-56-1)

Persistence and degradability	Readily biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 – 1.1 g O <sub>2</sub> /g substance

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Methanol (67-56-1)	
Chemical oxygen demand (COD)	1.4 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

Methanol (67-56-1)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
BCF - Fish [1]	1 – 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-0.77 (Experimental value)

### 12.4. Mobility in soil

Methanol (67-56-1)	
Mobility in soil	2.75 Source: HSDB
Surface tension	No data available in the literature
Ecology - soil	Highly mobile in soil.
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-0.89 – -0.21 (log Koc, Calculated value)

### 12.5. Other adverse effects

Ozone : Not classified  
Fluorinated greenhouse gases : No

## SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Disposal must be done according to official regulations.  
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.  
Additional information : Flammable vapors may accumulate in the container. Do not re-use empty containers.

## SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
<b>14.1. UN Number</b>			
UN1230	UN1230	1230	1230
<b>14.2. UN Proper Shipping Name</b>			
METHANOL	Methanol	METHANOL	Methanol
<b>Transport document description</b>			
UN1230 METHANOL, 3 (6.1), II	UN1230 Methanol, 3 (6.1), II	UN 1230 METHANOL, 3 (6.1), II (12°C c.c.)	UN 1230 Methanol, 3 (6.1), II
<b>14.3. Transport hazard class(es)</b>			
3 (6.1)	3 (6.1)	3 (6.1)	3 (6.1)

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

TDG	DOT	IMDG	IATA
<b>14.4. Packing group, if applicable</b>			
II	II	II	II
<b>14.5. Environmental hazards</b>			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

### 14.6. Special precautions for user

#### TDG

UN-No. (TDG) : UN1230  
 TDG Special Provisions : 43 - Despite section 2.1 of Part 2 (Classification), these dangerous goods are assigned to this classification based on human experience.  
 Explosive Limit and Limited Quantity Index : 1 L  
 Excepted quantities (TDG) : E2  
 Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 1 L  
 Emergency Response Guide (ERG) Number : 131

#### DOT

UN-No. (DOT) : UN1230  
 DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
 T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
 TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
 DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
 DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
 DOT Packaging Bulk (49 CFR 173.xxx) : 242  
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L  
 DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.  
 DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

#### IMDG

Special provision (IMDG) : 279

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
Flash point (IMDG)	: 12°C c.c.
Properties and observations (IMDG)	: Colorless, volatile liquid. Flashpoint: 12°C c.c. Explosive limits: 6% to 36.5%. Miscible with water. Toxic if swallowed; may cause blindness. Avoid skin contact.

### IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 352
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A113
ERG code (IATA)	: 3L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78<sup>9</sup> and the IBC Code<sup>10</sup>

Not applicable

## SECTION 15 Regulatory information

### Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

### Methanol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

## SECTION 16 Other Information

Issue date : 06-30-2025

### Full text of hazard classes and H-statements:

H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H319	Causes serious eye irritation
H331	Toxic if inhaled
H360	May damage fertility or the unborn child
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

# Estradiol Standard

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

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Safety Data Sheet (SDS), Canada

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



# Extraction Buffer 5X

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)  
Issue date: 06-30-2025 Version: 1.0

### SECTION 1 Identification

#### 1.1. GHS Product identifier

Product form : Mixture  
Product name : Extraction Buffer 5X  
Type of product : Life Sciences -- [Life Sciences]  
Product code : 21015

#### 1.2. Other means of identification

Part Number(s) : 21015|21003

#### 1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals, Scientific research and development  
Restrictions on use : Do not use kit components from one kit with any other kit.

#### 1.4. Supplier's details

Neogen Corporation  
620 Leshar Place  
Lansing, Michigan 48912  
United States of America  
T 800.234.5333  
[sds@neogen.com](mailto:sds@neogen.com) - <https://www.neogen.com/>

#### 1.5. Emergency phone number

Emergency number : 24 hours:  
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)  
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

### SECTION 2 Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Not classified

#### 2.2. GHS label elements, including precautionary statements

##### GHS CA labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

### SECTION 3 Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of schedule 1, item 3 of the Hazardous Products Regulations.

# Extraction Buffer 5X

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 4 First-aid measures

#### 4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures general	: If you feel unwell, seek medical advice.
Personal protection for first-aid responders.	: First aid workers will be equipped with suitable personal protective equipment.

#### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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

Other medical advice or treatment	: Treat symptomatically.
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### SECTION 5 Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

#### 5.3. Special protective actions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6 Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
Environmental precautions	: Avoid release to the environment.

#### 6.2. Methods and materials for containment and cleaning up

For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.
For further information refer to section 13.	

# Extraction Buffer 5X

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

### SECTION 7 Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.  
Storage conditions : Keep cool. Protect from sunlight.  
Packaging materials : Store always product in container of same material as original container.

### SECTION 8 Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures, such as personal protective equipment (PPE)

##### Personal protective equipment:

Wear recommended personal protective equipment.

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

##### Personal protective equipment symbol(s):



### SECTION 9 Physical and chemical properties

#### 9.1. Basic physical and chemical properties

Physical state : Liquid

# Extraction Buffer 5X

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Appearance	: No data available
Color	: Mixture contains one or more component(s) which have the following color(s): Colourless or white White Colourless to white
Odor	: There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Odourless
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: None under recommended storage and handling conditions (see section 7).
Incompatible materials	: No additional information available
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

## SECTION 11 Toxicological information

### 11.1. Likely routes of exposure

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Extraction Buffer 5X	
Unknown acute toxicity (GHS CA)	8.23% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 8.23% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 8.23% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified

# Extraction Buffer 5X

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

## SECTION 12 Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

### 12.2. Persistence and degradability

Extraction Buffer 5X	
Persistence and degradability	Not rapidly degradable

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

## SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

## SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
<b>14.1. UN Number</b>			
Not regulated for transport			

# Extraction Buffer 5X

## Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)

TDG	DOT	IMDG	IATA
<b>14.2. UN Proper Shipping Name</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group, if applicable</b>			
Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

### 14.6. Special precautions for user

#### TDG

Not regulated

#### DOT

Not regulated

#### IMDG

Not regulated

#### IATA

Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78<sup>9</sup> and the IBC Code<sup>10</sup>

Not applicable

## SECTION 15 Regulatory information

No additional information available

## SECTION 16 Other Information

Issue date : 06-30-2025

Safety Data Sheet (SDS), Canada

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.