Kit Components

Product code	Description
AS1135	**Maxwell®16 FFPE Plus LEV DNA Purification Kit**

Components:

D920	Incubation Buffer
A826E	Lysis Buffer
P119C	Nuclease-Free Water
V302A	Proteinase K Sp. Act.>30u/mg
K412	Maxwell® LEV RNA Resin
Z377	Yellow Core Wash Solution
Z376	RNA Wash B
Z305	RNA Lysis Buffer (RLA)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

*
1 Identification

Product identifier
Trade name: Incubation Buffer
Article number: D920
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified as hazardous according to the Globally Harmonized System (GHS).

Label elements
GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Not applicable or unknown
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Incubation Buffer

(Contd. of page 1)

*
3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:		
9002-93-1	Octoxynol 9	1-5%

Additional information: For the wording of the listed risk phrases refer to section 15.

*
4 First-aid measures

Description of first aid measures
General information: No special measures required.
After inhalation: If the patient feels unwell or is concerned, obtain medical advice.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If the patient feels unwell or is concerned, obtain medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters No special advice
Protective equipment: No special measures required.

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.
Environmental precautions: Dilute with plenty of water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Incubation Buffer

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*
7 Handling and storage

Handling:
Precautions for safe handling No special measures required.
Information about protection against explosions and fires: The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Do not store below -20°C. Protected from light.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s) No further relevant information available.

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Not required.

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Fluid
Color:	Colorless
Odor:	Not determined
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	8
Change in condition	
Melting point/Melting range:	0 °C (32 °F)

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

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Trade name: Incubation Buffer

(Contd. of page 3)

Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	0.99842 g/cm³ (8.33181 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic at 20 °C (68 °F):	0.0952 mPas
Kinematic:	Not determined.
Solvent separation test	
Organic solvents:	1.0 %
Water:	98.1 %
VOC content:	0.00 %
Solids content:	0.9 %
Other information	No further relevant information available.

*
10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.

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Safety Data Sheet
acc. to OSHA HCS

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Trade name: Incubation Buffer

(Contd. of page 4)

Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients are listed.

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

*
12 Ecological information

Toxicity
Aquatic toxicity: *Not harmful to the aquatic environment*
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil *No further relevant information available.*
Ecotoxicological effects:
Remark: *Not available*
Additional ecological information:
General notes:
Not available.
Not known to be hazardous to water.
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*
Other adverse effects *No further relevant information available.*

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: *Disposal must be made according to official regulations.*
Recommended cleansing agent: *Water, if necessary with cleansing agents.*

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Incubation Buffer

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*
14 Transport information

UN-Number	Not hazardous for transportation
DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name	None
DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA	
Class	Not applicable
Packing group	None
DOT, ADR, IMDG, IATA	Not applicable
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not applicable

*
15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:
All ingredients are listed.

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

New Jersey Right-to-Know List:
None of the ingredients are listed.

Pennsylvania Right-to-Know List:
None of the ingredients are listed.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Incubation Buffer

(Contd. of page 6)

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)
None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

GHS label elements Not applicable
Signal word Not applicable
Hazard statements Not applicable
Chemical safety assessment

Water hazard class: Generally not hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

*
16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 02/06/2023
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

*
1 Identification

Product identifier
Trade name: Lysis Buffer
Article number: A826E
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture

GHS05 Corrosion

Skin Corrosion 1B	H314 Causes severe skin burns and eye damage.
Eye Damage 1	H318 Causes serious eye damage.

GHS07

Acute Toxicity - Oral 4	H302 Harmful if swallowed.
Acute Toxicity - Inhalation 4	H332 Harmful if inhaled.

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS05 GHS07

Signal word Danger

Hazard-determining components of labeling:
guanidinium thiocyanate

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Lysis Buffer

(Contd. of page 1)

Polyethylene glycol tert-octylphenyl ether
Hazard statements
Harmful if swallowed or if inhaled.
Causes severe skin burns and eye damage.
Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 3
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = *3
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Toxic
Highly Toxic
Corrosive
Environmental Hazard
Primary route(s) of entry:
Dermal
Inhalation
Oral
Target Organ(s):
May affect Nervous system (Neurotoxin)
May cause Kidney damage (Nephrotoxin)
Risk of damage to eyes
Affects Gastrointestinal System
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Lysis Buffer

(Contd. of page 2)

*
3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:		
593-84-0	guanidinium thiocyanate	50-75%
9036-19-5	Polyethylene glycol tert-octylphenyl ether	1-5%
75621-03-3	3-[(3-Choalamidopropryl)dimethylammonio]propanesulfonic acid	1-5%

Additional information: For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Seek medical treatment.
After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
After eye contact: Call a doctor immediately.
After swallowing:
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Seek immediate medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters In the case of fire, wear respiratory protective equipment and chemical protective suit.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Lysis Buffer

(Contd. of page 3)

Protective equipment: Mouth respiratory protective device.

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Keep people at a distance and stay upwind.
Wear protective clothing.
Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to Section 13.
Ensure adequate ventilation.
Keep away from water.
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Information about protection against explosions and fires: The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Do not store below -20°C. Protected from light.
Information about storage in one common storage facility: Do not store together with acids.
Further information about storage conditions: Keep receptacle tightly sealed.
Specific end use(s) No further relevant information available.

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Lysis Buffer

(Contd. of page 4)

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Protection of hands:
Select the glove material considering penetration time, rate of diffusion and degradation time.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection:
Tightly sealed goggles
Use equipment for eye protection tested and approved under government NIOSH standards.

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	*Fluid*
Color:	*Colorless*
Odor:	*Not determined*
Odor threshold:	*Not determined.*
pH-value at 20 °C (68 °F):	*6.9*
Change in condition	
Melting point/Melting range:	*Undetermined.*
Boiling point/Boiling range:	*100 °C (212 °F)*
Flash point:	*Not applicable.*
Flammability (solid, gaseous):	*Not applicable.*
Decomposition temperature:	*Not determined.*
Auto igniting:	*Product is not selfigniting.*
Danger of explosion:	*Product does not present an explosion hazard.*

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Lysis Buffer

(Contd. of page 5)

Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.12 g/cm³ (9.3464 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent separation test	
Water:	44.4 %
VOC content:	0.00 %
Solids content:	53.2 %
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials:
Exposure to strong acid will result in the generation of toxic gases
Exposure to bleach may result in the generation of toxic gas
Hazardous decomposition products: No dangerous decomposition products known.

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:

LD/LC50 values that are relevant for classification:		
593-84-0 guanidinium thiocyanate		
Oral	LD50	475 mg/kg (Rat) By analogy to guanidine hydrochloride
Dermal	LD50	>2,000 mg/kg (Rabbit) By analogy to Guanidine hydrochloride.

Primary irritant effect:
on the skin: Caustic effect on skin and mucous membranes.
on the eye: Strong caustic effect.
Sensitization: Sensitization possible through inhalation.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Lysis Buffer

(Contd. of page 6)

Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
OECD test guideline 471, Ames test.
Harmful
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients are listed.

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

12 Ecological information

Toxicity
Aquatic toxicity: *Harmful to aquatic life with long lasting effects.*
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil *No further relevant information available.*
Ecotoxicological effects:
Remark: *Harmful to fish*
Additional ecological information:
General notes:
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*
Other adverse effects *No further relevant information available.*

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: *Disposal must be made according to official regulations.*

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Safety Data Sheet
acc. to OSHA HCS

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Trade name: Lysis Buffer

(Contd. of page 7)

Recommended cleansing agent: Water, if necessary with cleansing agents.

*

14 Transport information

UN-Number
DOT, ADR, IMDG, IATA UN1760

UN proper shipping name
DOT Corrosive liquid, n.o.s. solution
ADR 1760 CORROSIVE LIQUID, N.O.S. solution
IMDG, IATA CORROSIVE LIQUID, N.O.S. solution

Transport hazard class(es)

DOT

Class 8 Corrosive substances
Label 8

ADR

Class 8 (C9) Corrosive substances
Label 8

IMDG, IATA

Class 8 Corrosive substances
Label 8

Packing group
DOT, ADR, IMDG, IATA II

Environmental hazards: Not applicable.

Special precautions for user Warning: Corrosive substances
Hazard identification number (Kemler code): 80
EMS Number: F-A,S-B
Stowage Category B
Stowage Code SW2 Clear of living quarters.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Lysis Buffer

(Contd. of page 8)

Transport/Additional information:

ADR
Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

IMDG
Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation": UN 1760 CORROSIVE LIQUID, N.O.S. SOLUTION, 8, II

*
15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

593-84-0	guanidinium thiocyanate
9036-19-5	Polyethylene glycol tert-octylphenyl ether

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

New Jersey Right-to-Know List:
None of the ingredients are listed.

Pennsylvania Right-to-Know List:
None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)
None of the ingredients are listed.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Lysis Buffer

(Contd. of page 9)

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Signal word Danger

Hazard-determining components of labeling:
guanidinium thiocyanate
Polyethylene glycol tert-octylphenyl ether
Hazard statements
Harmful if swallowed or if inhaled.
Causes severe skin burns and eye damage.
Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

*
16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 02/06/2023
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 *Reviewed on 02/06/2023*

Trade name: Lysis Buffer

(Contd. of page 10)

VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Toxicity - Oral 4: Acute toxicity – Category 4
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Eye Damage 1: Serious eye damage/eye irritation – Category 1

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

*
1 Identification

Product identifier
Trade name: Nuclease-Free Water
Article number: P119C
CAS Number:
7732-18-5
EC number:
231-791-2
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture
The substance is not classified as hazardous according to the Globally Harmonized System (GHS).

Label elements
GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Not applicable or unknown
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Nuclease-Free Water

(Contd. of page 1)

vPvB: *Not applicable.*

*
3 Composition/information on ingredients

Chemical characterization: Substances
CAS No. Description
7732-18-5 water
EC number: *231-791-2*

*
4 First-aid measures

Description of first aid measures
General information: *No special measures required.*
After inhalation: *If the patient feels unwell or is concerned, obtain medical advice.*
After skin contact: *Generally the product does not irritate the skin.*
After eye contact: *Rinse opened eye for several minutes under running water.*
After swallowing: *If the patient feels unwell or is concerned, obtain medical advice.*
Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters *No special advice*
Protective equipment: *No special measures required.*

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures *Not required.*
Environmental precautions: *Dilute with plenty of water.*
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Nuclease-Free Water

(Contd. of page 2)

*
7 Handling and storage

Handling:
Precautions for safe handling No special measures required.
Information about protection against explosions and fires: The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Do not store below -20°C. Protected from light.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s) No further relevant information available.

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace: Not required.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands:
Select the glove material considering penetration time, rate of diffusion and degradation time.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
Eye protection: Not required.

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Fluid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.
Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Nuclease-Free Water

(Contd. of page 3)

Auto igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1 g/cm³ (8.345 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic at 20 °C (68 °F):	0.0952 mPas
Kinematic:	Not determined.
Water:	100.0 %
VOC content:	0.00 %
Solids content:	0.0 %
Other information	No further relevant information available.

*

10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

*

11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information: The substance is not subject to classification.

Carcinogenic categories

IARC (International Agency for Research on Cancer)
Substance is not listed.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Nuclease-Free Water

(Contd. of page 4)

NTP (National Toxicology Program)
Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

*
12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes:
Not available.
Not known to be hazardous to water.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

*
14 Transport information

UN-Number	Not hazardous for transportation
DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name	None
DOT, ADR, IMDG, IATA	Not applicable
ADN	
Transport hazard class(es)	None

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Nuclease-Free Water

(Contd. of page 5)

DOT, ADR, ADN, IMDG, IATA	
Class	Not applicable
Packing group	None
DOT, ADR, IMDG, IATA	Not applicable
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not applicable

*
15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
Substance is not listed.

Section 313 (Specific toxic chemical listings):
Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:
Substance is listed.

Hazardous Air Pollutants
Substance is not listed.

Proposition 65

Chemicals known to cause cancer:
Substance is not listed.

Chemicals known to cause reproductive toxicity for females:
Substance is not listed.

Chemicals known to cause reproductive toxicity for males:
Substance is not listed.

Chemicals known to cause developmental toxicity:
Substance is not listed.

New Jersey Right-to-Know List:
Substance is not listed.

Pennsylvania Right-to-Know List:
Substance is not listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
Substance is not listed.

TLV (Threshold Limit Value)
Substance is not listed.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Nuclease-Free Water

(Contd. of page 6)

NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

GHS label elements Not applicable
Signal word Not applicable
Hazard statements Not applicable
Chemical safety assessment

Water hazard class: Generally not hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

*
16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 02/06/2023
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

*
1 Identification

Product identifier
Trade name: Proteinase K
Article number: V302A
CAS Number:
39450-01-6
EC number:
254-457-8
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture

GHS08 Health hazard

Sensitization - Respiratory 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS07

Skin Irritation 2	H315 Causes skin irritation.
Eye Irritation 2A	H319 Causes serious eye irritation.
Specific Target Organ Toxicity - Single Exposure 3	H335 May cause respiratory irritation.

Label elements
GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Proteinase K

(Contd. of page 1)

Hazard pictograms

GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:
Proteinase, Tritirachium album serine
Hazard statements
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Precautionary statements
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye protection / face protection.
[In case of inadequate ventilation] wear respiratory protection.
If on skin: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a poison center/doctor if you feel unwell.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a poison center/doctor.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = *2
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Irritant
Sensitizer
Primary route(s) of entry:
Dermal
Inhalation
Target Organ(s):
Affects Pulmonary system (Lungs)
Risk of damage to eyes
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Proteinase K

(Contd. of page 2)

vPvB: *Not applicable.*

*
3 Composition/information on ingredients

Chemical characterization: Substances
CAS No. Description
39450-01-6 Proteinase, Tritirachium album serine
EC number: *254-457-8*

*
4 First-aid measures

Description of first aid measures
After inhalation:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: *If the patient feels unwell or is concerned, obtain medical advice.*
Information for doctor:
Most important symptoms and effects, both acute and delayed *Allergic reactions*
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters *No special advice*

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove persons from danger area.
Avoid formation of dust.
Wear protective clothing.
Environmental precautions: *No special measures required.*
Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to Section 13.
Pick up mechanically.
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Proteinase K

(Contd. of page 3)

See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Work only in fume cabinet.
Information about protection against explosions and fires:
Keep respiratory protective device available.
The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Do not store below -20°C. Protected from light.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep receptacle tightly sealed.
Specific end use(s) No further relevant information available.

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace: Not required.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Protection of hands:
Select the glove material considering penetration time, rate of diffusion and degradation time.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
Eye protection:
Safety glasses
Use equipment for eye protection tested and approved under government NIOSH standards.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Proteinase K

(Contd. of page 4)

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Solid
Color:	White
Odor:	Not determined
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density at 20 °C (68 °F):	1.1 g/cm³ (9.1795 lbs/gal)
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Soluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
VOC content:	0.00 %
Solids content:	100.0 %
Other information	No further relevant information available.

*
10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Proteinase K

(Contd. of page 5)

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization: Sensitization possible through inhalation.
Additional toxicological information: The substance is not subject to classification.

Carcinogenic categories

IARC (International Agency for Research on Cancer)
Substance is not listed.

NTP (National Toxicology Program)
Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

*
12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes: Not available.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/06/2023

Trade name: Proteinase K

(Contd. of page 6)

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number	Not hazardous for transportation
DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name	None
DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA	
Class	Not applicable
Packing group	None
DOT, ADR, IMDG, IATA	Not applicable
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not applicable

*

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
Substance is not listed.

Section 313 (Specific toxic chemical listings):
Substance is not listed.

TSCA (Toxic Substances Control Act) Inventory:
Substance is not listed.

Hazardous Air Pollutants
Substance is not listed.

Proposition 65

Chemicals known to cause cancer:
Substance is not listed.

Chemicals known to cause reproductive toxicity for females:
Substance is not listed.

Chemicals known to cause reproductive toxicity for males:
Substance is not listed.

Chemicals known to cause developmental toxicity:
Substance is not listed.

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Proteinase K

(Contd. of page 7)

New Jersey Right-to-Know List:
Substance is not listed.

Pennsylvania Right-to-Know List:
Substance is not listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
Substance is not listed.

TLV (Threshold Limit Value)
Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.

GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).
Signal word Danger

Hazard-determining components of labeling:
Proteinase, Tritirachium album serine
Hazard statements
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Precautionary statements
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear eye protection / face protection.
[In case of inadequate ventilation] wear respiratory protection.
If on skin: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a poison center/doctor if you feel unwell.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a poison center/doctor.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

Water hazard class: Generally not hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Proteinase K

(Contd. of page 8)

2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision *02/06/2023*
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Sensitization - Respiratory 1: Respiratory sensitisation – Category 1
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

*
1 Identification

Product identifier
Trade name: Maxwell® LEV RNA Resin
Article number: K412
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified as hazardous according to the Globally Harmonized System (GHS).

Label elements
GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Not applicable or unknown
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Maxwell® LEV RNA Resin

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components: Not applicable

4 First-aid measures

Description of first aid measures
General information: No special measures required.
After inhalation: If the patient feels unwell or is concerned, obtain medical advice.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If the patient feels unwell or is concerned, obtain medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters No special advice
Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.
Environmental precautions: Dilute with plenty of water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling No special measures required.
Information about protection against explosions and fires: The product is not flammable.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Maxwell® LEV RNA Resin

(Contd. of page 2)

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Do not store below -20°C. Protected from light.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s) No further relevant information available.

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Not required.

*
9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:

Form:	Fluid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	3-10
Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Maxwell® LEV RNA Resin

(Contd. of page 3)

Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.006 g/cm³ (8.39507 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic at 20 °C (68 °F):	0.0952 mPas
Kinematic:	Not determined.
Solvent separation test	
Water:	98.1 %
VOC content:	0.00 %
Solids content:	1.8 %
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Maxwell® LEV RNA Resin

(Contd. of page 4)

Carcinogenic categories

IARC (International Agency for Research on Cancer)		
7631-86-9	silicon dioxide	3
1309-37-1	diiron trioxide	3

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes:
Not available.
Not known to be hazardous to water.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number	Not hazardous for transportation
DOT, ADR, ADN, IMDG, IATA	Not applicable
UN proper shipping name	None

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Maxwell® LEV RNA Resin

(Contd. of page 5)

DOT, ADR, ADN, IMDG, IATA	Not applicable
Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA Class	Not applicable
Packing group DOT, ADR, IMDG, IATA	None Not applicable
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not applicable

*
15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

New Jersey Right-to-Know List:

1309-37-1	diiron trioxide
10377-60-3	MAGNESIUM (II) NITRATE
3251-23-8	Nitric acid, copper(2+) salt (2:1)

Pennsylvania Right-to-Know List:

7631-86-9	silicon dioxide
1309-37-1	diiron trioxide
10377-60-3	MAGNESIUM (II) NITRATE

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Maxwell® LEV RNA Resin

(Contd. of page 6)

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)		
1309-37-1	diiron trioxide	A4

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

GHS label elements Not applicable
Signal word Not applicable
Hazard statements Not applicable
Chemical safety assessment

Water hazard class: Generally not hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

*
16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 02/06/2023
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

*
1 Identification

Product identifier
Trade name: Yellow Core Wash Solution
Article number: Z377
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture

GHS02 Flame

Flammable Liquids 3 H226 Flammable liquid and vapor.

GHS05 Corrosion

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.
Eye Damage 1 H318 Causes serious eye damage.

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS02

GHS05

Signal word Danger

Hazard-determining components of labeling:
guanidinium thiocyanate

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Yellow Core Wash Solution

(Contd. of page 1)

Hazard statements
Flammable liquid and vapor.
Causes severe skin burns and eye damage.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dusts or mists.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 3
Fire = 3
Reactivity = 0
HMIS-ratings (scale 0 - 4)
*Health = *3*
Fire = 3
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Toxic
Highly Toxic
Corrosive
Primary route(s) of entry:
Dermal
Inhalation
Target Organ(s):
May cause Liver damage (Hepatotoxin)
May affect Nervous system (Neurotoxin)
May cause Kidney damage (Nephrotoxin)
Risk of damage to eyes
Affects Gastrointestinal System
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Yellow Core Wash Solution

(Contd. of page 2)

*
3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:		
64-17-5	ethanol	25-50%
593-84-0	guanidinium thiocyanate	15-20%

Additional information: For the wording of the listed risk phrases refer to section 15.

*
4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Seek medical treatment.
After inhalation: In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
After eye contact: Call a doctor immediately.
After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed
Headache
Dizziness
Nausea
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters In the case of fire, wear respiratory protective equipment and chemical protective suit.
Protective equipment: Mouth respiratory protective device.

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Keep people at a distance and stay upwind.
Keep away from ignition sources
Wear protective clothing.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Yellow Core Wash Solution

(Contd. of page 3)

Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to Section 13.
Ensure adequate ventilation.
Keep away from water.
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

*
7 Handling and storage

Handling:
Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Use only in well ventilated areas.
Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: *Do not store below -20°C. Protected from light.*
Information about storage in one common storage facility: *Do not store together with acids.*
Further information about storage conditions: *Keep receptacle tightly sealed.*
Specific end use(s) *No further relevant information available.*

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

64-17-5 ethanol	
PEL	*Long-term value: 1900 mg/m³, 1000 ppm*
REL	*Long-term value: 1900 mg/m³, 1000 ppm*
TLV	*Short-term value: 1000 ppm* *A3*

Additional information: *The lists that were valid during the creation were used as basis.*

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Yellow Core Wash Solution

(Contd. of page 4)

Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Protection of hands:
Select the glove material considering penetration time, rate of diffusion and degradation time.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection:
Tightly sealed goggles
Use equipment for eye protection tested and approved under government NIOSH standards.

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	*Fluid*
Color:	*Colorless*
Odor:	*Alcohol-like*
Odor threshold:	*Not determined.*
pH-value at 20 °C (68 °F):	*7.5*
Change in condition	
Melting point/Melting range:	*Undetermined.*
Boiling point/Boiling range:	*78 °C (172.4 °F)*
Flash point:	*30 °C (86 °F) (EPA 1010)*
Flammability (solid, gaseous):	*Flammable.*
Ignition temperature:	*425 °C (797 °F)*
Decomposition temperature:	*Not determined.*
Auto igniting:	*Product is not selfigniting.*
Danger of explosion:	*Product does not present an explosion hazard.* *Product is not explosive. However, formation of explosive air/vapor mixtures are possible.*
Explosion limits:	
Lower:	*3.5 Vol %*
Upper:	*15 Vol %*
Vapor pressure at 20 °C (68 °F):	*59 hPa (44.3 mm Hg)*
Density:	*Not determined.*

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Yellow Core Wash Solution

(Contd. of page 5)

Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent separation test	
Organic solvents:	40.0 %
Water:	42.3 %
VOC content:	40.00 %
Solids content:	17.7 %
Other information	No further relevant information available.

*
10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials:
Oxidizing agents
Exposure to strong acid may result in the generation of toxic gases
Hazardous decomposition products: No dangerous decomposition products known.

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:

LD/LC50 values that are relevant for classification:		
593-84-0 guanidinium thiocyanate		
Oral	LD50	475 mg/kg (Rat) By analogy to guanidine hydrochloride
Dermal	LD50	>2,000 mg/kg (Rabbit) By analogy to Guanidine hydrochloride.

Primary irritant effect:
on the skin: Caustic effect on skin and mucous membranes.
on the eye: Strong caustic effect.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
OECD test guideline 471, Ames test.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Yellow Core Wash Solution

(Contd. of page 6)

Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic categories

IARC (International Agency for Research on Cancer)		
64-17-5	ethanol	1

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

*
12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes:
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: Yellow Core Wash Solution

(Contd. of page 7)

*

14 Transport information

UN-Number	
DOT, ADR, IMDG, IATA	UN1170
UN proper shipping name	
DOT	Ethanol solutions
ADR	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IMDG	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IATA	ETHANOL SOLUTION
Transport hazard class(es)	
DOT	

Class	3 Flammable liquids
Label	3
ADR	

Class	3 (F1) Flammable liquids
Label	3
IMDG, IATA	

Class	3 Flammable liquids
Label	3
Packing group	
DOT, ADR, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code):	30
EMS Number:	F-E,S-D
Stowage Category	A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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Trade name: Yellow Core Wash Solution

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Transport/Additional information:

ADR
Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

IMDG
Limited quantities (LQ) 5L
Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation": UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III

*
15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:
All ingredients are listed.

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

64-17-5	ethanol

New Jersey Right-to-Know List:

64-17-5	ethanol

Pennsylvania Right-to-Know List:

64-17-5	ethanol

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)

64-17-5	ethanol	A3

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Trade name: Yellow Core Wash Solution

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NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Signal word Danger

Hazard-determining components of labeling:
guanidinium thiocyanate
Hazard statements
Flammable liquid and vapor.
Causes severe skin burns and eye damage.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dusts or mists.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

*
16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision 02/06/2023
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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Trade name: Yellow Core Wash Solution

(Contd. of page 10)

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flammable Liquids 3: Flammable liquids – Category 3
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Eye Damage 1: Serious eye damage/eye irritation – Category 1

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

*
1 Identification

Product identifier
Trade name: RNA Wash B
Article number: Z376
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture

GHS02 Flame

Flammable Liquids 2 H225 Highly flammable liquid and vapor.

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS02

Signal word Danger
Hazard statements
Highly flammable liquid and vapor.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.

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Trade name: RNA Wash B

(Contd. of page 1)

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 3
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 3
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): *Not applicable*
Target Organ(s):
May cause Liver damage (Hepatotoxin)
May affect Nervous system (Neurotoxin)
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

*
3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:		
64-17-5	*ethanol*	*50-75%*

Additional information: *For the wording of the listed risk phrases refer to section 15.*

*
4 First-aid measures

Description of first aid measures
General information: *Immediately remove any clothing soiled by the product.*
After inhalation: *If the patient feels unwell or is concerned, obtain medical advice.*
After skin contact: *Generally the product does not irritate the skin.*
After eye contact: *Rinse opened eye for several minutes under running water.*
After swallowing: *If the patient feels unwell or is concerned, obtain medical advice.*
Information for doctor:
Most important symptoms and effects, both acute and delayed
Headache
Dizziness
Nausea
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

(Contd. on page 3)

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Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: RNA Wash B

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*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents: *Use fire fighting measures that suit the environment.*
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters *No special advice*

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources
Wear protective clothing.
Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

*
7 Handling and storage

Handling:
Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Use only in well ventilated areas.
Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: *Do not store below -20°C. Protected from light.*
Information about storage in one common storage facility: *Not required.*
Further information about storage conditions: *Keep receptacle tightly sealed.*
Specific end use(s) *No further relevant information available.*

*
8 Exposure controls/personal protection

Control parameters

Components with limit values that require monitoring at the workplace:	
64-17-5 ethanol	
PEL	*Long-term value: 1900 mg/m³, 1000 ppm*

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(Contd. of page 3)

REL	Long-term value: 1900 mg/m³, 1000 ppm
TLV	Short-term value: 1000 ppm A3

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Protection of hands:
Select the glove material considering penetration time, rate of diffusion and degradation time.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Use equipment for eye protection tested and approved under government NIOSH standards.

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Fluid
Color:	Colorless
Odor:	Not determined
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	7.5
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	78 °C (172.4 °F)
Flash point:	26.7 °C (80.1 °F) (EPA 1010)
Flammability (solid, gaseous):	Flammable.
Ignition temperature:	425 °C (797 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard. Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

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Trade name: RNA Wash B

(Contd. of page 4)

Explosion limits:	
Lower:	3.5 Vol %
Upper:	15 Vol %
Vapor pressure at 20 °C (68 °F):	59 hPa (44.3 mm Hg)
Density at 20 °C (68 °F):	0.8627 g/cm³ (7.19923 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent separation test	
Organic solvents:	63.0 %
Water:	36.6 %
VOC content:	63.00 %
Solids content:	0.4 %
Other information	No further relevant information available.

*
10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: Oxidizing agents
Hazardous decomposition products: No dangerous decomposition products known.

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: No data available
Primary irritant effect:
on the skin: Causes skin irritation.
on the eye: No data available.
Sensitization:
In case of skin contact: not sensitising
In case of inhalation: not sensitising
Additional toxicological information:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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Trade name: RNA Wash B

(Contd. of page 5)

Carcinogenic categories

IARC (International Agency for Research on Cancer)		
64-17-5	ethanol	1

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

*
12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes: No data available.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

*
14 Transport information

UN-Number	
DOT, ADR, IMDG, IATA	UN1170
UN proper shipping name	
DOT	Ethanol solutions
ADR	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IMDG	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

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Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 *Reviewed on 02/04/2023*

Trade name: RNA Wash B

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IATA	ETHANOL SOLUTION
Transport hazard class(es)	
DOT	
	
Class	3 Flammable liquids
Label	3
ADR	
	
Class	3 (F1) Flammable liquids
Label	3
IMDG, IATA	
	
Class	3 Flammable liquids
Label	3
Packing group	
DOT, ADR, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code):	30
EMS Number:	F-E,S-D
Stowage Category	A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

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Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: RNA Wash B

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UN "Model Regulation":	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III

*

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:
All ingredients are listed.

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

64-17-5	ethanol

New Jersey Right-to-Know List:

64-17-5	ethanol
64-19-7	acetic acid

Pennsylvania Right-to-Know List:

64-17-5	ethanol
64-19-7	acetic acid

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)

64-17-5	ethanol	A3

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Signal word Danger
Hazard statements
Highly flammable liquid and vapor.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Trade name: RNA Wash B

(Contd. of page 8)

Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

Water hazard class: *Water hazard class 1 (Self-assessment): slightly hazardous for water.*
Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

*
16 Other information

**This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

Department issuing SDS:
Promega Corporation
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
chemicalregulatory@promega.com
Contact:
Date of preparation / last revision *02/06/2023*
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flammable Liquids 2: Flammable liquids – Category 2

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

*
1 Identification

Product identifier
Trade name: RNA Lysis Buffer (RLA)
Article number: Z305
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: chemicalregulatory@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*
2 Hazard(s) identification

Classification of the substance or mixture

GHS05 Corrosion

Skin Corrosion 1B	H314 Causes severe skin burns and eye damage.
Eye Damage 1	H318 Causes serious eye damage.

GHS07

Acute Toxicity - Oral 4	H302 Harmful if swallowed.
Acute Toxicity - Inhalation 4	H332 Harmful if inhaled.

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS05 GHS07

Signal word Danger

Hazard-determining components of labeling:
guanidinium thiocyanate

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: RNA Lysis Buffer (RLA)

(Contd. of page 1)

Hazard statements
Harmful if swallowed or if inhaled.
Causes severe skin burns and eye damage.
Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 3
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 3
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Toxic
Highly Toxic
Corrosive
Environmental Hazard
Primary route(s) of entry:
Dermal
Inhalation
Oral
Target Organ(s):
May affect Nervous system (Neurotoxin)
May cause Kidney damage (Nephrotoxin)
Risk of damage to eyes
Affects Gastrointestinal System
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

*
3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is made up of a mixture of hazardous and non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: RNA Lysis Buffer (RLA)

(Contd. of page 2)

Dangerous components:		
593-84-0	guanidinium thiocyanate	25-50%

Additional information: For the wording of the listed risk phrases refer to section 15.

*
4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Seek medical treatment.
After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
After eye contact: Call a doctor immediately.
After swallowing:
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Seek immediate medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed
None
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

*
5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters In the case of fire, wear respiratory protective equipment and chemical protective suit.
Protective equipment: Mouth respiratory protective device.

*
6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Keep people at a distance and stay upwind.
Wear protective clothing.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/06/2023 Reviewed on 02/04/2023

Trade name: RNA Lysis Buffer (RLA)

(Contd. of page 3)

Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to Section 13.
Ensure adequate ventilation.
Keep away from water.
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

*
7 Handling and storage

Handling:
Precautions for safe handling
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Information about protection against explosions and fires: *The product is not flammable.*

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: *Do not store below -20°C. Protected from light.*
Information about storage in one common storage facility: *Do not store together with acids.*
Further information about storage conditions: *Keep receptacle tightly sealed.*
Specific end use(s) *No further relevant information available.*

*
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: *The lists that were valid during the creation were used as basis.*

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection:
Tightly sealed goggles
Use equipment for eye protection tested and approved under government NIOSH standards.

*
9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Fluid
Color:	Colorless
Odor:	Not determined
Odor threshold:	Not determined.
pH-value at 20 °C (68 °F):	7.5
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.102 g/cm³ (9.19619 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

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Solvent separation test	
Water:	52.6 %
VOC content:	0.00 %
Solids content:	47.4 %
Other information	No further relevant information available.

*
10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials:
Exposure to strong acid will result in the generation of toxic gases
Exposure to bleach may result in the generation of toxic gas
Hazardous decomposition products: No dangerous decomposition products known.

*
11 Toxicological information

Information on toxicological effects
Acute toxicity:

LD/LC50 values that are relevant for classification:		
593-84-0 guanidinium thiocyanate		
Oral	LD50	475 mg/kg (Rat) By analogy to guanidine hydrochloride
Dermal	LD50	>2,000 mg/kg (Rabbit) By analogy to Guanidine hydrochloride.

Primary irritant effect:
on the skin: Caustic effect on skin and mucous membranes.
on the eye: Strong caustic effect.
Sensitization: Sensitization possible through inhalation.
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
OECD test guideline 471, Ames test.
Harmful
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients are listed.

NTP (National Toxicology Program)
None of the ingredients are listed.

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OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

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12 Ecological information

Toxicity
Aquatic toxicity: Harmful to aquatic life with long lasting effects.
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Harmful to fish
Additional ecological information:
General notes:
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

*
13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

*
14 Transport information

UN-Number	
DOT, ADR, IMDG, IATA	UN1760
UN proper shipping name	
DOT	Corrosive liquid, n.o.s. solution
ADR	1760 CORROSIVE LIQUID, N.O.S. solution
IMDG, IATA	CORROSIVE LIQUID, N.O.S. solution

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Transport hazard class(es)

DOT

Class	8 Corrosive substances
Label	8

ADR

Class	8 (C9) Corrosive substances
Label	8

IMDG, IATA

Class	8 Corrosive substances
Label	8

Packing group	
DOT, ADR, IMDG, IATA	II

Environmental hazards:	
Marine pollutant:	No

Special precautions for user	Warning: Corrosive substances
Hazard identification number (Kemler code):	80
EMS Number:	F-A,S-B
Stowage Category	B
Stowage Code	SW2 Clear of living quarters.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

Transport/Additional information:

ADR

Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

IMDG

Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

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UN "Model Regulation": UN 1760 CORROSIVE LIQUID, N.O.S. SOLUTION, 8, II

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15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):
None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act) Inventory:
All ingredients are listed.

Hazardous Air Pollutants
None of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

New Jersey Right-to-Know List:
None of the ingredients are listed.

Pennsylvania Right-to-Know List:
None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value)
None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Signal word Danger

Hazard-determining components of labeling:
guanidinium thiocyanate
Hazard statements
Harmful if swallowed or if inhaled.
Causes severe skin burns and eye damage.
Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.

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Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

Water hazard class: *Water hazard class 2 (Self-assessment): hazardous for water.*
Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

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16 Other information

**This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

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Date of preparation / last revision *02/06/2023*
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Toxicity - Oral 4: Acute toxicity – Category 4
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Eye Damage 1: Serious eye damage/eye irritation – Category 1