

Product code	Description
<b>L4600</b>	<b>TNT® SP6 Coupled Reticulocyte Lysate System</b>
Components:	
L447	Amino Acid Mixture Minus Cysteine, 1mM
L462	TNT® Reaction Buffer
L463	TNT® SP6 Polymerase
L474	Luciferase SP6 Control DNA
L483	TNT® Rabbit Reticulocyte
L486	Luciferase Assay Reagent
L995	Amino acid Mixture Minus Leucine
L996	Amino Acid Mix Minus Methionine
L458	Magnesium Acetate, 25mM



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** Amino Acid Mixture Minus Cysteine, 1mM**Article number:** L447**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mixture Minus Cysteine, 1mM

vPvB: Not applicable.

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## 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**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:**CO<sub>2</sub>, 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.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mixture Minus Cysteine, 1mM

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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

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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 7

#### Change in condition

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Decomposition temperature:** Not determined.

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# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mixture Minus Cysteine, 1mM

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<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic at 20 °C (68 °F):</b>	0.0952 mPas
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	99.7 %
<b>VOC content:</b>	0.00 %
<b>Other information</b>	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.

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US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mixture Minus Cysteine, 1mM

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**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.

## 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

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# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mixture Minus Cysteine, 1mM

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<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mixture Minus Cysteine, 1mM

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**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:**

Promega Corporation  
Chemical Regulatory Department  
2800 Woods Hollow Road  
Madison, WI  
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Toll-Free: (800) 356-9526  
chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 4.0**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)  
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 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** TNT® Reaction Buffer**Article number:** L462**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Reaction Buffer

vPvB: Not applicable.

(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:**

1185-53-1 Tris HCl

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:**CO<sub>2</sub>, 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.

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US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Reaction Buffer

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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.

**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**

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:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 7.5

**Change in condition**

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

**Flammability (solid, gaseous):** Not applicable.

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# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Reaction Buffer

(Contd. of page 3)

<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	95.6 %
<b>VOC content:</b>	0.00 %
<b>Other information</b>	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)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Reaction Buffer

(Contd. of page 4)

**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.

## 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

(Contd. on page 6)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: **TNT® Reaction Buffer**

(Contd. of page 5)

<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	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:**

1185-53-1 | Tris HCl

**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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Reaction Buffer

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**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:**

Promega Corporation  
Chemical Regulatory Department  
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Madison, WI  
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Toll-Free: (800) 356-9526  
chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 3.0**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)

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 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** TNT® SP6 Polymerase**Article number:** L463**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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 = 1

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** May cause Kidney damage (Nephrotoxin)**Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® SP6 Polymerase

vPvB: Not applicable.

(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:**

56-81-5 glycerol

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:** 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.

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).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

(Contd. on page 3)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® SP6 Polymerase

(Contd. of page 2)

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.

**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:**

### 56-81-5 glycerol

PEL Long-term value: 15\* 5\*\* mg/m<sup>3</sup>  
mist; \*total dust \*\*respirable fraction

TLV TLV withdrawn-insufficient data human occup. exp.

**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**

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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

<b>pH-value at 20 °C (68 °F):</b>	7.7
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#### Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
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(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® SP6 Polymerase

(Contd. of page 3)

<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	400 °C (752 °F)
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	0.9 Vol %
<b>Upper:</b>	0.0 Vol %
<b>Vapor pressure at 20 °C (68 °F):</b>	0.1 hPa
<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Organic solvents:</b>	50.0 %
<b>Water:</b>	48.7 %
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	0.3 %
<b>Other information</b>	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.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® SP6 Polymerase

(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 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

(Contd. on page 6)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: **TNT® SP6 Polymerase**

(Contd. of page 5)

<b>DOT, ADR, ADN, IMDG, IATA</b>	Not applicable
<b>UN proper shipping name</b>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	Not applicable
<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	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:**

56-81-5 | glycerol

**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:**

56-81-5 | glycerol

**Pennsylvania Right-to-Know List:**

56-81-5 | glycerol

(Contd. on page 7)

US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: **TNT® SP6 Polymerase**

(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:** 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:**

Promega Corporation  
Chemical Regulatory Department  
2800 Woods Hollow Road  
Madison, WI  
Ph: (608) 274-4330  
Toll-Free: (800) 356-9526  
chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 3.0**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)  
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

(Contd. on page 8)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**Trade name: TNT® SP6 Polymerase***PEL: Permissible Exposure Limit*  
*REL: Recommended Exposure Limit*

(Contd. of page 7)

US



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** Luciferase SP6 Control DNA**Article number:** L474**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase SP6 Control DNA

vPvB: Not applicable.

(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**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:**CO<sub>2</sub>, 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.

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase SP6 Control DNA

(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:**

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**

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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 7.4

#### Change in condition

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Decomposition temperature:** Not determined.

(Contd. on page 4)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: *Luciferase SP6 Control DNA*

(Contd. of page 3)

<b>Auto igniting:</b>	<i>Product is not selfigniting.</i>
<b>Danger of explosion:</b>	<i>Product does not present an explosion hazard.</i>
<b>Explosion limits:</b>	
<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>
<b>Vapor pressure:</b>	<i>Not determined.</i>
<b>Density at 20 °C (68 °F):</b>	<i>1 g/cm<sup>3</sup> (8.345 lbs/gal)</i>
<b>Relative density</b>	<i>Not determined.</i>
<b>Vapor density</b>	<i>Not determined.</i>
<b>Evaporation rate</b>	<i>Not determined.</i>
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	<i>Fully miscible.</i>
<b>Partition coefficient (n-octanol/water):</b>	<i>Not determined.</i>
<b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not determined.</i>
<b>Kinematic:</b>	<i>Not determined.</i>
<b>Solvent separation test</b>	
<b>Water:</b>	<i>99.8 %</i>
<b>VOC content:</b>	<i>0.00 %</i>
<b>Solids content:</b>	<i>0.9 %</i>
<b>Other information</b>	<i>No further relevant information available.</i>

### 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 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase SP6 Control DNA

(Contd. of page 4)

**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.

## 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

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase SP6 Control DNA

(Contd. of page 5)

<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	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:**

None of the ingredients are listed.

**Pennsylvania Right-to-Know List:**

None of the ingredients are listed.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value)**

None of the ingredients are listed.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase SP6 Control DNA

(Contd. of page 6)

**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:**

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

Toll-Free: (800) 356-9526

chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 3.0**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)

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 &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** TNT® Rabbit Reticulocyte**Article number:** L483**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

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

GHS08

**Signal word** Warning**Hazard-determining components of labeling:**

ethane-1,2-diol

**Hazard statements**

May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Get medical advice/attention if you feel unwell.

(Contd. on page 2)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: **TNT® Rabbit Reticulocyte**

(Contd. of page 1)

Dispose of contents/container in accordance with local/regional/national/international regulations.

**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.

## 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:**

107-21-1 ethane-1,2-diol

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****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:**CO<sub>2</sub>, 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.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Rabbit Reticulocyte

Advice for firefighters No special advice

(Contd. of page 2)

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

Wear protective clothing.

**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.

## 7 Handling and storage

### Handling:

**Precautions for safe handling** No special precautions are necessary if used correctly.**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:

#### 107-21-1 ethane-1,2-diol

TLV	Short-term value: 10** mg/m <sup>3</sup> , 50* ppm Long-term value: 25* ppm *vapor fraction:**inh. fraction, aerosol only, A4
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WEEL I (2)

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

### Exposure controls

#### Personal protective equipment:

**General protective and hygienic measures:** Wash hands before breaks and at the end of work.**Breathing equipment:** Not required.

#### Protection of hands:

Protective gloves

Select the glove material considering penetration time, rate of diffusion and degradation time.

It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Material of gloves

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.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Rabbit Reticulocyte

(Contd. of page 3)

**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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 7

#### Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	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:

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.

**Density:** Not determined.

**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:** 0.5 %

**Water:** 91.1 %

**VOC content:** 0.00 %

**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.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Rabbit Reticulocyte

(Contd. of page 4)

**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:** 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.

**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.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Rabbit Reticulocyte

(Contd. of page 5)

## 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

<b>UN-Number</b>	Not hazardous for transportation
<b>DOT, ADR, ADN, IMDG, IATA</b>	Not applicable

<b>UN proper shipping name</b>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	Not applicable

<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable

<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable

<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No

<b>Special precautions for user</b>	Not applicable.
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<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
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<b>UN "Model Regulation":</b>	Not applicable
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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):

107-21-1	ethane-1,2-diol
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### TSCA (Toxic Substances Control Act) Inventory:

107-21-1	ethane-1,2-diol
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### Hazardous Air Pollutants

107-21-1	ethane-1,2-diol
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US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: TNT® Rabbit Reticulocyte

(Contd. of page 6)

**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:**

107-21-1 ethane-1,2-diol

**New Jersey Right-to-Know List:**

107-21-1 ethane-1,2-diol

56-81-5 glycerol

**Pennsylvania Right-to-Know List:**

107-21-1 ethane-1,2-diol

56-81-5 glycerol

**Cancerogenity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value)**

107-21-1 ethane-1,2-diol

A4

**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** Warning**Hazard-determining components of labeling:**

ethane-1,2-diol

**Hazard statements**

May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Get medical advice/attention if you feel unwell.

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

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

chemicalregulatory@promega.com

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**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**Trade name: TNT® Rabbit Reticulocyte**

(Contd. of page 7)

**Contact:**

Promega Corporation  
Chemical Regulatory Department  
2800 Woods Hollow Road  
Madison, WI  
Ph: (608) 274-4330  
Toll-Free: (800) 356-9526  
chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 3.0**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)  
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  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

US

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** Luciferase Assay Reagent**Article number:** L486**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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.

(Contd. on page 2)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase Assay Reagent

vPvB: Not applicable.

(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**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:**CO<sub>2</sub>, 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.

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).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase Assay Reagent

(Contd. of page 2)

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.

**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

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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 8

#### Change in condition

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

**Flammability (solid, gaseous):** Not applicable.

(Contd. on page 4)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase Assay Reagent

(Contd. of page 3)

<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	99.0 %
<b>VOC content:</b>	0.00 %
<b>Other information</b>	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)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase Assay Reagent

(Contd. of page 4)

**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 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, ADN, IMDG, IATA**

Not applicable

**Transport hazard class(es)**

None

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US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Luciferase Assay Reagent

(Contd. of page 5)

**DOT, ADR, ADN, IMDG, IATA**  
**Class**

Not applicable

**Packing group**  
**DOT, ADR, IMDG, IATA**

None  
Not applicable

**Environmental hazards:**  
**Marine pollutant:**

No

**Special precautions for user**

Not applicable.

**Transport in bulk according to Annex II of**  
**MARPOL 73/78 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:**

546-93-0 Magnesium Carbonate

**Pennsylvania Right-to-Know List:**

None of the ingredients are listed.

**Carcinogenicity 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.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: **Luciferase Assay Reagent**

(Contd. of page 6)

**GHS label elements** Not applicable**Signal word** Not applicable**Hazard statements** Not applicable**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:**

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

Toll-Free: (800) 356-9526

chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 3.0**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 &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** Amino acid Mixture Minus Leucine**Article number:** L995**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino acid Mixture Minus Leucine

vPvB: Not applicable.

(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**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:**CO<sub>2</sub>, 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.

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).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

(Contd. on page 3)

US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino acid Mixture Minus Leucine

See Section 13 for disposal information.

(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:**

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

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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 7

#### Change in condition

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

**Flammability (solid, gaseous):** Not applicable.

(Contd. on page 4)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino acid Mixture Minus Leucine

(Contd. of page 3)

<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic at 20 °C (68 °F):</b>	0.0952 mPas
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	99.6 %
<b>VOC content:</b>	0.00 %
<b>Other information</b>	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)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino acid Mixture Minus Leucine

(Contd. of page 4)

**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 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, ADN, IMDG, IATA**

Not applicable

**Transport hazard class(es)**

None

(Contd. on page 6)

US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino acid Mixture Minus Leucine

(Contd. of page 5)

**DOT, ADR, ADN, IMDG, IATA**  
**Class**

Not applicable

**Packing group**  
**DOT, ADR, IMDG, IATA**

None

Not applicable

**Environmental hazards:**  
**Marine pollutant:**

No

**Special precautions for user**

Not applicable.

**Transport in bulk according to Annex II of**  
**MARPOL 73/78 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.

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value)**

None of the ingredients are listed.

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

**Trade name: Amino acid Mixture Minus Leucine**

(Contd. of page 6)

**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:** 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:**

Promega Corporation

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

Toll-Free: (800) 356-9526

chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 4.0

**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: International 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 &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** Amino Acid Mix Minus Methionine**Article number:** L996**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mix Minus Methionine

vPvB: Not applicable.

(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**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:**CO<sub>2</sub>, 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.

US

(Contd. on page 3)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mix Minus Methionine

(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:**

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

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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 7

#### Change in condition

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Decomposition temperature:** Not determined.

(Contd. on page 4)



# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mix Minus Methionine

(Contd. of page 3)

<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic at 20 °C (68 °F):</b>	0.0952 mPas
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	99.7 %
<b>VOC content:</b>	0.00 %
<b>Other information</b>	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)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mix Minus Methionine

(Contd. of page 4)

**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.

## 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

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mix Minus Methionine

(Contd. of page 5)

<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	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.

### Carcinogenicity categories

#### EPA (Environmental Protection Agency)

None of the ingredients are listed.

(Contd. on page 7)

US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Amino Acid Mix Minus Methionine

(Contd. of page 6)

**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:**

Promega Corporation  
Chemical Regulatory Department  
2800 Woods Hollow Road  
Madison, WI  
Ph: (608) 274-4330  
Toll-Free: (800) 356-9526  
chemicalregulatory@promega.com

**Date of preparation / last revision** 03/01/2022 / 4.0**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)  
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 03/01/2022

Reviewed on 03/01/2022

**1 Identification****Product identifier****Trade name:** Magnesium Acetate, 25mM**Article number:** L458**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

SDS author: [chemicalregulatory@promega.com](mailto:chemicalregulatory@promega.com)**Information department:**SDS author: [chemicalregulatory@promega.com](mailto: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.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/01/2022

Reviewed on 03/01/2022

Trade name: Magnesium Acetate, 25mM

vPvB: Not applicable.

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## 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**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:**CO<sub>2</sub>, 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.

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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**

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:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

**pH-value at 20 °C (68 °F):** 7

#### Change in condition

<b>Melting point/Melting range:</b>	0 °C (32 °F)
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>Flash point:</b>	Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Decomposition temperature:** Not determined.

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<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.345 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic at 20 °C (68 °F):</b>	0.0952 mPas
<b>Kinematic:</b>	Not determined.
<b>Solvent separation test</b>	
<b>Water:</b>	99.6 %
<b>VOC content:</b>	0.00 %
<b>Other information</b>	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.

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**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.

## 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

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<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA Class</b>	Not applicable
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Not applicable
<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	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.

### Carcinogenicity categories

#### EPA (Environmental Protection Agency)

None of the ingredients are listed.

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**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.

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**Date of preparation / last revision** 03/01/2022 / 3.0**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)  
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