

**Kit Components**

Product code	Description
<b>DC6031</b>	<b>GenePrint® STR Multiplex-F13A01-FESFPS-vWA 100rxns</b>

## Components:

DD208	K562 DNA High Molecular Weight
DG174	pGEM® DNA Markers
DG214	FFv Allelic Ladder Mix
DK524	FFv 10X Primer Pair Mix
DM221	STR 10X Buffer
DV433	STR 2X Loading Solution



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

Printing date 05/22/2015

Reviewed on 05/22/2015

**1: Identification****1.1 Product identifier****Trade name:** *K562 DNA High Molecular Weight***Article number:** *DD208***1.2 Relevant identified uses of the substance or mixture and uses advised against***No further relevant information available.***Application of the substance / the mixture** *Laboratory chemicals***1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:***Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330***Information department:** *SDS author: Regulatory.Affairs@promega.com***1.4 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****2.1 Classification of the substance or mixture****Classification according to the Hazard Communication Standard (HCS)***The product is not classified as hazardous according to the HCS regulation.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008 Void****Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***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***2.3 Other hazards***This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.*

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: K562 DNA High Molecular Weight**

(Contd. of page 1)

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## \* 3: Composition/information on ingredients

### 3.2 Chemical characterization: Mixtures

#### Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances are withheld as a Promega Corp. trade secret.

**Dangerous components:** Void

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

## \* 4: First-aid measures

### 4.1 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.

**4.2 Most important symptoms and effects, both acute and delayed** None

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## \* 5: Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture** None known

### 5.3 Advice for firefighters

No special advice

No special advice

**Protective equipment:** No special measures required.

## \* 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

**6.2 Environmental precautions:** Dilute with plenty of water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**6.4 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 05/22/2015

Reviewed on 05/22/2015

**Trade name: K562 DNA High Molecular Weight**

(Contd. of page 2)

## 7: Handling and storage

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

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**7.3 Specific end use(s)** No further relevant information available.

## 8: Exposure controls/personal protection

**8.1 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.

**8.2 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

**9.1 Information on basic physical and chemical properties**

**General Information**

**Appearance:**

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

**Ignition temperature:**

**Decomposition temperature:** Not determined.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: K562 DNA High Molecular Weight**

(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:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour 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>Organic solvents:</b>	0.0 %
<b>Water:</b>	97.0 %
<b>Solids content:</b>	10.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10: Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** No dangerous reactions known.

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11: Toxicological information

### 11.1 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:** Irritating effect.

**Sensitization:** No sensitizing effects known.

#### Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

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.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: K562 DNA High Molecular Weight**

(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

### 12.1 Toxicity

**Aquatic toxicity:** Not harmful to the aquatic environment

**12.2 Persistence and degradability** Not available

**12.3 Bioaccumulative potential** Not known

**12.4 Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for water.

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13: Disposal considerations

### 13.1 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

**14.1 UN-Number** Not hazardous for transportation

**14.2 UN proper shipping name** None

**14.3 Transport hazard class(es)** None

**14.4 Packing group** None

**14.5 Environmental hazards:**

**Marine pollutant:** No

**14.6 Special precautions for user** Not applicable.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: K562 DNA High Molecular Weight**

(Contd. of page 5)

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

## 15: Regulatory information

**15.1 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):**

All 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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

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

None of the ingredients are listed.

**National regulations:**

**Water hazard class:** Generally not hazardous for water.

**15.2 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

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

(Contd. on page 7)



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

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: K562 DNA High Molecular Weight**

(Contd. of page 6)

*Ph: (608)274-4330***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)**GHS: Globally Harmonized System of Classification and Labeling of Chemicals**ACGIH: American Conference of Governmental Industrial Hygienists**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)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent***\* Data compared to the previous version altered.**

US

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

Printing date 05/22/2015

Reviewed on 05/22/2015

**1: Identification****1.1 Product identifier****Trade name:** pGEM® DNA Markers**Article number:** DG174**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture** Laboratory chemicals**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)**1.4 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****2.1 Classification of the substance or mixture****Classification according to the Hazard Communication Standard (HCS)**

The product is not classified as hazardous according to the HCS regulation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**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**2.3 Other hazards**

This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

(Contd. on page 2)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: pGEM® DNA Markers**

(Contd. of page 1)

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3: Composition/information on ingredients

### 3.2 Chemical characterization: Mixtures

#### Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances are withheld as a Promega Corp. trade secret.

**Dangerous components:** Void

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

## 4: First-aid measures

### 4.1 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.

**4.2 Most important symptoms and effects, both acute and delayed** None

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5: Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture** None known

**5.3 Advice for firefighters** No special advice

**Protective equipment:** No special measures required.

## 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

**6.2 Environmental precautions:** Dilute with plenty of water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**6.4 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

**7.1 Precautions for safe handling** No special measures required.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: pGEM® DNA Markers**

(Contd. of page 2)

**Information about protection against explosions and fires:** The product is not flammable.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**7.3 Specific end use(s)** No further relevant information available.

## 8: Exposure controls/personal protection

### 8.1 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.

### 8.2 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

### 9.1 Information on basic physical and chemical properties

**General Information**

**Appearance:**

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

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: pGEM® DNA Markers

(Contd. of page 3)

**Explosion limits:****Lower:** Not determined.**Upper:** Not determined.**Vapor pressure:** Not determined.**Density:** Not determined.**Relative density** Not determined.**Vapour 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.**Organic solvents:** 0.0 %**Water:** 99.0 %**Solids content:** 10.0 %**9.2 Other information** No further relevant information available.

## 10: Stability and reactivity

**10.1 Reactivity****10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11: Toxicological information

**11.1 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:** Irritating effect.**Sensitization:** No sensitizing effects known.**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

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.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: pGEM® DNA Markers**

(Contd. of page 4)

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

## 12: Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** Not harmful to the aquatic environment

**12.2 Persistence and degradability** Not available

**12.3 Bioaccumulative potential** Not known

**12.4 Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for water.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13: Disposal considerations

### 13.1 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

**14.1 UN-Number** Not hazardous for transportation

**DOT, ADR, ADN, IMDG, IATA** Void

**14.2 UN proper shipping name** None

**DOT, ADR, ADN, IMDG, IATA** Void

**14.3 Transport hazard class(es)** None

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

**14.4 Packing group** None

**DOT, ADR, IMDG, IATA** Void

**14.5 Environmental hazards:**

**Marine pollutant:** No

**14.6 Special precautions for user** Not applicable.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: pGEM® DNA Markers

(Contd. of page 5)

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

**UN "Model Regulation":**      -

## 15: Regulatory information

**15.1 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):**

*All 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.*

**Carcinogeny categories**

**EPA (Environmental Protection Agency)**

*None of the ingredients are listed.*

**TLV (Threshold Limit Value established by ACGIH)**

*None of the ingredients are listed.*

**MAK (German Maximum Workplace Concentration)**

*None of the ingredients are listed.*

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

*None of the ingredients are listed.*

**National regulations:**

**Water hazard class:** *Generally not hazardous for water.*

**15.2 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*

*Environmental Health and Safety Department*

*2800 Woods Hollow Road*

(Contd. on page 7)

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

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: pGEM® DNA Markers**

(Contd. of page 6)

*Madison, WI**Ph:(608)274-4330***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 européen sur le transport 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**GHS: Globally Harmonized System of Classification and Labeling of Chemicals**ACGIH: American Conference of Governmental Industrial Hygienists**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)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent***\* Data compared to the previous version altered.**

US



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

Printing date 05/22/2015

Reviewed on 05/22/2015

**1: Identification****1.1 Product identifier****Trade name:** FFv Allelic Ladder Mix**Article number:** DG214**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture** Laboratory chemicals**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)**1.4 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****2.1 Classification of the substance or mixture****Classification according to the Hazard Communication Standard (HCS)**

The product is not classified as hazardous according to the HCS regulation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**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**2.3 Other hazards**

This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: FFv Allelic Ladder Mix**

(Contd. of page 1)

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3: Composition/information on ingredients

### 3.2 Chemical characterization: Mixtures

#### Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances are withheld as a Promega Corp. trade secret.

#### Dangerous components:

9002-93-1	Polyethylene glycol tert-octylphenyl ether	<1.00%
	⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319; Aquatic Chronic 4, H413	

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

## 4: First-aid measures

### 4.1 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.

**4.2 Most important symptoms and effects, both acute and delayed** None

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5: Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture** None known

**5.3 Advice for firefighters** No special advice

**Protective equipment:** No special measures required.

## 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

**6.2 Environmental precautions:** Dilute with plenty of water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**6.4 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 05/22/2015

Reviewed on 05/22/2015

Trade name: FFv Allelic Ladder Mix

(Contd. of page 2)

## 7: Handling and storage

**7.1 Precautions for safe handling** No special measures required.

**Information about protection against explosions and fires:** The product is not flammable.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**7.3 Specific end use(s)** No further relevant information available.

## \* 8: Exposure controls/personal protection

**8.1 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.

**8.2 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

**9.1 Information on basic physical and chemical properties**

**General Information**

**Appearance:**

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

**pH-value at 20 °C (68 °F):** 9

**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.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: FFv Allelic Ladder Mix

(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:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour 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>Organic solvents:</b>	0.1 %
<b>Water:</b>	99.2 %
<b>Solids content:</b>	10.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10: Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** No dangerous reactions known.

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11: Toxicological information

### 11.1 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:** Irritating effect.

**Sensitization:** No sensitizing effects known.

#### Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

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.

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: FFv Allelic Ladder Mix

(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****12.1 Toxicity****Aquatic toxicity:** Not harmful to the aquatic environment**12.2 Persistence and degradability** Not available**12.3 Bioaccumulative potential** Not known**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:** Generally not hazardous for water.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**13: Disposal considerations****13.1 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****14.1 UN-Number**

Not hazardous for transportation

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

Void

**14.2 UN proper shipping name**

None

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

Void

**14.3 Transport hazard class(es)**

None

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

Void

**14.4 Packing group**

None

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: FFv Allelic Ladder Mix

(Contd. of page 5)

<b>DOT, ADR, IMDG, IATA</b>	Void
-----------------------------	------

<b>14.5 Environmental hazards:</b> <b>Marine pollutant:</b>	No
--	----

<b>14.6 Special precautions for user</b>	Not applicable.
--	-----------------

<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
---	-----------------

<b>UN "Model Regulation":</b>	-
-------------------------------	---

## 15: Regulatory information

**15.1 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):**

7447-40-7	potassium chloride
-----------	--------------------

77-86-1	2-Amino-2-(hydroxymethyl)-1,3-propanediol
---------	---

9002-93-1	Polyethylene glycol tert-octylphenyl ether
-----------	--

7732-18-5	water
-----------	-------

**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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

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

None of the ingredients are listed.

**National regulations:**

**Water hazard class:** Generally not hazardous for water.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: FFv Allelic Ladder Mix****15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. of page 6)

## 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  
Environmental Health and Safety Department  
2800 Woods Hollow Road  
Madison, WI  
Ph: (608)274-4330

### **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
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)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4

**\* Data compared to the previous version altered.**

US

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

Printing date 05/22/2015

Reviewed on 05/22/2015

**1: Identification**

**1.1 Product identifier**

**Trade name:** FFv 10X Primer Pair Mix

**Article number:** DK524

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture** Laboratory chemicals

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.

1-800-356-9526 or (608)-274-4330

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

**1.4 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**

**2.1 Classification of the substance or mixture**

**Classification according to the Hazard Communication Standard (HCS)**

The product is not classified as hazardous according to the HCS regulation.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008 Void**

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

**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

**2.3 Other hazards**

This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

(Contd. on page 2)



# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: FFv 10X Primer Pair Mix**

(Contd. of page 1)

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3: Composition/information on ingredients

### 3.2 Chemical characterization: Mixtures

#### Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances are withheld as a Promega Corp. trade secret.

**Dangerous components:** Void

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

## 4: First-aid measures

### 4.1 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.

**4.2 Most important symptoms and effects, both acute and delayed** None

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5: Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture** None known

**5.3 Advice for firefighters** No special advice

**Protective equipment:** No special measures required.

## 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

**6.2 Environmental precautions:** Dilute with plenty of water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**6.4 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

**7.1 Precautions for safe handling** No special measures required.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: FFv 10X Primer Pair Mix**

(Contd. of page 2)

**Information about protection against explosions and fires:** *The product is not flammable.*

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** *No special requirements.*

**Information about storage in one common storage facility:** *Not required.*

**Further information about storage conditions:** *None.*

**7.3 Specific end use(s)** *No further relevant information available.*

## 8: Exposure controls/personal protection

### 8.1 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.*

### 8.2 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

### 9.1 Information on basic physical and chemical properties

#### **General Information**

#### **Appearance:**

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

#### **Ignition temperature:**

**Decomposition temperature:** *Not determined.*

**Auto igniting:** *Product is not selfigniting.*

**Danger of explosion:** *Product does not present an explosion hazard.*

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: FFv 10X Primer Pair Mix

(Contd. of page 3)

**Explosion limits:****Lower:** Not determined.**Upper:** Not determined.**Vapor pressure:** Not determined.**Density:** Not determined.**Relative density** Not determined.**Vapour 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.**Organic solvents:** 0.0 %**Water:** 99.9 %**Solids content:** 10.0 %**9.2 Other information** No further relevant information available.**10: Stability and reactivity****10.1 Reactivity****10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.**11: Toxicological information****11.1 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:** Irritating effect.**Sensitization:** No sensitizing effects known.**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

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.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: FFv 10X Primer Pair Mix**

(Contd. of page 4)

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

## 12: Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** Not harmful to the aquatic environment

**12.2 Persistence and degradability** Not available

**12.3 Bioaccumulative potential** Not known

**12.4 Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for water.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## 13: Disposal considerations

### 13.1 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

**14.1 UN-Number** Not hazardous for transportation

**DOT, ADR, ADN, IMDG, IATA** Void

**14.2 UN proper shipping name** None

**DOT, ADR, ADN, IMDG, IATA** Void

**14.3 Transport hazard class(es)** None

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

**Class** Void

**14.4 Packing group** None

**DOT, ADR, IMDG, IATA** Void

**14.5 Environmental hazards:**

**Marine pollutant:** No

**14.6 Special precautions for user** Not applicable.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: FFv 10X Primer Pair Mix

(Contd. of page 5)

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

**UN "Model Regulation":** -

## 15: Regulatory information

**15.1 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):**

7732-18-5 | water

**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.

**Carcinogen categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

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

None of the ingredients are listed.

**National regulations:**

**Water hazard class:** Generally not hazardous for water.

**15.2 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

Environmental Health and Safety Department

2800 Woods Hollow Road

(Contd. on page 7)

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

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: FFv 10X Primer Pair Mix**

(Contd. of page 6)

*Madison, WI**Ph:(608)274-4330***Abbreviations and acronyms:***ADR: Accord européen sur le transport 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**GHS: Globally Harmonized System of Classification and Labeling of Chemicals**ACGIH: American Conference of Governmental Industrial Hygienists**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)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent***\* Data compared to the previous version altered.**

US

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

Printing date 05/22/2015

Reviewed on 05/22/2015

**1: Identification****1.1 Product identifier****Trade name:** STR 10X Buffer**Article number:** DM221**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture** Laboratory chemicals**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)**1.4 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****2.1 Classification of the substance or mixture****Classification according to the Hazard Communication Standard (HCS)**

The product is not classified as hazardous according to the HCS regulation.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**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**2.3 Other hazards**

This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: STR 10X Buffer**

(Contd. of page 1)

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3: Composition/information on ingredients

### 3.2 Chemical characterization: Mixtures

#### Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances are withheld as a Promega Corp. trade secret.

#### Dangerous components:

77-86-1	2-Amino-2-(hydroxymethyl)-1,3-propanediol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	<2.00%
9002-93-1	Polyethylene glycol tert-octylphenyl ether ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319; Aquatic Chronic 4, H413	<2.00%

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

## 4: First-aid measures

### 4.1 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.

**4.2 Most important symptoms and effects, both acute and delayed** None

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5: Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture** None known

### 5.3 Advice for firefighters

No special advice

No special advice

**Protective equipment:** No special measures required.

## 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Not required.

### 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

(Contd. on page 3)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: STR 10X Buffer**

(Contd. of page 2)

## 6.4 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

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

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**7.3 Specific end use(s)** No further relevant information available.

## 8: Exposure controls/personal protection

### 8.1 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.

### 8.2 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

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

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

**pH-value at 20 °C (68 °F):** 9

#### Change in condition

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

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: STR 10X Buffer

(Contd. of page 3)

<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	
<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:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour 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>Organic solvents:</b>	1.0 %
<b>Water:</b>	93.3 %
<b>Solids content:</b>	7.0 %
<b>9.2 Other information</b>	No further relevant information available.

## \* 10: Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** No dangerous reactions known.

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## \* 11: Toxicological information

### 11.1 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:** Irritating effect.

**Sensitization:** No sensitizing effects known.

#### 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 05/22/2015

Reviewed on 05/22/2015

Trade name: STR 10X Buffer

(Contd. of page 4)

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****12.1 Toxicity****Aquatic toxicity:** Not harmful to the aquatic environment**12.2 Persistence and degradability** Not available**12.3 Bioaccumulative potential** Not known**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.\* **13: Disposal considerations****13.1 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****14.1 UN-Number**

Not hazardous for transportation

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

Void

**14.2 UN proper shipping name**

None

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

Void

**14.3 Transport hazard class(es)**

None

(Contd. on page 6)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: STR 10X Buffer

(Contd. of page 5)

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

Void

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

None

Void

**14.5 Environmental hazards:**  
Marine pollutant:

No

**14.6 Special precautions for user**

Not applicable.

**14.7 Transport in bulk according to Annex II of**  
MARPOL73/78 and the IBC Code

Not applicable.

**UN "Model Regulation":**

-

## 15: Regulatory information

**15.1 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):**

7447-40-7	potassium chloride
77-86-1	2-Amino-2-(hydroxymethyl)-1,3-propanediol
9002-93-1	Polyethylene glycol tert-octylphenyl ether
7786-30-3	Magnesium Chloride
7732-18-5	water

**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.

**Carcinogeny categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: STR 10X Buffer**

(Contd. of page 6)

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

None of the ingredients are listed.

**National regulations:**

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**15.2 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

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

**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 européen sur le transport 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

**GHS:** Globally Harmonized System of Classification and Labeling of Chemicals

**ACGIH:** American Conference of Governmental Industrial Hygienists

**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)

**LC50:** Lethal concentration, 50 percent

**LD50:** Lethal dose, 50 percent

**Acute Tox. 4:** Acute toxicity, Hazard Category 4

**Skin Irrit. 2:** Skin corrosion/irritation, Hazard Category 2

**Eye Irrit. 2:** Serious eye damage/eye irritation, Hazard Category 2

**STOT SE 3:** Specific target organ toxicity - Single exposure, Hazard Category 3

**Aquatic Chronic 4:** Hazardous to the aquatic environment - Chronic Hazard, Category 4

**\* Data compared to the previous version altered.**

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

Printing date 05/22/2015

Reviewed on 05/22/2015

**1: Identification****1.1 Product identifier****Trade name:** STR 2X Loading Solution**Article number:** DV433**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture** Laboratory chemicals**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** SDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)**1.4 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****2.1 Classification of the substance or mixture**

Classification according to the Hazard Communication Standard (HCS)



Health hazard

Muta. 1B H340 May cause genetic defects.

Repr. 1B H360D May damage the unborn child.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labeled according to the CLP regulation.

**Hazard pictograms** GHS08**Signal word** Danger**Hazard-determining components of labeling:**

formamide

**Hazard statements**

H340 May cause genetic defects.

H360D May damage the unborn child.

**Precautionary statements**

P281 Use personal protective equipment as required.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P308+P313 IF exposed or concerned: Get medical advice/attention.

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: STR 2X Loading Solution**

(Contd. of page 1)

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 1

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 2

Fire = 1

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):**

Toxic

Reproductive Hazard

**Primary route(s) of entry:** Oral

**Target Organ(s):**

May affect Nervous system (Neurotoxin)

May affect Reproductive System (Mutagen, Teratogen)

Affects Blood (Hematopoietic system)

Risk of damage to eyes

**2.3 Other hazards**

This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

### 3: Composition/information on ingredients

**3.2 Chemical characterization: Mixtures**

**Description:**

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances are withheld as a Promega Corp. trade secret.

**Dangerous components:**

75-12-7	formamide	 Muta. 1B, H340; Repr. 1B, H360D	75-100%
---------	-----------	---	---------

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

### 4: First-aid measures

**4.1 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.

**4.2 Most important symptoms and effects, both acute and delayed** None

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: STR 2X Loading Solution

(Contd. of page 2)

## 5: Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing agents:

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

### 5.2 Special hazards arising from the substance or mixture

None known

5.3 Advice for firefighters In the case of fire, wear respiratory protective equipment and chemical protective suit.

## 6: Accidental release measures

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

Remove persons from danger area.

Wear protective clothing.

### 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to Section 13.

Ensure adequate ventilation.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## 7: Handling and storage

### 7.1 Precautions for safe handling

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about protection against explosions and fires:** No special measures required.

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

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

### 7.3 Specific end use(s)

No further relevant information available.

## 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with limit values that require monitoring at the workplace:

#### 75-12-7 formamide

REL	Long-term value: 15 mg/m <sup>3</sup> , 10 ppm
	Skin

TLV	Long-term value: 18 mg/m <sup>3</sup> , 10 ppm
	Skin

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

(Contd. on page 4)

US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: STR 2X Loading Solution

(Contd. of page 3)

**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Ensure that washing facilities are available at the work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat or drink while working.

**Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:**

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.

**Eye protection:**

Safety glasses

Use equipment for eye protection tested and approved under government NIOSH standards.

## 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

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

**Change in condition**

<b>Melting point/Melting range:</b>	2.5 °C (37 °F)
<b>Boiling point/Boiling range:</b>	210 °C (410 °F)
<b>Flash point:</b>	> 100 °C (> 212 °F)

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

**Vapor pressure at 20 °C (68 °F):** 0.03 hPa**Density at 20 °C (68 °F):** 1.1339 g/cm<sup>3</sup> (9.462 lbs/gal)

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: STR 2X Loading Solution**

(Contd. of page 4)

<b>Relative density</b>	Not determined.
<b>Vapour 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>Organic solvents:</b>	95.0 %
<b>Water:</b>	4.8 %
<b>VOC content:</b>	95.0 %

<b>Solids content:</b>	0.1 %
<b>9.2 Other information</b>	No further relevant information available.

## \* 10: Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

### 10.3 Possibility of hazardous reactions

Reacts with strong acids and alkali.

Reacts with strong oxidizing agents.

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

### 10.6 Hazardous decomposition products:

Nitrogen oxides

Carbon monoxide and carbon dioxide

Ammonia

## \* 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values that are relevant for classification:

#### 75-12-7 formamide

Oral	LD50	5570 mg/kg (Rat)
Irritation of eyes	acute	100 mg (Rabbit) Severe

#### Primary irritant effect:

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

#### Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

The product can cause inheritable damage.

(Contd. on page 6)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: STR 2X Loading Solution

(Contd. of page 5)

**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****12.1 Toxicity****Aquatic toxicity:** Not harmful to the aquatic environment**12.2 Persistence and degradability** Not available**12.3 Bioaccumulative potential** Not known**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Not available**Additional ecological information:****General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**13: Disposal considerations****13.1 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****14.1 UN-Number**

Not hazardous for transportation

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

Void

**14.2 UN proper shipping name**

None

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

Void

**14.3 Transport hazard class(es)**

None

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

Void

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

Trade name: STR 2X Loading Solution

(Contd. of page 6)

<b>14.4 Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Void

<b>14.5 Environmental hazards:</b>	
<b>Marine pollutant:</b>	No

<b>14.6 Special precautions for user</b>	Not applicable.
--	-----------------

<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
---	-----------------

<b>UN "Model Regulation":</b>	-
-------------------------------	---

## 15: Regulatory information

**15.1 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):**

All 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.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

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

None of the ingredients are listed.

**National regulations:**

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. on page 8)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/22/2015

Reviewed on 05/22/2015

**Trade name: STR 2X Loading Solution**

(Contd. of page 7)

### 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  
 Environmental Health and Safety Department  
 2800 Woods Hollow Road  
 Madison, WI  
 Ph: (608)274-4330

**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 européen sur le transport 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*  
*GHS: Globally Harmonized System of Classification and Labeling of Chemicals*  
*ACGIH: American Conference of Governmental Industrial Hygienists*  
*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*  
*Muta. 1B: Germ cell mutagenicity, Hazard Category 1B*  
*Repr. 1B: Reproductive toxicity, Hazard Category 1B*  
**\* Data compared to the previous version altered.**

US