

Product code	Description
<b>DC6171</b>	<b>GenePrint® Fluor. Sex Ident. Sys.-Amelogenin 100rxns</b>

## Components:

DD208	K562 DNA High Molecular Weight
DG333	Amelogenin Ladder, (TMR)
DK280	Amelogenin 10X Primer Pair, (TMR)
DM221	STR 10X Buffer
DV435	Blue Dextran Loading Solution
DV436	Gel Tracking Dye
DV437	Bromophenol Blue Loading Solution



**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

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

**Article number:** DD208

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

**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

**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 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

1185-53-1	2-Amino-2-(hydroxymethyl)-1,3-propanediolhydrochloride	1.0-5.0%
	⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; H319; STOT SE 3, H335	

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

**3 Hazards identification**

**Classification of the substance or mixture**

The product is not classified according to the Globally Harmonized System (GHS).

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**GHS label elements** Void

**Hazard pictograms** Void

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# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

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

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**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

## 4 First aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**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 symptoms persist consult doctor.

## 5 Firefighting measures

**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

**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.

## 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.

**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.

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# Material Safety Data Sheet

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

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

## 8 Exposure controls/personal protection

**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.

**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:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<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)

**Flash point:** 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.

**Explosion limits:**

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

**Vapor pressure:** Not determined.

**Density:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

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# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

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

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<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with 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 content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	97.0 %
<b>Solids content:</b>	10.0 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.  
**Incompatible materials:** No further relevant information available.  
**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**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.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment  
**Persistence and degradability:** Not available  
**Behavior in environmental systems:**  
**Bioaccumulative potential:** Not known  
**Ecotoxicological effects:**  
**Remark:** Not available

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# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

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

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**Additional ecological information:**

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

## 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>	None
<b>UN proper shipping name</b>	None
<b>Transport hazard class(es)</b>	None
<b>Packing group</b>	None
<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 MARPOL73/78 and the IBC Code</b>	Not applicable.

## 15 Regulatory information

**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.

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# Material Safety Data Sheet

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Reviewed on 11/04/2012

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

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**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.

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

None of the ingredients are listed.

**GHS label elements** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

**National regulations:**

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

## 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 MSDS:**

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)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

\* Data compared to the previous version altered.



**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** Amelogenin Ladder, (TMR)

**Article number:** DG333

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

**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

**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 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

9002-93-1	Polyethylene glycol tert-octylphenyl ether Eye Dam. 1, H318; Acute Tox. 4, H302	<1.00%
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**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**

The product is not classified according to the Globally Harmonized System (GHS).

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**GHS label elements** Void

**Hazard pictograms** Void

**Signal word** Void

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# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: Amelogenin Ladder, (TMR)

(Contd. of page 1)

**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

## 4 First aid measures

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**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 symptoms persist consult doctor.

## 5 Firefighting measures

**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**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.

## 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.**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.

(Contd. on page 3)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: Amelogenin Ladder, (TMR)

(Contd. of page 2)

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

## 8 Exposure controls/personal protection

### **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.

### **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:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### **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:** Goggles recommended during refilling.

## 9 Physical and chemical properties

### **General Information**

#### **Appearance:**

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

**pH-value at 20°C (68 °F):** 9

#### **Change in condition**

<b>Melting point/Melting range:</b>	0°C (32 °F)
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** 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.

#### **Explosion limits:**

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

**Vapor pressure:** Not determined.

**Density:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Amelogenin Ladder, (TMR)**

(Contd. of page 3)

<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with 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 content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	99.2 %
<b>Solids content:</b>	10.0 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.  
**Incompatible materials:** No further relevant information available.  
**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**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.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment  
**Persistence and degradability:** Not available  
**Behavior in environmental systems:**  
**Bioaccumulative potential:** Not known  
**Ecotoxicological effects:**  
**Remark:** Not available

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: Amelogenin Ladder, (TMR)

(Contd. of page 4)

**Additional ecological information:****General notes:** Generally not hazardous for water**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 None

DOT, ADR, ADN, IMDG, IATA Void

UN proper shipping name None

DOT, ADR, ADN, IMDG, IATA Void

Transport hazard class(es) None

DOT, ADR, ADN, IMDG, IATA  
Class Void

Packing group None

DOT, ADR, IMDG, IATA Void

**Environmental hazards:****Marine pollutant:** No**Special precautions for user** Not applicable.**Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code** Not applicable.

UN "Model Regulation": -

**15 Regulatory information****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

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# Material Safety Data Sheet

acc. to ISO/DIS 11014

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Reviewed on 11/04/2012

**Trade name: Amelogenin Ladder, (TMR)**

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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.

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

None of the ingredients are listed.

**GHS label elements** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**National regulations:**

Class	Share in %
Wasser	99.2
NK	0.1

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

## 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 MSDS:**

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)

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**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Amelogenin Ladder, (TMR)**

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*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

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

USA

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 11/05/2012

Reviewed on 11/04/2012

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** Amelogenin 10X Primer Pair, (TMR)

**Article number:** DK280

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

**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)

**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 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

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

**3 Hazards identification**

**Classification of the substance or mixture**

The product is not classified according to the Globally Harmonized System (GHS).

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**GHS label elements** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

(Contd. on page 2)



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Amelogenin 10X Primer Pair, (TMR)**

(Contd. of page 1)

**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

## \* 4 First aid measures

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**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 symptoms persist consult doctor.

## \* 5 Firefighting measures

**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**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.

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

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: Amelogenin 10X Primer Pair, (TMR)

(Contd. of page 2)

## 8 Exposure controls/personal protection

**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.

**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:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<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)

**Flash point:** 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.

**Explosion limits:**

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

**Vapor pressure:** 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.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Amelogenin 10X Primer Pair, (TMR)**

(Contd. of page 3)

**Solubility in / Miscibility with  
Water:**

Fully miscible.

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

**Solvent content:**

**Organic solvents:** 0.0 %

**Water:** 99.8 %

**Solids content:** 10.0 %

**Other information** No further relevant information available.

## 10 Stability and reactivity

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

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

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

## 11 Toxicological information

**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.

## 12 Ecological information

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

**Persistence and degradability** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential** Not known

**Ecotoxicological effects:**

**Remark:** Not available

(Contd. on page 5)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Amelogenin 10X Primer Pair, (TMR)**

(Contd. of page 4)

**Additional ecological information:**

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

## 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** None

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

**UN proper shipping name** None

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

**Transport hazard class(es)** None

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

**Packing group** None

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

**Environmental hazards:**

**Marine pollutant:** No

**Special precautions for user** Not applicable.

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

**UN "Model Regulation":** -

## 15 Regulatory information

**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

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Amelogenin 10X Primer Pair, (TMR)**

(Contd. of page 5)

**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.

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

None of the ingredients are listed.

**GHS label elements** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**National regulations:****Water hazard class:** Generally not hazardous for water.

## 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 MSDS:**

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

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** STR 10X Buffer

**Article number:** DM221

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

**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)

**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 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

77-86-1	2-Amino-2-(hydroxymethyl)-1,3-propanediol ⚠ Skin Irrit. 2, H315; H319; STOT SE 3, H335	<2.00%
9002-93-1	Polyethylene glycol tert-octylphenyl ether ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	<2.00%

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

**3 Hazards identification**

**Classification of the substance or mixture**

The product is not classified according to the Globally Harmonized System (GHS).

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: STR 10X Buffer**

(Contd. of page 1)

**Label elements****GHS label elements** 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

## \* 4 First aid measures

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**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 symptoms persist consult doctor.

## \* 5 Firefighting measures

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

## \* 6 Accidental release measures

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

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

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: STR 10X Buffer

(Contd. of page 2)

**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

**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.**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:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information****Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<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)

**Flash point:** 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.**Explosion limits:**

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

**Vapor pressure:** Not determined.**Density:** Not determined.

(Contd. on page 4)



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: STR 10X Buffer

(Contd. of page 3)

<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient (n-octanol/water):</b> Not determined.	
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	92.8 %
<b>Solids content:</b>	100.0 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.  
**Incompatible materials:** No further relevant information available.  
**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**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.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment  
**Persistence and degradability:** Not available  
**Behavior in environmental systems:**  
**Bioaccumulative potential:** Not known

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: STR 10X Buffer

(Contd. of page 4)

**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.

## 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.

## 14 Transport information

<b>UN-Number</b>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	Void

<b>UN proper shipping name</b>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	Void

<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	
<b>Class</b>	Void

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

<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 MARPOL73/78 and the IBC Code</b>	Not applicable.
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<b>UN "Model Regulation":</b>	-
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## 15 Regulatory information

**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

(Contd. on page 6)

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: STR 10X Buffer**

(Contd. of page 5)

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.

**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.

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

None of the ingredients are listed.

**GHS label elements** Void**Hazard pictograms** Void**Signal word** Void**Hazard statements** Void**National regulations:**

Class	Share in %
Wasser	92.9
NK	1.0

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

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph:(608)274-4330

(Contd. on page 7)

USA

**Material Safety Data Sheet**  
**acc. to ISO/DIS 11014**

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: STR 10X Buffer**

(Contd. of page 6)

**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*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

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

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** Blue Dextran Loading Solution

**Article number:** DV435

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

**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

**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 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

75-12-7 formamide	 Repr. 1B, H360	75-100%
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**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

H319 Causes serious eye irritation.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: **Blue Dextran Loading Solution**

(Contd. of page 1)

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC****Toxic***May cause harm to the unborn child.***Harmful***Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.***Irritant***Irritating to eyes and skin.***Classification system:***The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.***Label elements****GHS label elements** *The product is classified and labelled according to the Globally Harmonized System (GHS).***Hazard pictograms** *GHS07, GHS08***Signal word** *Danger***Hazard-determining components of labelling:***formamide***Hazard statements***Causes skin irritation.**Causes serious eye irritation.**May damage fertility or the unborn child.**Causes damage to organs through prolonged or repeated exposure.***Precautionary statements***Do not breathe dust/fume/gas/mist/vapours/spray.**Wear protective gloves/protective clothing/eye protection/face protection.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Specific treatment (see on this label).**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Classification system:****NFPA ratings (scale 0 - 4)***Health = 2**Fire = 1**Reactivity = 0***HMIS-ratings (scale 0 - 4)***Health = 2**Fire = 1**Reactivity = 0***OSHA Hazard Overview (Criteria according to 29CFR1910.1200):***Toxic**Irritant**Reproductive Hazard***Primary route(s) of entry:***Dermal**Inhalation**Oral***Target Organ(s):***May affect Nervous system (Neurotoxin)*

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Blue Dextran Loading Solution**

(Contd. of page 2)

May affect Reproductive System (Mutagen, Teratogen)  
Affects Blood (Hematopoietic system)  
Risk of damage to eyes

## 4 First aid measures

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** If symptoms persist consult doctor.

## 5 Firefighting measures

**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

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

**Environmental precautions:**

Dilute with plenty of water.

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

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

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## 7 Handling and storage

**Handling:**

**Precautions for safe handling**

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.

**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:** Keep receptacle tightly sealed.

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

USA

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: **Blue Dextran Loading Solution**

(Contd. of page 3)

## 8 Exposure controls/personal protection

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

**75-12-7 formamide**

REL	15 mg/m <sup>3</sup> , 10 ppm Skin
TLV	18 mg/m <sup>3</sup> , 10 ppm Skin

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

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat or drink while working.

Clean skin thoroughly immediately after handling the product.

Ensure that washing facilities are available at the work place.

**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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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:** Tightly sealed goggles

## 9 Physical and chemical properties

**General Information**

**Appearance:**

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

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

**Flash point:** > 100°C (> 212 °F)

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

**Ignition temperature:**

**Decomposition temperature:** Not determined.

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

(Contd. on page 5)

USA



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Blue Dextran Loading Solution**

(Contd. of page 4)

<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>	1.121 g/cm <sup>3</sup> (9.355 lbs/gal)
<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>Solvent content:</b>	
<b>Organic solvents:</b>	88.2 %
<b>Water:</b>	10.1 %
<b>VOC content:</b>	88.2 %
<b>Solids content:</b>	1.7 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

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

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

## 11 Toxicological information

**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:** Irritant to skin and mucous membranes.

**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:

Irritant

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Blue Dextran 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.

## 12 Ecological information

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

**Persistence and degradability** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential** Not known

**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.

## 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** None

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

**UN proper shipping name** None

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

**Transport hazard class(es)** None

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

**Class** Void

**Packing group** None

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

### Environmental hazards:

**Marine pollutant:** No

**Special precautions for user** Not applicable.

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USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Blue Dextran Loading Solution**

(Contd. of page 6)

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

**UN "Model Regulation":** -

## \* 15 Regulatory information

**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):**

75-12-7	formamide
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139-33-3	disodium dihydrogenethylenediaminetetraacetate
----------	--

7732-18-5	water
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**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.

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

None of the ingredients are listed.

**GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).

**Hazard pictograms** GHS07, GHS08

**Signal word** Danger

**Hazard-determining components of labelling:**

formamide

**Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

(Contd. on page 8)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Blue Dextran Loading Solution**

(Contd. of page 7)

*May damage fertility or the unborn child.*

*Causes damage to organs through prolonged or repeated exposure.*

**Precautionary statements**

*Do not breathe dust/fume/gas/mist/vapours/spray.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Specific treatment (see on this label).*

*Store locked up.*

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

**National regulations:**

Class	Share in %
Wasser	10.1
NK	88.3

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

## 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 MSDS:**

*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*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*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*

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

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** Gel Tracking Dye

**Article number:** DV436

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

**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

**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 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

75-12-7 formamide	 Repr. 1B, H360	75-100%
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**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Toxic

May cause harm to the unborn child.



Harmful

Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: Gel Tracking Dye

(Contd. of page 1)

**Irritant***Irritating to eyes and skin.***Classification system:***The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.***Label elements****GHS label elements** *The product is classified and labelled according to the Globally Harmonized System (GHS).***Hazard pictograms** GHS08**Signal word** Danger**Hazard-determining components of labelling:***formamide***Hazard statements***May damage fertility or the unborn child.***Precautionary statements***Use personal protective equipment as required.**Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**IF exposed or concerned: Get medical advice/attention.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***Classification system:****NFPA ratings (scale 0 - 4)***Health = 2**Fire = 1**Reactivity = 0***HMIS-ratings (scale 0 - 4)***Health = 2**Fire = 1**Reactivity = 0***OSHA Hazard Overview (Criteria according to 29CFR1910.1200):***Toxic**Irritant**Reproductive Hazard***Primary route(s) of entry:***Dermal**Inhalation**Oral***Target Organ(s):***May affect Nervous system (Neurotoxin)**May affect Reproductive System (Mutagen, Teratogen)**Affects Blood (Hematopoietic system)**Risk of damage to eyes*

## 4 First aid measures

**After inhalation:** *Supply fresh air; consult doctor in case of complaints.***After skin contact:***Immediately wash with water and soap and rinse thoroughly.**If skin irritation continues, consult a doctor.***After eye contact:***Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*

(Contd. on page 3)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Gel Tracking Dye**

(Contd. of page 2)

*After swallowing: If symptoms persist consult doctor.*

## 5 Firefighting measures

**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

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

**Environmental precautions:**

Dilute with plenty of water.

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

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

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## 7 Handling and storage

**Handling:**

**Precautions for safe handling**

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.

**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:** Keep receptacle tightly sealed.

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

## 8 Exposure controls/personal protection

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

**75-12-7 formamide**

REL	15 mg/m <sup>3</sup> , 10 ppm
	Skin
TLV	18 mg/m <sup>3</sup> , 10 ppm
	Skin

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

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Gel Tracking Dye**

(Contd. of page 3)

*Avoid contact with the eyes and skin.*

*Pregnant women should strictly avoid inhalation or skin contact.*

*Do not eat or drink while working.*

*Clean skin thoroughly immediately after handling the product.*

*Ensure that washing facilities are available at the work place.*

**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*

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

**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:** *Tightly sealed goggles*

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<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)

**Flash point:** > 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)

**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.

(Contd. on page 5)



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: Gel Tracking Dye

(Contd. of page 4)

**Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**Solvent content:****Organic solvents:** 95.0 %**Water:** 4.9 %**VOC content:** 95.0 %**Solids content:** 0.1 %**Other information** No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:**

Nitrogen oxides

Carbon monoxide and carbon dioxide

Ammonia

## 11 Toxicological information

**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:** Irritant to skin and mucous membranes.**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:

Irritant

**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.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment**Persistence and degradability** Not available**Behavior in environmental systems:****Bioaccumulative potential** Not known

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Gel Tracking Dye**

(Contd. of page 5)

**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.

## \* 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>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	Void
<b>UN proper shipping name</b>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	Void
<b>Transport hazard class(es)</b>	None
<b>DOT, ADR, ADN, IMDG, IATA</b>	Class
<b>Packing group</b>	None
<b>DOT, ADR, IMDG, IATA</b>	Void
<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 MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	-

**Environmental hazards:****Marine pollutant:** No**Special precautions for user** Not applicable.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.**UN "Model Regulation":** -

## \* 15 Regulatory information

**Sara****Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

(Contd. on page 7)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Gel Tracking Dye**

(Contd. of page 6)

**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.

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

None of the ingredients are listed.

**GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).**Hazard pictograms** GHS08**Signal word** Danger**Hazard-determining components of labelling:**

formamide

**Hazard statements**

May damage fertility or the unborn child.

**Precautionary statements**

Use personal protective equipment as required.

Obtain special instructions before use.

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

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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

**National regulations:**

Class	Share in %
Wasser	4.9
NK	95.0

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

USA

(Contd. on page 8)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Gel Tracking Dye**

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## 16 Other information

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

**Department issuing MSDS:**

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

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

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** Bromophenol Blue Loading Solution

**Article number:** DV437

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

**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

**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 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

75-12-7 formamide	 Repr. 1B, H360	75-100%
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**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

H319 Causes serious eye irritation.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Bromophenol Blue Loading Solution**

(Contd. of page 1)

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

**Toxic**

May cause harm to the unborn child.

**Harmful**

Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

**Irritant**

Irritating to eyes and skin.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).

**Hazard pictograms** GHS07, GHS08

**Signal word** Danger

**Hazard-determining components of labelling:**

formamide

**Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

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

Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

Store locked up.

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

**Classification system:**

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

Health = 2

Fire = 1

Reactivity = 0

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

Health = 2

Fire = 1

Reactivity = 0

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

Toxic

Irritant

Reproductive Hazard

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

Dermal

Inhalation

Oral

**Target Organ(s):**

May affect Nervous system (Neurotoxin)

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Bromophenol Blue Loading Solution**

(Contd. of page 2)

May affect Reproductive System (Mutagen, Teratogen)  
Affects Blood (Hematopoietic system)  
Risk of damage to eyes

## 4 First aid measures

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** If symptoms persist consult doctor.

## 5 Firefighting measures

**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

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

**Environmental precautions:**

Dilute with plenty of water.

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

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

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## 7 Handling and storage

**Handling:**

**Precautions for safe handling**

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.

**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:** Keep receptacle tightly sealed.

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

USA

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

Trade name: **Bromophenol Blue Loading Solution**

(Contd. of page 3)

## 8 Exposure controls/personal protection

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

**75-12-7 formamide**

REL	15 mg/m <sup>3</sup> , 10 ppm Skin
TLV	18 mg/m <sup>3</sup> , 10 ppm Skin

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

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat or drink while working.

Clean skin thoroughly immediately after handling the product.

Ensure that washing facilities are available at the work place.

**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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**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:** Tightly sealed goggles

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<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)

**Flash point:** > 100°C (> 212 °F)

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

**Ignition temperature:**

**Decomposition temperature:** Not determined.

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

(Contd. on page 5)

USA



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 11/05/2012

Reviewed on 11/04/2012

**Trade name: Bromophenol Blue Loading Solution**

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<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 at 20°C (68 °F):</b>	0.03 hPa
<b>Density at 20°C (68 °F):</b>	1.1339 g/cm <sup>3</sup> (9.462 lbs/gal)
<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>Solvent content:</b>	
<b>Organic solvents:</b>	95.0 %
<b>Water:</b>	4.9 %
<b>VOC content:</b>	95.0 %
<b>Solids content:</b>	0.1 %
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

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

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

## 11 Toxicological information

**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:** Irritant to skin and mucous membranes.

**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:

Irritant

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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.

## 12 Ecological information

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

**Persistence and degradability:** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential:** Not known

**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.

## 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** None

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

**UN proper shipping name** None

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

**Transport hazard class(es)** None

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

**Class** Void

**Packing group** None

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

**Environmental hazards:**

**Marine pollutant:** No

**Special precautions for user** Not applicable.

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

**UN "Model Regulation":** -

## 15 Regulatory information

**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.

**Carcinogenity 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.

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

None of the ingredients are listed.

**GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).

**Hazard pictograms** GHS07, GHS08

**Signal word** Danger

**Hazard-determining components of labelling:**

formamide

**Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

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**Precautionary statements**

*Do not breathe dust/fume/gas/mist/vapours/spray.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Specific treatment (see on this label).*

*Store locked up.*

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

**National regulations:**

Class	Share in %
Wasser	4.9
NK	95.0

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

## 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 MSDS:**

*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*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*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*

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