

08/01/2014

Kit Components

Product code	Description
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G2101	100bp DNA Ladder, 250ul
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Components:

G190	Blue/Orange 6X Loading Dye
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G210	100bp DNA Ladder
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Safety Data Sheet
acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

1: Identification**1.1 Product identifier****Trade name:** *Blue/Orange 6X Loading Dye***Article number:** *G190***1.2 Relevant identified uses of the substance or mixture and uses advised against***No further relevant information available.***Application of the substance / the mixture** *Laboratory chemicals***1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:***Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330***Information department:** *SDS author: Regulatory.Affairs@promega.com***1.4 Emergency telephone number:***For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300**Outside USA and Canada: +1 703-527-3887 (collect calls accepted)***2: Hazard(s) identification****2.1 Classification of the substance or mixture****Classification according to the Hazard Communication Standard (HCS)***The product is not classified as hazardous according to the HCS regulation.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008 Void****Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Classification system:****NFPA ratings (scale 0 - 4)***Health = 0**Fire = 0**Reactivity = 0***HMIS-ratings (scale 0 - 4)***Health = 0**Fire = 0**Reactivity = 0***OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** *Not applicable***Target Organ(s):** *Not applicable or unknown***2.3 Other hazards***This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.*

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acc. to OSHA HCS

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Trade name: Blue/Orange 6X Loading Dye

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Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

* 3: Composition/information on ingredients

3.2 Chemical characterization: Mixtures

Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

Dangerous components: Void

* 4: First-aid measures

4.1 Description of 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.

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

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

* 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture None known

5.3 Advice for firefighters

No special advice

No special advice

Protective equipment: No special measures required.

* 6: Accidental release measures

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

6.2 Environmental precautions:

Dilute with plenty of water.

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

6.3 Methods and material for containment and cleaning up:

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

6.4 Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

USA

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Trade name: *Blue/Orange 6X Loading Dye*

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7: Handling and storage

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

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

7.2 Conditions for safe storage, including any incompatibilities

Storage:

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

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

Further information about storage conditions: *None.*

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

8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: *Not required.*

Protection of hands: *Not required.*

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: *Not required.*

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

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

pH-value at 20 °C (68 °F): *8*

Change in condition

Melting point/Melting range:	<i>Undetermined.</i>
Boiling point/Boiling range:	<i>100 °C (212 °F)</i>
Flash point:	<i>Not applicable.</i>

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

Ignition temperature:

Decomposition temperature: *Not determined.*

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Printing date 08/01/2014

Reviewed on 08/01/2014

Trade name: *Blue/Orange 6X Loading Dye*

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Auto igniting:	<i>Product is not selfigniting.</i>
Danger of explosion:	<i>Product does not present an explosion hazard.</i>
Explosion limits:	
Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>
Vapor pressure:	<i>Not determined.</i>
Density:	<i>Not determined.</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not determined.</i>
Evaporation rate	<i>Not determined.</i>
Solubility in / Miscibility with	
Water:	<i>Fully miscible.</i>
Partition coefficient (n-octanol/water):	<i>Not determined.</i>
Viscosity:	
Dynamic:	<i>Not determined.</i>
Kinematic:	<i>Not determined.</i>
Organic solvents:	<i>0.0 %</i>
Water:	<i>82.5 %</i>
Solids content:	<i>16.6 %</i>
9.2 Other information	<i>No further relevant information available.</i>

10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

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

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

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

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

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

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification: *No data available*

Primary irritant effect:

on the skin: *No irritant effect.*

on the eye: *Irritating effect.*

Sensitization: *No sensitizing effects known.*

Additional toxicological information:

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

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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Reviewed on 08/01/2014

Trade name: **Blue/Orange 6X Loading Dye**

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Carcinogenic categories**IARC (International Agency for Research on Cancer)**

1936-15-8 | Orange G Sodium

3

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

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

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

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

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**13: Disposal considerations****13.1 Waste treatment methods****Recommendation:**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**14: Transport information****14.1 UN-Number**

None

DOT, ADR, ADN, IMDG, IATA

Void

14.2 UN proper shipping name

None

DOT, ADR, ADN, IMDG, IATA

Void

14.3 Transport hazard class(es)

None

DOT, ADR, ADN, IMDG, IATA

Class

Void

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Reviewed on 08/01/2014

Trade name: *Blue/Orange 6X Loading Dye*

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14.4 Packing group	None
DOT, ADR, IMDG, IATA	Void

14.5 Environmental hazards:	
Marine pollutant:	No

14.6 Special precautions for user	Not applicable.
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14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
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UN "Model Regulation":	-
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15: Regulatory information

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

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

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

None of the ingredients are listed.

National regulations:

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

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

USA

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Safety Data Sheet

acc. to OSHA HCS

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Trade name: Blue/Orange 6X Loading 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

Date of preparation / last revision 08/01/2014 / -

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

USA

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

1: Identification

1.1 Product identifier

Trade name: 100bp DNA Ladder

Article number: G210

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

No further relevant information available.

Application of the substance / the mixture Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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

Information department: SDS author: Regulatory.Affairs@promega.com

1.4 Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification according to the Hazard Communication Standard (HCS)

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

2.2 Label elements

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

Hazard pictograms Void

Signal word Void

Hazard statements Void

Classification system:

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable

Target Organ(s): Not applicable or unknown

2.3 Other hazards

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

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Safety Data Sheet

acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

Trade name: 100bp DNA Ladder

(Contd. of page 1)

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3: Composition/information on ingredients

3.2 Chemical characterization: Mixtures

Description:

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

Dangerous components: Void

4: First-aid measures

4.1 Description of 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.

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

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture None known

5.3 Advice for firefighters No special advice

Protective equipment: No special measures required.

6: Accidental release measures

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

6.2 Environmental precautions: Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up:

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

6.4 Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

7: Handling and storage

7.1 Precautions for safe handling No special measures required.

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

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Safety Data Sheet

acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

Trade name: 100bp DNA Ladder

(Contd. of page 2)

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**7.3 Specific end use(s)** No further relevant information available.

8: Exposure controls/personal protection

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.**8.2 Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.**Protection of hands:** Not required.**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Not required.

9: Physical and chemical properties

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

Form:	Fluid
Color:	Colorless
Odor:	Characteristic
Odour threshold:	Not determined.

pH-value at 20 °C (68 °F): 7.4**Change in condition**

Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	Undetermined.
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:
Lower: Not determined.

(Contd. on page 4)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

Trade name: 100bp DNA Ladder

(Contd. of page 3)

Upper: Not determined.
Vapor pressure: Not determined.

Density: Not determined.
Relative density Not determined.
Vapour density Not determined.
Evaporation rate Not determined.

Solubility in / Miscibility with
Water: Fully miscible.
Partition coefficient (n-octanol/water): Not determined.

Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

Organic solvents: 0.0 %
Water: 99.1 %
9.2 Other information No further relevant information available.

10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification: No data available

Primary irritant effect:

on the skin: No irritant effect.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

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

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

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USA

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acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

Trade name: 100bp DNA Ladder

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OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12: Ecological information

12.1 Toxicity

Aquatic toxicity: Not harmful to the aquatic environment

12.2 Persistence and degradability Not available

12.3 Bioaccumulative potential Not known

12.4 Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:

General notes: Generally not hazardous for water.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

13: Disposal considerations

13.1 Waste treatment methods

Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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

14: Transport information

14.1 UN-Number None

14.2 UN proper shipping name None

14.3 Transport hazard class(es) None

14.4 Packing group None

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user Not applicable.

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

USA

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

Trade name: 100bp DNA Ladder

(Contd. of page 5)

15: Regulatory information

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

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenicity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

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

None of the ingredients are listed.

National regulations:

Water hazard class: Generally not hazardous for water.

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

16: Other information

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

Department issuing MSDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

Date of preparation / last revision 08/01/2014 / -

Abbreviations and acronyms:

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

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Safety Data Sheet
acc. to OSHA HCS

Printing date 08/01/2014

Reviewed on 08/01/2014

Trade name: 100bp DNA Ladder

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EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
*** Data compared to the previous version altered.**

USA