

Trade name: ΦX174 DNA/BsuRI (HaeIII) Marker, 9

#SM0251

#SM0252

Supplied with: 6X DNA Loading Dye

Trade name: ΦX174 DNA/BsuRI (HaeIII) Marker, 9,
ready-to-use

#SM0253

Supplied with: 6X DNA Loading Dye

MATERIAL SAFETY DATA SHEET
Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

Revised: 05/16/2011

1 Product and company identification

· **Product details**

- **Trade name: PhiX174 DNA/BsuRI (HaellI)**
- **Application of the substance / the preparation:** Laboratory chemicals

· **Manufacturer/Supplier:**

Fermentas UAB, subsidiary of Thermo Fisher Scientific Inc.
V.Graiciuno 8
LT-02241 Vilnius
Lithuania
Tel.: +370 5 2602131
Fax.: +370 5 2602142

· **Further information obtainable from:**

Please visit our site: <http://www.thermoscientific.com/onebio>
Contact us: fermentas.info@thermofisher.com

· **Emergency information:**

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident),
Call CHEMTREC Day or Night
Domestic North America: 1-800-424-9300
International: 1-703-527-3887 (collect calls accepted)

2 Composition/Information on ingredients

· **Chemical characterization**

- **Description:** Solution, consisting of the following components.

· **Components:**

7732-18-5	water	>50%
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· **Other components:**

Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

3 Hazards identification

- **Hazard description:** Not applicable.

· **Information pertaining to particular dangers for man 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 expanded upon from company and literature data.

· **NFPA ratings (scale 0 - 4)**

 Health = 0
Fire = 0
Reactivity = 0

(Contd. on page 2)

USA

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

Revised: 05/16/2011

Trade name: *PhiX174 DNA/BsuRI (HaellI)*

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

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **GHS label elements** Void

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 Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **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:** None.

8 Exposure controls and 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.

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MATERIAL SAFETY DATA SHEET

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Trade name: PhiX174 DNA/BsuRI (HaellI)

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- **Protection of hands:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **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.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

- **General Information**

Form:	Solution
Color:	Colorless
Odor:	Odorless

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- **Flash point:** Not applicable.

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

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

- **Density at 20°C (68°F):** 1 g/cm³

- **Solubility in / Miscibility with Water:** Fully miscible.

- **pH-value at 25°C (77°F):** 7.6

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

- **Materials to be avoided:**

· **Dangerous reactions:** No dangerous reactions known.

· **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**

- **Primary irritant effect:**

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

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

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MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

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Trade name: PhiX174 DNA/BsuRI (HaeIII)

(Contd. of page 3)

· 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.

12 Ecological information

· Additional ecological information:

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

13 Disposal considerations

· Product:

· **Recommendation:** Smaller quantities can be disposed of with household waste.

· Uncleaned packagings:

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

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

14 Transport information

· DOT regulations:

· **Hazard class:** -

· Land transport ADR/RID (cross-border):

· **ADR/RID class:** -

· Maritime transport IMDG:

· **IMDG Class:** -

· **Marine pollutant:** No

· Air transport ICAO-TI and IATA-DGR:

· **ICAO/IATA Class:** -

· **UN "Model Regulation":** -

15 Regulations

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

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MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

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Trade name: PhiX174 DNA/BsuRI (HaellI)

(Contd. of page 4)

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Product related hazard information:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

16 Other information

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Thermo Fisher Scientific is not held liable for any damage resulting from handling or from contact with the above mentioned products.

MSDS has been prepared in accordance with ISO 11014-1 Standard and OSHA Hazard Communication Standard 29 CFR 1910.1200.

· **Abbreviations and acronyms:**

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

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

MATERIAL SAFETY DATA SHEET
Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

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1 Product and company identification

· **Product details**

- **Trade name:** *PhiX174 DNA/BsuRI (HaellI), ready-to-use*
- **Application of the substance / the preparation:** *Laboratory chemicals*

· **Manufacturer/Supplier:**

*Fermentas UAB, subsidiary of Thermo Fisher Scientific Inc.
V.Graiciuno 8
LT-02241 Vilnius
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· **Emergency information:**

*For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident),
Call CHEMTREC Day or Night
Domestic North America: 1-800-424-9300
International: 1-703-527-3887 (collect calls accepted)*

2 Composition/Information on ingredients

· **Chemical characterization**

- **Description:** *Solution, consisting of the following components.*

· **Components:**

7732-18-5	water	>50%
56-81-5	glycerol	10-25%

· **Other components:**

Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

3 Hazards identification

- **Hazard description:** *Not applicable.*

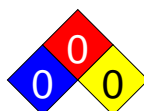
· **Information pertaining to particular dangers for man and environment:**

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 expanded upon from company and literature data.

· **NFPA ratings (scale 0 - 4)**



*Health = 0
Fire = 0
Reactivity = 0*

(Contd. on page 2)

MATERIAL SAFETY DATA SHEET

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Printed: 05/16/2011

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Trade name: PhiX174 DNA/BsuRI (HaeIII), ready-to-use

(Contd. of page 1)

· **HMS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· **GHS label elements** Void

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 Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **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:** None.

8 Exposure controls and personal protection

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

56-81-5 glycerol

PEL	15* 5** mg/m ³ *total dust **respirable fraction
TLV	10* ppm *Mist

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MATERIAL SAFETY DATA SHEET

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Trade name: PhiX174 DNA/BsuRI (HaeIII), ready-to-use

(Contd. of page 2)

- **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:**
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **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.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

· General Information

Form:	Solution
Color:	Blue
Odor:	Odorless

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

· Flash point:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Density at 20°C (68°F):	1.03 g/cm ³
· Solubility in / Miscibility with Water:	Fully miscible.
· pH-value at 25°C (77°F):	7.6

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

-USA-

(Contd. on page 4)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

Revised: 05/16/2011

Trade name: *PhiX174 DNA/BsuRI (HaeIII), ready-to-use*

(Contd. of page 3)

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No 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.

12 Ecological information

- **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

- **Product:**
- **Recommendation:** *Smaller quantities can be disposed of with household waste.*
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border):**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -

15 Regulations

- **Sara**
- **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

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USA

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

Revised: 05/16/2011

Trade name: PhiX174 DNA/BsuRI (HaeIII), ready-to-use

(Contd. of page 4)

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

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogen categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Product related hazard information:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

16 Other information

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Thermo Fisher Scientific is not held liable for any damage resulting from handling or from contact with the above mentioned products.

MSDS has been prepared in accordance with ISO 11014-1 Standard and OSHA Hazard Communication Standard 29 CFR 1910.1200.

· **Abbreviations and acronyms:**

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

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

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MATERIAL SAFETY DATA SHEET
Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

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Trade name: PhiX174 DNA/BsuRI (HaeIII), ready-to-use

(Contd. of page 5)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

— USA —

MATERIAL SAFETY DATA SHEET
Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

Revised: 05/10/2011

1 Product and company identification

· **Product details**

· **Trade name: 6x DNA Loading Dye**

· (6x Loading Dye Solution)

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

· **Manufacturer/Supplier:**

Fermentas UAB, subsidiary of Thermo Fisher Scientific Inc.

V.Graiciuno 8

LT-02241 Vilnius

Lithuania

Tel.: +370 5 2602131

Fax.: +370 5 2602142

· **Further information obtainable from:**

Please visit our site: <http://www.thermoscientific.com/onebio>

Contact us: fermentas.info@thermofisher.com

· **Emergency information:**

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident),

Call CHEMTREC Day or Night

Domestic North America: 1-800-424-9300

International: 1-703-527-3887 (collect calls accepted)

2 Composition/Information on ingredients

· **Chemical characterization**

· **Description:** Solution, consisting of the following components.

· **Components:**

56-81-5	glycerol	>50%
7732-18-5	water	25-50%
139-33-3	disodium dihydrogenethylenediaminetetraacetate	1-2.5%
Warning: ⚠ 3.1.O/4		

· **Other components:**

Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

3 Hazards identification

· **Hazard description:** Not applicable.

· **Information pertaining to particular dangers for man 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 expanded upon from company and literature data.

(Contd. on page 2)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

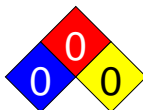
Printed: 05/16/2011

Revised: 05/10/2011

Trade name: 6x DNA Loading Dye

(Contd. of page 1)

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



Health = 0
Fire = 0
Reactivity = 0

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



HEALTH 0 Health = 0
FIRE 0 Fire = 0
REACTIVITY 0 Reactivity = 0

- **GHS label elements** Void

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 Fire fighting measures

- **Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
 - **Information for safe handling:** No special measures required.
 - **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:** None.

USA

(Contd. on page 3)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

Revised: 05/10/2011

Trade name: 6x DNA Loading Dye

(Contd. of page 2)

8 Exposure controls and personal protection

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

56-81-5 glycerol

PEL	15* 5** mg/m ³ *total dust **respirable fraction
TLV	10* ppm *Mist

· **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:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **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.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

· **General Information**

Form:	Solution
Color:	Blue
Odor:	Odorless

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

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

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

· **Density at 20°C (68°F):** 1.18 g/cm³

· **Solubility in / Miscibility with Water:** Fully miscible.

· **pH-value at 25°C (77°F):** 7.6

USA

(Contd. on page 4)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 05/16/2011

Revised: 05/10/2011

Trade name: 6x DNA Loading Dye

(Contd. of page 3)

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No 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.

12 Ecological information

- **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

- **Product:**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | |
|--|
| <ul style="list-style-type: none"> · DOT regulations: · Hazard class: - |
| <ul style="list-style-type: none"> · Land transport ADR/RID (cross-border): · ADR/RID class: - |
| <ul style="list-style-type: none"> · Maritime transport IMDG: · IMDG Class: - · Marine pollutant: No |
| <ul style="list-style-type: none"> · Air transport ICAO-TI and IATA-DGR: · ICAO/IATA Class: - |

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USA

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· UN "Model Regulation": -

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15 Regulations

· Sara

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogen categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Product related hazard information:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

16 Other information

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Thermo Fisher Scientific is not held liable for any damage resulting from handling or from contact with the above mentioned products.

MSDS has been prepared in accordance with ISO 11014-1 Standard and OSHA Hazard Communication Standard 29 CFR 1910.1200.

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Abbreviations and acronyms:

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

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

USA