



04/02/2010

Kit Components

Product code	Description
665-2550	BioPlex Cardiac Damage Reagent Pack

Components:

665-2550Bead Mu	Bead Multiplex, Cardiac Damage Panel
665-2550Buffer	Acidification Buffer, Cardiac Damage Panel
665-2550Conju1	Conjugate 1, Cardiac Damage Panel
665-2550Conju2	Conjugate 2B, Cardiac Damage Panel

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Bead Multiplex, Cardiac Damage Panel
- **Catalog or product number:** 665-2550Bead Mu
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

· **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water		50-100%
1132-61-2	4-morpholinopropanesulphonic acid	Xn; R 21/22	1.0-2.5%
	Bovine Serum Albumin		0.1-1.0%
	ProClin 300	C, Xn, N; R 20/21/22-34-43-51/53	0.1-1.0%
26628-22-8	sodium azide	T+, N; R 28-32-50/53	0.01- 0.1%
532-32-1	sodium benzoate		0.1-1.0%
9005-64-5	Tween 20		0.1-1.0%
	Dyed, Magnetic beads		0.01-0.1%

3 Hazards identification

- **Emergency overview:**
Irritant to skin.
Sensitizer by dermal contact.
Irritant to respiratory system and skin.
Xi Irritant
- **Routes of exposure:** Skin
- **Information pertaining to particular dangers for man and environment**
R 43 May cause sensitization by skin contact.
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: **Bead Multiplex, Cardiac Damage Panel**

(Contd. of page 1)

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.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **Information for doctor**
- **The following symptoms may occur:**
 - Headache
 - Allergic reactions
 - Breathing difficulty

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:** Handle as potentially infectious.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
 - Disinfectant effective against agent of concern.
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
 - No special measures required.
 - No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**

26628-22-8 sodium azide

(Contd. on page 3)

DUS

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Bead Multiplex, Cardiac Damage Panel

(Contd. of page 2)

REL (United States) Short-term value: C 0.3** mg/m³, C 0.1* ppm

*as HN3 vapor; **as NaN₃; Skin

TLV (United States) Short-term value: C 0.29** mg/m³, C 0.11* ppm

*as HN3 vapor **as NaN₃

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

· **Personal protective equipment**

· **General protective and hygienic measures**

Follow the usual biosafety practices for handling potentially infectious materials.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:** Protective gloves.

· **Material of gloves** Synthetic gloves

· **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.

· **For the permanent contact gloves made of the following materials are suitable:**

Synthetic gloves

Nitrile rubber, NBR

Neoprene gloves

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Synthetic gloves

Nitrile rubber, NBR

Neoprene gloves

· **As protection from splashes gloves made of the following materials are suitable:**

Synthetic gloves

Nitrile rubber, NBR

Neoprene gloves

· **Eye protection:** Safety glasses

· **Body protection:**

Protective work clothing.

Apron

9 Physical and chemical properties:

· **General Information**

Form: Suspension

Color: Light brown

Odor: Odorless

· **Change in condition**

Melting point/Melting range: undetermined

Boiling point/Boiling range: undetermined

· **Flash point:** Not applicable

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

· **Density:** Not determined

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: **Bead Multiplex, Cardiac Damage Panel**

(Contd. of page 3)

- | | |
|--|----------------------------------|
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix |
| · pH-value at 20°C: | 7-8 |

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions**
This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **Dangerous products of decomposition:**
Nitrogen oxides
Carbon dioxide

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Target organs:** Skin.

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (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**
Dispose of waste in accordance to applicable national, regional, or local regulations.
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

DUS
(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Bead Multiplex, Cardiac Damage Panel

(Contd. of page 4)

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:** -

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

26628-22-8	sodium azide
------------	--------------

· **Section 313 (40CFR372.65):**

26628-22-8	sodium azide
------------	--------------

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

7732-18-5	water
1132-61-2	4-morpholinopropanesulphonic acid
7647-14-5	sodium chloride
9005-64-5	Tween 20
532-32-1	sodium benzoate
26628-22-8	sodium azide

· **Carcinogenic categories**

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

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

Xi Irritant

· **Risk phrases:**

43 May cause sensitization by skin contact.

· **Safety phrases:**

24 Avoid contact with skin.
35 This material and its container must be disposed of in a safe way.

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Bead Multiplex, Cardiac Damage Panel

(Contd. of page 5)

37 Wear suitable gloves.

· **National regulations**

· **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:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Acidification Buffer, Cardiac Damage Panel
- **Catalog or product number:** 665-2550Buffer
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
 Bio-Rad Laboratories, Diagnostic Group
 4000 Alfred Nobel Drive
 Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
 1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.
- **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

110-15-6	succinic acid	Xi; R 36	1.0-2.5%
----------	---------------	----------	----------

3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment** not applicable
- **Classification system**
 The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

5 Fire fighting measures

- **Suitable extinguishing agents**
 CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

(Contd. on page 2)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 10/21/2009

Trade name: Acidification Buffer, Cardiac Damage Panel

(Contd. of page 1)

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

6 Accidental release measures

- **Person-related safety precautions:** Wear protective clothing.
- **Measures for environmental protection:** 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.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:** Not required.
- **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 necessary if room is well-ventilated. Adequate ventilation required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **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:** Safety glasses
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· **General Information**

Form:	liquid
Color:	Colorless
Odor:	Odorless

· **Change in condition**

Melting point/Melting range: undetermined

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 10/21/2009

Trade name: Acidification Buffer, Cardiac Damage Panel

(Contd. of page 2)

Boiling point/Boiling range: undetermined· **Flash point:** Not applicable· **Danger of explosion:** Product does not present an explosion hazard.· **Density:** Not determined· **Solubility in / Miscibility with Water:** Fully miscible· **pH-value at 20°C:** 2-3**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:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritant effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

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

The substance is not subject to classification according to the latest version of the EU lists.
- **Target organs:** Not applicable.

12 Ecological information:

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

DUS
(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 10/21/2009

Trade name: Acidification Buffer, Cardiac Damage Panel

(Contd. of page 3)

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:** -

· **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

· **Section 313 (40CFR372.65):**

Substance is not listed.

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

7732-18-5 water

110-15-6 succinic acid

· **Carcinogenic categories**

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

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The substance is not subject to classification according to EU lists and other sources of literature known to us.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **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.

(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 10/21/2009

Trade name: Acidification Buffer, Cardiac Damage Panel

(Contd. of page 4)

· **Department issuing MSDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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

DUS

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

1 Identification of substance:

· **Product details:**

· **Trade name:** Conjugate 1, Cardiac Damage Panel

· **Catalog or product number:** 665-2550Conju1

· **Application of the substance / the preparation** In-vitro laboratory reagent or component

· **Manufacturer/Supplier:**

Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547

1(510)724-7000

· **Information department:** Technical services, customer support.

· **Emergency information:**

1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

· **Chemical characterization**

· **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water		50-100%
69-65-8	D-mannitol		2.5-5%
9048-46-8	Bovine Serum Albumin		0.1-1.0%
	ProClin 300	C, Xn, N; R 20/21/22-34-43-51/53	0.1-1.0%
26628-22-8	sodium azide	T+, N; R 28-32-50/53	0.01-0.1%
9005-64-5	Tween 20		0.01-0.1%

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

3 Hazards identification

· **Emergency overview:**

Irritant to skin.

Sensitizer by dermal contact.

Irritant to respiratory system and skin.

Xi Irritant

· **Routes of exposure:** Skin

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

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 43 May cause sensitization by skin contact.

· **Classification system**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 1, Cardiac Damage Panel

(Contd. of page 1)

4 First aid measures**· After inhalation**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact** Rinse opened eye for several minutes under running water.

· **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

· Information for doctor

· **The following symptoms may occur:**

Headache

Allergic reactions

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:** Handle as potentially infectious.

· Measures for environmental protection:

Dilute with plenty of water.

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

· Measures for cleaning/collecting:

Disinfectant effective against agent of concern.

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

Dispose contaminated material as waste according to item 13.

7 Handling and storage**· Handling****· Information for safe handling:**

No special measures required.

No special precautions are necessary if used correctly.

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

· Storage

· **Requirements to be met by storerooms and receptacles:** According to product specification

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

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

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 1, Cardiac Damage Panel

(Contd. of page 2)

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

26628-22-8 sodium azide

REL (United States) Short-term value: C 0.3** mg/m³, C 0.1* ppm

*as HN3 vapor; **as NaN3; Skin

TLV (United States) Short-term value: C 0.29** mg/m³, C 0.11* ppm

*as HN3 vapor **as NaN3

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

· Personal protective equipment

· General protective and hygienic measures

Follow the usual biosafety practices for handling potentially infectious materials.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

· Breathing equipment: Not required.

· Protection of hands: Protective gloves.

· Material of gloves: Synthetic gloves

· 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: Safety glasses

· Body protection:

Protective work clothing.

Apron

9 Physical and chemical properties:

· General Information

Form: liquid

Color: Light yellow

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: Not determined

· Solubility in / Miscibility with

Water: Fully miscible

· pH-value at 20°C: 7-8

10 Stability and reactivity

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

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 1, Cardiac Damage Panel

(Contd. of page 3)

- **Materials to be avoided:**
- **Dangerous reactions**
This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **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 irritant effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
- **Target organs:** Skin.

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (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**
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **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:** -

(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 1, Cardiac Damage Panel

(Contd. of page 4)

- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

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

7732-18-5	water
69-65-8	D-mannitol
9048-46-8	Bovine Serum Albumin
7647-14-5	sodium chloride
7558-79-4	disodium hydrogenorthophosphate
9005-64-5	Tween 20
532-32-1	sodium benzoate
26628-22-8	sodium azide
	ProClin 300
9011-18-1	Dextran Sulfate
10049-21-5	Sodium Phosphate Monobasic, Monohydrate

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

Xi Irritant

· **Hazard-determining components of labelling:**

ProClin 300

· **Risk phrases:**

43 May cause sensitization by skin contact.

· **Safety phrases:**

24 Avoid contact with skin.

35 This material and its container must be disposed of in a safe way.

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 1, Cardiac Damage Panel

(Contd. of page 5)

37 Wear suitable gloves.

· National regulations**· 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: Environmental Health and Safety.**· Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * Data compared to the previous version altered.

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Conjugate 2B, Cardiac Damage Panel
- **Catalog or product number:** 665-2550Conju2
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
 Bio-Rad Laboratories, Diagnostic Group
 4000 Alfred Nobel Drive
 Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
 1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water		50-100%
69-65-8	D-mannitol		2.5-5%
9048-46-8	Bovine Serum Albumin		0.1-1.0%
	ProClin 300	C, Xn, N; R 20/21/22-34-43-51/53	0.1-1.0%
26628-22-8	sodium azide	T+, N; R 28-32-50/53	0.01-0.1%
532-32-1	sodium benzoate		0.01-0.1%

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

3 Hazards identification

- **Emergency overview:**
 Irritant to skin.
 Sensitizer by dermal contact.
 Irritant to respiratory system and skin.
 Xi Irritant
- **Routes of exposure:** Skin
- **Information pertaining to particular dangers for man and environment**
 The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 R 43 May cause sensitization by skin contact.
- **Classification system**
 The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
 The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

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

(Contd. on page 2)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 2B, Cardiac Damage Panel

(Contd. of page 1)

- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **Information for doctor**
- **The following symptoms may occur:**
Headache
Allergic reactions

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:** Handle as potentially infectious.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Disinfectant effective against agent of concern.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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

26628-22-8 sodium azide

REL (United States)	Short-term value: C 0.3** mg/m ³ , C 0.1* ppm *as HN3 vapor; **as NaN3; Skin
TLV (United States)	Short-term value: C 0.29** mg/m ³ , C 0.11* ppm *as HN3 vapor **as NaN3

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

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 2B, Cardiac Damage Panel

(Contd. of page 2)

- **Personal protective equipment**
- **General protective and hygienic measures**
Follow the usual biosafety practices for handling potentially infectious materials.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves:** Synthetic gloves
- **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:** Safety glasses
- **Body protection:**
Protective work clothing.
Apron

9 Physical and chemical properties:

· **General Information**

Form:	liquid
Color:	Pink
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:** Not determined

· **Solubility in / Miscibility with**

Water: Fully miscible

· **pH-value at 20°C:** 7-8

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions**
This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **Dangerous products of decomposition:** No dangerous decomposition products known

—DUS—
(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 2B, Cardiac Damage Panel

(Contd. of page 3)

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
- **Target organs:** Skin.

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (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**
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **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:** -

DUS

(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 2B, Cardiac Damage Panel

(Contd. of page 4)

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

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

7732-18-5	water
69-65-8	D-mannitol
9048-46-8	Bovine Serum Albumin
7647-14-5	sodium chloride
7558-79-4	disodium hydrogenorthophosphate
9005-64-5	Tween 20
532-32-1	sodium benzoate
26628-22-8	sodium azide
	ProClin 300
9003-39-8	Polyvinylpyrrolidone
10049-21-5	Sodium Phosphate Monobasic, Monohydrate

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

Xi Irritant

· **Hazard-determining components of labelling:**

ProClin 300

· **Risk phrases:**

43 May cause sensitization by skin contact.

· **Safety phrases:**

24 Avoid contact with skin.

35 This material and its container must be disposed of in a safe way.

37 Wear suitable gloves.

· **National regulations**

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

DUS

(Contd. on page 6)

Material Safety Data Sheet

Printing date 04/02/2010

Reviewed on 12/03/2009

Trade name: Conjugate 2B, Cardiac Damage Panel

(Contd. of page 5)

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:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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

DUS