

03/02/2011

Kit Components

Product code	Description
212520	`TB Stain Set ZN

Components:

212520a	TB Carbofuchsin ZN
212520b	TB Decolorizer
212520c	TB Methylene Blue

Date Prepared: 03/02/2011

Reviewed On: 02/11/2011

Product Name: TB Carbofuchsin ZN
(TB Stain Set ZN)

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34 Causes burns.

· **Safety phrases:**

53 Avoid exposure - obtain special instructions before use.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

43 In case of fire, use water or powdered extinguishing agent

45 In case of accident or if you feel unwell, seek medical advice immediately.

60 This material and its container must be disposed of as hazardous waste.

· **NFPA ratings (scale 0-4)**



Health = 3

Fire = 1

Reactivity = 0

· **HMIS ratings (scale 0-4)**



Health = *3

Fire = 1

Reactivity = 0

4 First aid measures

· **General information**

Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.

· **After inhalation** Seek medical treatment in case of complaints.

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

· **After eye contact** Rinse opened eye for 15 minutes under running water. Then consult a doctor.

· **After swallowing** Call a doctor immediately.

· **Information for doctor** Show this product label or this MSDS.

5 Firefighting measures

· **Suitable extinguishing agents**

CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

6 Accidental release measures

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

· **Environmental precautions:** Wipe up with damp sponge or mop.

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

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

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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Product Name: TB Carbofuchsin ZN
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See Section 13 for disposal information.

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7 Handling and storage

- **Handling**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 15 - 30 °C
- **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.
Do not store together with alkaline material.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.

8 Exposure controls/personal protection

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

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

67-63-0 isopropanol

PEL	980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm

108-95-2 phenol

PEL	19 mg/m ³ , 5 ppm Skin
REL	Short-term value: C 60* mg/m ³ , C 15.6* ppm Long-term value: 19 mg/m ³ , 5 ppm *15-min
TLV	19 mg/m ³ , 5 ppm Skin; BEI

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal Protective Equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

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· **Eye protection:** Safety glasses

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9 Physical and chemical properties

· **General Information**

· **Appearance:**
Form: Liquid

Color: Red

Purple

· **Odor:** Characteristic

· **Change in condition**
Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

· **Flash point:** Not applicable

· **Ignition temperature:** 425.0°C (797 °F)

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

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

· **Density:** Not determined

· **Solubility in / Miscibility with**
Water: Soluble

10 Stability and reactivity

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

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

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**
108-95-2 phenol

Oral LD50 300 mg/kg (mus)

317 mg/kg (rat)

Dermal LD50 670 mg/kg (rat)

569-61-9 basic fuchsin

Oral LD50 500 mg/kg (mou)

67-63-0 isopropanol

Oral LD50 5045 mg/kg (rat)

Dermal LD50 12800 mg/kg (rab)

· **Primary irritant effect:**

· **on the skin:** Caustic effect on skin and mucous membranes.

· **on the eye:** Strong caustic effect.

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- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:** Target organs: liver, gastrointestinal tumors, blood, lymphomas.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Corrosive (causes skin burns)
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Carcinogenic

12 Ecological information

- **Acquatic toxicity:** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water danger class 3 (Self-assessment): extremely hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed of with solid waste.
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
This product is not considered a RCRA hazardous waste.
- **Uncleaned packagings:**
- **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:** -

15 Regulatory information

- **SARA Section 355 (extremely hazardous substances)**
108-95-2 phenol
- **SARA Section 313 (specific toxic chemical listings)**
67-63-0 isopropanol

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Material Safety Data Sheet
acc. to ISO/DIS 11014

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Product Name: TB Carbofuchsin ZN
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108-95-2 phenol

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

All ingredients are listed.

· **California Proposition 65 - Chemicals known to cause cancer**

569-61-9 basic fuchsin

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **NTP (National Toxicology Program)**

569-61-9 basic fuchsin

R

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

67-63-0 isopropanol

A4

108-95-2 phenol

A4

· **National regulations**

· **Additional classification according to Decree on Hazardous Materials:**

CERCLA: This product contains Phenol which has a Reporting Quantity (RQ) of 1000#.

SARA 311/312: Subject to reporting.

313: Isopropyl Alcohol and Phenol are subject to reporting.

TSCA: This product is exempt under TSCA.

· **Water hazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· **Department issuing MSDS:**

Environmental, Health & Safety

Created by Michael J. Spinazzola

· **Contact:** Technical Service Representative

USA

Date Prepared: 03/02/2011

Reviewed On: 02/11/2011

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

- **Product Identifier**
- **Product Name:** *TB Decolorizer*
(TB Stain Set ZN)
- **Catalog Number:** 212520
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone.: (410) 771 - 0100 or (800) 638 – 8663
- **Information Department:** Technical Service
- **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Composition/information on ingredients

- **Chemical characterization:** *Mixture*
- **Description:** *Mixture consisting of the following components.*

· **Dangerous Components:**

64-17-5	ethanol	92.3%
67-56-1	methanol	4.7%
7647-01-0	hydrochloric acid	3.0%

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R20/21/22-40-68/20/21/22: Harmful by inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect. Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.



F; Highly flammable

R11: Highly flammable.

- **Classification system:**

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

· **Label elements**

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with regulations on hazardous materials.
- **Code letter and hazard designation of product:**
Xn Harmful
F Highly flammable
- **Hazard-determining components of labelling:**
ethanol
methanol

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hydrochloric acid

· **Risk phrases:**

- 11 Highly flammable.
- 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- 40 Limited evidence of a carcinogenic effect.
- 68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

· **Safety phrases:**

- 7/9 Keep container tightly closed and in a well-ventilated place.
- 16 Keep away from sources of ignition - No smoking.
- 36/37 Wear suitable protective clothing and gloves.
- 60 This material and its container must be disposed of as hazardous waste.

· **NFPA ratings (scale 0-4)**



· **HMIS ratings (scale 0-4)**

HEALTH	2	Health = *2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

4 First aid measures

· **General information**

Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.

- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** Immediately call a doctor.
- **Information for doctor** Show this product label or this MSDS.

5 Firefighting measures

· **Suitable extinguishing agents**

CO₂, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

6 Accidental release measures

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

- **Environmental precautions:** Wipe up with damp sponge or mop.

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

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

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- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 15 - 30 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.

8 Exposure controls/personal protection

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

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

64-17-5 ethanol

PEL	1900 mg/m ³ , 1000 ppm
REL	1900 mg/m ³ , 1000 ppm
TLV	1880 mg/m ³ , 1000 ppm

67-56-1 methanol

PEL	260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

7647-01-0 hydrochloric acid

PEL	Short-term value: C 7 mg/m ³ , C 5 ppm
REL	Short-term value: C 7 mg/m ³ , C 5 ppm
TLV	Short-term value: C 2.98 mg/m ³ , C 2 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal Protective Equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.

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· Protection of hands:


Chemical resistant gloves (i.e. nitrile, or equivalent).

· Eye protection: Safety glasses

· Body protection: Protective work clothing (lab coat).

9 Physical and chemical properties
· General Information
· Appearance:
Form: Liquid

Color: Clear

· Odor: Characteristic

· Change in condition
Melting point/Melting range: Not determined

Boiling point/Boiling range: 78°C (172 °F)

· Flash point: 15.5°C (60 °F)

· Ignition temperature: 425.0°C (797 °F)

· Auto igniting: Product is not self igniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:
Lower: 3.8 Vol %

Upper: 13.5 Vol %

· Vapor pressure at 25°C (77 °F): 59.0 hPa (44 mm Hg)

· Density at 25°C (77 °F): 1.53 g/cm³
· Solubility in / Miscibility with
Water: Soluble

· Solvent content:
Organic solvents: 97.0 %

10 Stability and reactivity
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· Incompatible materials: Incompatible material: strong oxidizers.

· Hazardous decomposition products:

Carbon dioxide (CO₂)

Hydrogen chloride (HCl)

USA

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Date Prepared: 03/02/2011

Reviewed On: 02/11/2011

Product Name: TB Decolorizer
(TB Stain Set ZN)

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11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

64-17-5 ethanol

Oral	LD50	3450 mg/kg (MOU)
		7060 mg/kg (rat)

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
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· **Primary irritant effect:**

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

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

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

· **Subacute to chronic toxicity:**

Target organs: liver, gastrointestinal tumors, blood, lymphomas.

Target organs: thyroid, kidney, ureter or bladder tumors.

· **Additional toxicological information:**

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

12 Ecological information

· **Acquatic toxicity:** No further relevant information available.

· **Additional ecological information:**

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

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed of with solid waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

RCRA hazardous waste - RCRA # D001 (ignitable).

· **Uncleaned packagings:**

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

14 Transport information

· **DOT regulations:**



· **Hazard class:**

9

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Product Name: TB Decolorizer
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· **Identification number:** UN3316
· **Packing group:** II
· **Proper shipping name:** CHEMICAL KITS
· **Label** 9

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



· **ADR/RID class:** 9 (M11) Miscellaneous dangerous substances and articles
· **UN-Number:** 3316
· **Packaging group:** II
· **UN proper shipping name:** 3316 CHEMICAL KIT

· **Maritime transport IMDG:**



· **IMDG Class:** 9
· **UN Number:** 3316
· **Label** 9
· **Packaging group:** II
· **EMS Number:** F-A,S-P
· **Marine pollutant:** No
· **Proper shipping name:** CHEMICAL KITS

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 9
· **UN/ID Number:** 3316
· **Label** 9
· **Packaging group:** II
· **Proper shipping name:** CHEMICAL KITS

15 Regulatory information

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

7647-01-0 hydrochloric acid

· **SARA Section 313 (specific toxic chemical listings)**

All ingredients are listed.

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

All ingredients are listed.

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· California Proposition 65 - Chemicals known to cause cancer

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· California Proposition 65 - Chemicals known to cause developmental toxicity:

64-17-5 ethanol

· Carcinogenic categories**· NTP (National Toxicology Program)**

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol

A4

7647-01-0 hydrochloric acid

A4

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· Department issuing MSDS:

Environmental, Health & Safety

Created by Michael J. Spinazzola

· Contact: Technical Service Representative

USA

Date Prepared: 03/02/2011

Reviewed On: 02/11/2011

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

- **Product Identifier**
- **Product Name:** *TB Methylene Blue*
 (TB Stain Set ZN)
- **Catalog Number:** 212520
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 BD Diagnostic Systems
 7 Loveton Circle
 Sparks, MD 21152
 Telephone.: (410) 771 - 0100 or (800) 638 – 8663
- **Information Department:** Technical Service
- **Emergency telephone number:**
 In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.


2 Composition/information on ingredients

- **Chemical characterization:** *Mixture*
- **Description:** *Mixture consisting of the following components.*

· **Dangerous Components:**

64-17-5	ethanol	28.5%
67-56-1	methanol	1.5%

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 *Xn; Harmful*
 R40: *Limited evidence of a carcinogenic effect.*
 R10: *Flammable.*
- **Classification system:**
 The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
 The product has been classified and marked in accordance with regulations on hazardous materials.
- **Code letter and hazard designation of product:**
 Xn Harmful
- **Hazard-determining components of labelling:**
 ethanol
 methanol
- **Risk phrases:**
 10 *Flammable.*
 40 *Limited evidence of a carcinogenic effect.*
- **Safety phrases:**
 7 *Keep container tightly closed.*

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- 16 Keep away from sources of ignition - No smoking.
36/37 Wear suitable protective clothing and gloves.
60 This material and its container must be disposed of as hazardous waste.
· **NFPA ratings (scale 0-4)**



Health = 2
Fire = 3
Reactivity = 0

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



Health = 2
Fire = 3
Reactivity = 0

4 First aid measures

- **General information**
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** Immediately call a doctor.
- **Information for doctor** Show this product label or this MSDS.

5 Firefighting measures

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

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

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Reviewed On: 02/11/2011

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- **Information about protection against explosions and fires:**
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 15 - 30 °C
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.
- **Storage class** II A

8 Exposure controls/personal protection

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

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

64-17-5 ethanol

PEL	1900 mg/m ³ , 1000 ppm
REL	1900 mg/m ³ , 1000 ppm
TLV	1880 mg/m ³ , 1000 ppm

67-56-1 methanol

PEL	260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm
	Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm
	Skin; BEI

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal Protective Equipment**
- **General protective and hygienic measures**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.
- **Breathing equipment:**
 In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

- **General Information**

- **Appearance:**

Form: Liquid

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Product Name: TB Methylene Blue
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Color:	Blue
Odor:	Characteristic
Change in condition	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	78°C (172 °F)
Flash point:	29°C (84 °F)
Ignition temperature:	425.0°C (797 °F)
Auto igniting:	Product is not self igniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	7.0 Vol %
Upper:	20.0 Vol %
Vapor pressure at 25°C (77 °F):	59.0 hPa (44 mm Hg)
Density:	Not determined
Solubility in / Miscibility with Water:	Soluble
Solvent content:	
Organic solvents:	30.0 %

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- Hazardous decomposition products:**
 - Nitrogen oxides (NO_x)
 - Carbon monoxide (CO) and carbon dioxide (CO₂)
 - Hydrogen chloride (HCl)

11 Toxicological information

- Acute toxicity:**

- LD/LC50 values that are relevant for classification:**

64-17-5 ethanol

Oral	LD50	3450 mg/kg (MOU)
		7060 mg/kg (rat)

- Primary irritant effect:**
 - on the skin:** No irritating effect.
 - on the eye:** No irritating effect.
- Sensitization:** No sensitizing effects known.
- Subacute to chronic toxicity:**
 - Target organs: eyes, kidneys, liver, gastrointestinal tumors, blood, lymphomas.
 - Target organs: thyroid, kidney, ureter or bladder tumors.

(Contd. on page 5)

Date Prepared: 03/02/2011

Reviewed On: 02/11/2011

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 4)

· Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
12 Ecological information

- **Acquatic toxicity:** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Must not be disposed of with solid waste.
 Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
 RCRA hazardous waste - RCRA # D001 (ignitable).
- **Uncleaned packagings:**
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information
· DOT regulations:


- **Hazard class:** 9
- **Identification number:** UN3316
- **Packing group:** III
- **Proper shipping name:** CHEMICAL KIT
- **Label** 9

· Land transport ADR/RID (cross-border)


- **ADR/RID class:** 9 (M11) Miscellaneous dangerous substances and articles
- **UN-Number:** 3316
- **Packaging group:** III

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Date Prepared: 03/02/2011

Reviewed On: 02/11/2011

Product Name: TB Methylene Blue
(TB Stain Set ZN)

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· **UN proper shipping name:** 3316 CHEMICAL KITS

· **Maritime transport IMDG:**

· **IMDG Class:** 9
· **UN Number:** 3316
· **Label** 9
· **Packaging group:** III
· **EMS Number:** F-A,S-P
· **Marine pollutant:** No
· **Proper shipping name:** CHEMICAL KIT

· **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** 9
· **UN/ID Number:** 3316
· **Label** 9
· **Packaging group:** III
· **Proper shipping name:** CHEMICAL KIT

15 Regulatory information

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

None of the ingredients is listed.

· **SARA Section 313 (specific toxic chemical listings)**

64-17-5 ethanol

67-56-1 methanol

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

All ingredients are listed.

· **California Proposition 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause developmental toxicity:**

64-17-5 ethanol

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

Date Prepared: 03/02/2011

Reviewed On: 02/11/2011

Product Name: TB Methylene Blue
(TB Stain Set ZN)

(Contd. of page 6)

· **Carcinogenic categories**· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

64-17-5 ethanol

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16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· **Department issuing MSDS:**

Environmental, Health & Safety

Created by Michael J. Spinazzola

· **Contact:** Technical Service Representative

USA