



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** BD Vacutainer® Serum Clot Activator Plus Blood Collection Tube

**Other means of identification**

**Product code** 368660, 365078, 365905, 366668, 367812, 367813, 367814, 367815, 367819, 367820, 368044, 368045, 368050, 368175

**Recommended use** For blood collection and analysis.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Company name** BD Diagnostics, PreAnalytical Systems

**Address** 1 Becton Drive  
Franklin Lakes, NJ 07417-1885

**Telephone** 800-631-0174

**Contact person** Technical Services

**Emergency telephone** Chemtrec US 1-800-424-9300 EU 703-527-3887

**E-mail** pas\_tech\_services@bd.com

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** This material is not considered hazardous by the OSHA Hazard Communication Standard, OSHA 29 CFR 1910.1200.

**Precautionary statement**

**Prevention** Observe good industrial hygiene practices.

**Response** Wash skin with soap and water.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** The product is bound on the wall of the device.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Quartz	14808-60-7	71-74
Oxirane, 2-Methyl-, Polymer with oxirane, Monobutyl ether	9038-95-3	1-5
Octamethylcyclotetrasiloxane	556-67-2	< 0.5
Toluene	108-88-3	< 0.5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits.

#### 4. First-aid measures

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention if irritation persists after washing.
<b>Eye contact</b>	Flush eyes with water as a precaution. If irritation occurs, get medical assistance.
<b>Ingestion</b>	Rinse mouth. Get medical attention if any discomfort occurs.
<b>Most important symptoms/effects, acute and delayed</b>	This product is not expected to produce adverse effects under normal conditions of use and appropriate personal hygiene.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	No specific first aid measures noted.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	By heating and fire, harmful vapors/gases may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
<b>Fire fighting equipment/instructions</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Avoid contact with eyes and prolonged skin contact. See Section 8 of the SDS for Personal Protective Equipment.
<b>Methods and materials for containment and cleaning up</b>	Collect spillage with shovel, broom or the like and reuse, if possible. Following product recovery, flush area with water. For waste disposal, see Section 13 of the SDS.
<b>Environmental precautions</b>	Environmental manager must be informed of all major spillages.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with eyes and prolonged skin contact. Observe good laboratory hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a cool, dry, well-ventilated place. Keep container closed. Store away from incompatible materials.

#### 8. Exposure controls/personal protection

##### Occupational exposure limits

##### US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

##### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.3 mg/m <sup>3</sup>	Total dust.
		0.1 mg/m <sup>3</sup>	Respirable.
		2.4 mppcf	Respirable.

##### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Toluene (CAS 108-88-3)	TWA	20 ppm	

## US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Respirable dust.
Toluene (CAS 108-88-3)	STEL	560 mg/m <sup>3</sup>	
		150 ppm	
	TWA	375 mg/m <sup>3</sup>	
		100 ppm	

## US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Octamethylcyclotetrasiloxane (CAS 556-67-2)	TWA	10 ppm

### Biological limit values

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

\* - For sampling details, please see the source document.

**Exposure guidelines** No exposure limits noted for ingredient(s).

**Appropriate engineering controls** No particular ventilation requirements.

#### Individual protection measures, such as personal protective equipment

**Eye/face protection** Risk of contact: Wear approved safety goggles.

#### Skin protection

**Hand protection** For prolonged or repeated skin contact use suitable protective gloves. Nitrile gloves are recommended. Suitable gloves can be recommended by the glove supplier.

#### Skin protection

**Other** No protection is ordinarily required under normal conditions of use.

**Respiratory protection** Under normal conditions, respirator is not normally required.

#### Thermal hazards

None.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

**Physical state** Solid.

**Form** The product is bound on the wall of the device.

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not applicable.

**pH** Not applicable.

**Melting point/freezing point** Not applicable.

**Initial boiling point and boiling range** Not applicable.

**Flash point** Not applicable.

**Evaporation rate** Not applicable.

**Flammability (solid, gas)** Not available.

#### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not applicable.

<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	Not applicable.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not applicable.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.
<b>Other information</b>	
<b>Density</b>	Not applicable.
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	None under normal temperatures and pressures.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Under normal conditions of intended use, this material does not pose a risk to health.
<b>Eye contact</b>	Under normal conditions of intended use, this material does not pose a risk to health.
<b>Ingestion</b>	Under normal conditions of intended use, this material does not pose a risk to health. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms related to the physical, chemical and toxicological characteristics** Under normal conditions of intended use, this material does not pose a risk to health.

### Information on toxicological effects

**Acute toxicity** Not expected to be acutely toxic.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Octamethylcyclotetrasiloxane (CAS 556-67-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2400 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 36 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	> 4800 mg/kg
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	14.1 ml/kg

Components	Species	Test Results
<i>Inhalation</i> LC50	Rat	49000 mg/m <sup>3</sup> , 4 Hours
<i>Oral</i> LD50	Rat	5580 mg/kg
<b>Skin corrosion/irritation</b>	Due to lack of data the classification is not possible.	
<b>Serious eye damage/eye irritation</b>	Due to lack of data the classification is not possible.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Due to lack of data the classification is not possible.	
<b>Skin sensitization</b>	Due to lack of data the classification is not possible.	
<b>Germ cell mutagenicity</b>	Due to lack of data the classification is not possible.	
<b>Carcinogenicity</b>	Dust: May cause cancer by inhalation. Not relevant, due to the form of the product.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.	
<b>NTP Report on Carcinogens</b>		
Quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>		
Not regulated.		
<b>Reproductive toxicity</b>	Dust: Suspected of damaging fertility or the unborn child. Not relevant, due to the form of the product.	
<b>Specific target organ toxicity - single exposure</b>	Due to lack of data the classification is not possible.	
<b>Specific target organ toxicity - repeated exposure</b>	Dust: Causes damage to organs (lung) through prolonged or repeated exposure by inhalation. Not relevant, due to the form of the product.	
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.	
<b>Chronic effects</b>	None known.	
<b>Further information</b>	As supplied, the product is expected to pose no immediate health hazard. The product is bound on the wall of the device and with proper use it is unlikely to escape the tube as a hazardous dust.	

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Toluene (CAS 108-88-3)		
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC50	Daphnia magna 11.5 mg/l, 48 hours
Fish	LC50	Oncorhynchus kisutch 5.5 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	NOEC	Ceriodaphnia dubia 0.74 mg/l, 7 days
Fish	NOEC	Oncorhynchus kisutch 1.4 mg/l, 40 days
<b>Persistence and degradability</b>	No data available.	
<b>Bioaccumulative potential</b>	No data available.	
<b>Partition coefficient n-octanol / water (log Kow)</b>		
Toluene (CAS 108-88-3)	2.73	
<b>Mobility in soil</b>	No data available.	
<b>Other adverse effects</b>	Not relevant, due to the form of the product.	

## 13. Disposal considerations

**Disposal instructions** Dispose in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.

**Hazardous waste code** Not regulated.

**Waste from residues / unused products** Dispose of waste and residues in accordance with local authority requirements.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**US federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Octamethylcyclotetrasiloxane (CAS 556-67-2) One-Time Export Notification only.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Toluene (CAS 108-88-3) LISTED

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Toluene (CAS 108-88-3)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

#### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3) 6594

#### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3) 35 %WV

#### DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3) 594

### US state regulations

#### US. Massachusetts RTK - Substance List

Quartz (CAS 14808-60-7)  
Toluene (CAS 108-88-3)

#### US. New Jersey Worker and Community Right-to-Know Act

Quartz (CAS 14808-60-7)  
Toluene (CAS 108-88-3)

## US. Pennsylvania Worker and Community Right-to-Know Law

Quartz (CAS 14808-60-7)

Toluene (CAS 108-88-3)

## US. Rhode Island RTK

Toluene (CAS 108-88-3)

## US. California Proposition 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Quartz (CAS 14808-60-7)

Toluene (CAS 108-88-3)

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	17-May-2016
Revision date	-
Version #	01
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0

## NFPA ratings



List of abbreviations	LD50: Lethal Dose 50%. LC50: Lethal Concentration 50%. EC50: Effective Concentration 50%. NOEC: No observed effect concentration.
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References	HSDB® - Hazardous Substances Data Bank ACGIH: American Conference of Governmental and Industrial Hygienists. US. IARC Monographs on Occupational Exposures to Chemical Agents National Toxicology Program (NTP) Report on Carcinogens ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices IARC Monographs. Overall Evaluation of Carcinogenicity
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