



# BD Hazardous Drug Solutions product catalog

Our portfolio to help protect  
your greatest assets





**They're your team—working each day to deliver the highest-quality care. And when they prepare or administer hazardous drugs (HDs), they need and deserve to be protected.**

The BD Hazardous Drug Solutions (HDS) portfolio is designed to help you reduce the risk of HD exposure and surface contamination. With evidence-based insights on your current safe handling practices, rapid hazardous drug detection and closed-system drug transfer device (CSTD) solutions, the BD Hazardous Drug Solutions portfolio is designed to protect you—and the team you count on. Our solution includes the BD® PhaSeal™ Optima System, the BD® PhaSeal™ System, BD® Texium™ System\*, and the BD® HD Check System.

Our clinical team can tailor a solution for your facility that balances your needs for personnel safety, workflow efficiency and cost. So your greatest assets can focus on the job at hand—improving outcomes and saving lives.

\* The BD Texium™ Closed Male Luer minimizes individual and environmental exposure to drugs, leaks and spills when connected to a BD SmartSite™ Needle-free connector. BD Texium™ IV sets have not been indicated for use as a closed system drug-transfer device.

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# The BD PhaSeal™ Optima System

The BD PhaSeal™ Optima System is a next-generation CSTD built on the foundation of the BD PhaSeal™ System. It is designed to help advance safety, performance, ergonomics and ease of use—to address your clinical and economic concerns.

Every component of the BD PhaSeal™ Optima System is designed with no inlets or air exchange for airtight and leak-proof hazardous drug transfers. The BD PhaSeal™ Optima System with a one-step straight-push mechanism, makes it easy for pharmacists and clinicians to use.





## BD PhaSeal™ Optima Drug Vial Access Devices

The BD PhaSeal™ Optima Protector is a pressure-equalization device that attaches to the vial. It is used in the preparation of drugs from either powder or liquid form. The protector establishes and maintains neutral pressure when air or fluid is injected into or aspirated from the vial.



## BD PhaSeal™ Optima Protectors

### BD PhaSeal™ Optima Protector P13-O

SKU: 515060

Vial adapter for closed reconstitution and pressure equalization.

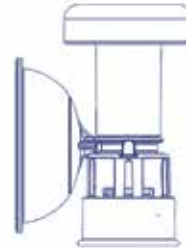
**Shelf pack:** 50 each

**Case:** 200 each

**Neck diameter:** 13 mm

**Equalizing capacity:** 10 mL of air

**Cap color:** Blue



### BD PhaSeal™ Optima Protector P20-O

SKU: 515064

Vial adapter for closed reconstitution and pressure equalization.

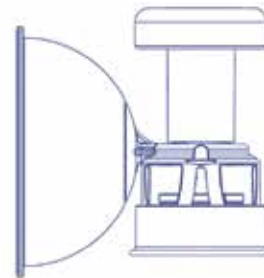
**Shelf pack:** 25 each

**Case:** 100 each

**Neck diameter:** 20 mm

**Equalizing capacity:** 50 mL of air

**Cap color:** Green



### BD PhaSeal™ Optima Protector P20-O Multi-pack

SKU: 515065

Vial adapter for closed reconstitution and pressure equalization. Multi-pack includes 30 individual packages of 5 P20-O units.

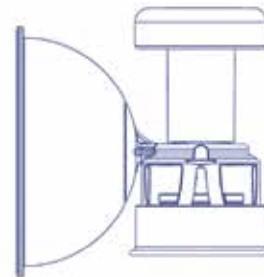
**Shelf pack:** 5 each

**Case:** 150 each

**Neck diameter:** 20 mm

**Equalizing capacity:** 50 mL of air

**Cap color:** Green



### BD PhaSeal™ Optima Protector P28-O

SKU: 515063

Vial adapter for closed reconstitution and pressure equalization.

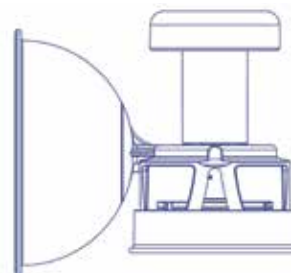
**Shelf pack:** 25 each

**Case:** 100 each

**Neck diameter:** 28 mm

**Equalizing capacity:** 50 mL of air

**Cap color:** Clear





# BD PhaSeal™ Optima Syringe Safety Devices

The BD PhaSeal™ Optima System is leakproof at the connection, with membranes that self-seal upon disconnect.



## BD PhaSeal™ Optima Injectors

### BD PhaSeal™ Optima Injector N35-O

SKU: 515052

Transfer device that attaches to a disposable syringe or IV tubing with a standard luer lock connection.

**Shelf pack:** 50 each

**Case:** 200 each

**Residual volume:** 0.04 mL



### BD PhaSeal™ Optima Injector N35-O Multi-pack

SKU: 515053

Transfer device that attaches to a disposable syringe or IV tubing with a standard luer lock connection. Multi-pack includes 50 individual packages of 5 BD PhaSeal™ Optima Injector N35-O units.

**Shelf pack:** 5 each

**Case:** 250 each

**Residual volume:** 0.04 mL



### BD PhaSeal™ Optima Locking Injector N40-O

SKU: 515056

Transfer device that attaches and locks to a disposable syringe or IV tubing with a standard luer lock connection.

**Shelf pack:** 50 each

**Case:** 200 each

**Residual volume:** 0.04 mL



### BD PhaSeal™ Optima Locking Injector N40-O Multi-pack

SKU: 515057

Transfer device that attaches and locks to a disposable syringe or IV tubing with a standard luer lock connection. Multi-pack includes 50 individual packages of 5 BD PhaSeal™ Optima Injector N40-O units.

**Shelf pack:** 5 each

**Case:** 250 each

**Residual volume:** 0.04 mL





## BD PhaSeal™ Optima IV Bag/Line Access Devices

These devices help to support closed transfer to infusion bags and closed administration\* of the drug via the patient's IV line.

## BD PhaSeal™ Optima IV Bag/Line Access Devices

### BD PhaSeal™ Optima Connector C35-O

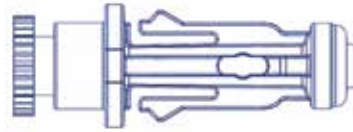
SKU: 515070

Attaches to the patient's IV line, providing a closed connection to the injector. Standard luer lock connection.

**Shelf pack:** 50 each

**Case:** 200 each

**Residual volume:** <0.16 mL without Injector  
<0.14 mL with Injector



### BD PhaSeal™ Optima Infusion Adapter C100-O

SKU: 515078

Connection between IV bag and non-vented set. Built-in BD PhaSeal™ Optima Connector for closed transfer to IV bag.

**Shelf pack:** 40 each

**Case:** 160 each



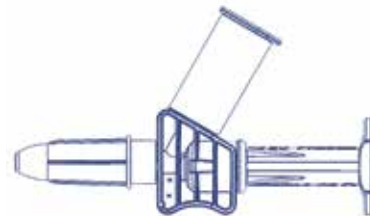
### BD PhaSeal™ Optima Infusion Adapter C100-O Multi-pack

SKU: 515079

Connection between IV bag and non-vented set. Built-in BD PhaSeal™ Optima Connector for closed transfer to IV bag. Multi-pack includes 50 individual packages of 5 BD PhaSeal™ Optima Infusion Adapter C100-O units.

**Shelf pack:** 5 each

**Case:** 250 each



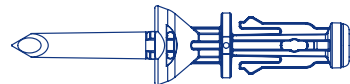
### BD PhaSeal™ Optima Spike Set C180-O

SKU: 515628

Connection between IV bag and BD PhaSeal™ Optima Connecting Set for closed transfer between IV bag and IV line.

**Shelf pack:** 50 each

**Case:** 200 each



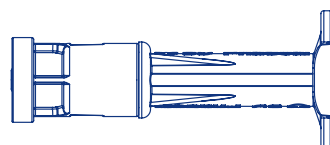
### BD PhaSeal™ Optima Connecting Set C83-O

SKU: 515629

Connection between IV line and BD PhaSeal™ Optima Spike Set for closed transfer between IV bag and IV line.

**Shelf pack:** 40 each

**Case:** 160 each





## BD PhaSeal™ Optima System Accessories

These devices help to support closed administration of the drug via the patient's IV line and simple attachment of a protector to a drug vial.

## The BD PhaSeal™ Optima System Accessories\*

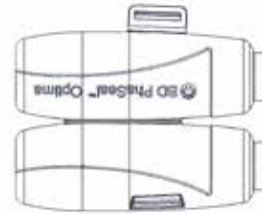
### BD PhaSeal™ Optima Infusion Clamp M25-O\*

SKU: 515085

Clamp for securing the connection of injector luer lock to the connector. Non-sterile.

**Shelf pack:** 25 each

**Case:** 100 each



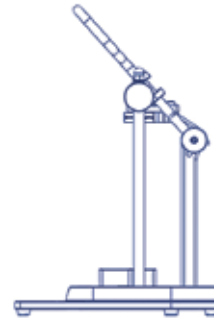
### BD PhaSeal™ Optima Assembly Fixture M12-O\*

SKU: 515082

Assembly fixture used for consistent and simple attachment of a protector to a drug vial. Non-sterile.

**Shelf pack:** 1 each

**Case:** 1 each





# The BD PhaSeal™ System

The BD PhaSeal™ System pioneered the category of CSTDs. It is the most widely published CSTD in the world, supported by more than 50 peer-reviewed, published studies.

For over 20 years, facilities have used the BD PhaSeal™ System to protect their personnel from HD exposure and to help reduce drug waste. Designed with double membranes and vapor capture mechanisms, it is an airtight and leakproof CSTD that minimizes individual and environmental exposure to vapor aerosols and spills during the preparation, administration and disposal of HDs.





## BD PhaSeal™ Drug Vial Access Devices

Each BD PhaSeal™ Protector is a pressure-equalization device that is permanently attached to the vial. It is used in the preparation of drugs from either powder or liquid form. The protector establishes and maintains neutral pressure when air or fluid is injected into or aspirated from the vial.

## BD PhaSeal™ Protectors

### BD PhaSeal™ Protector P14

SKU: 515100

Vial adapter for closed reconstitution and pressure equalization.

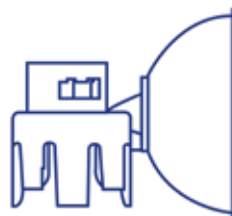
**Shelf pack:** 50 each

**Case:** 200 each

**Neck diameter:** 13 mm

**Equalizing capacity:** 20 mL of air

**Cap color:** Blue



### BD PhaSeal™ Protector P21

SKU: 515102

Vial adapter for closed reconstitution and pressure equalization.

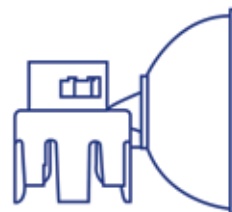
**Shelf pack:** 50 each

**Case:** 200 each

**Neck diameter:** 20 mm

**Equalizing capacity:** 20 mL of air

**Cap color:** Red



### BD PhaSeal™ Protector P21 Multi-pack

SKU: 515103

Vial adapter for closed reconstitution and pressure equalization.  
Multi-pack includes 50 individual packages of 5 BD PhaSeal™ Protector P21 units.

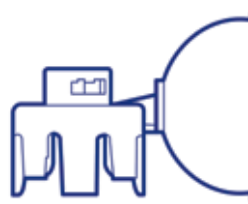
**Shelf pack:** 5 each

**Case:** 250 each

**Neck diameter:** 20 mm

**Equalizing capacity:** 20 mL of air

**Cap color:** Red



## BD PhaSeal™ Protectors

### BD PhaSeal™ Protector P28

SKU: 515104

Vial adapter for closed reconstitution and pressure equalization.

**Shelf pack:** 25 each

**Case:** 100 each

**Neck diameter:** 28 mm

**Equalizing capacity:** 50 mL of air

**Cap color:** White



### BD PhaSeal™ Protector P50

SKU: 515105

Vial adapter for closed reconstitution and pressure equalization.

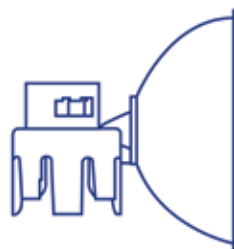
**Shelf pack:** 25 each

**Case:** 100 each

**Neck diameter:** 20 mm

**Equalizing capacity:** 50 mL of air

**Cap color:** Green





## BD PhaSeal™ Protectors

### BD PhaSeal™ Protector P50 Multi-pack

SKU: 515106

Vial adapter for closed reconstitution and pressure equalization.

Multi-pack includes 30 individual packages of 5 BD PhaSeal™ Protector P50 units.

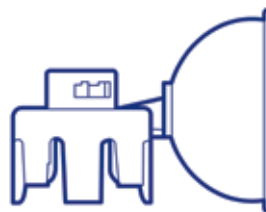
**Shelf pack:** 5 each

**Case:** 150 each

**Neck diameter:** 20 mm

**Equalizing capacity:** 50 mL of air

**Cap color:** Green



### BD PhaSeal™ Protector P55

SKU: 515117

Vial adapter for closed reconstitution and pressure equalization.

This protector contains a plastic spike to help reduce coring and fragmentation.

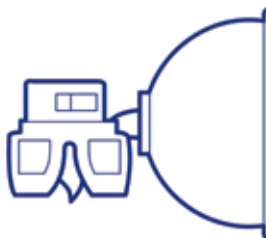
**Shelf pack:** 25 each

**Case:** 100 each

**Neck diameter:** 20 mm

**Equalizing capacity:** 50 mL of air

**Cap color:** Green





## BD PhaSeal™ Syringe Safety Devices

The BD PhaSeal™ System is designed for a leakproof drug transfer thanks to sealed, elastomeric, double membranes.

## BD PhaSeal™ Injectors

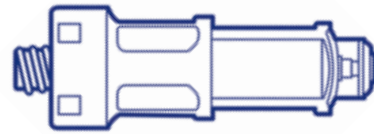
### BD PhaSeal™ Injector Luer Lock N35

SKU: 515003

Transfer device that attaches to a disposable syringe or IV tubing with a standard luer lock connection.

**Shelf pack:** 50 each

**Case:** 200 each



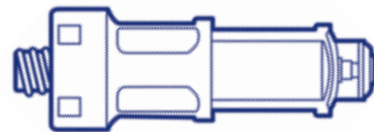
### BD PhaSeal™ Injector Luer Lock N35C Multi-pack

SKU: 515005

Transfer device that attaches to a disposable syringe or IV tubing with a standard luer lock connection. Multi-pack includes 50 individual packages of 5 BD PhaSeal™ Injector N35C units.

**Shelf pack:** 5 each

**Case:** 250 each





## BD PhaSeal™ IV Bag/Line Access Devices

These devices help to support closed transfer to infusion bags and closed administration\* of the drug via the patient's IV line.

## BD PhaSeal™ IV Bag/Line Access Devices

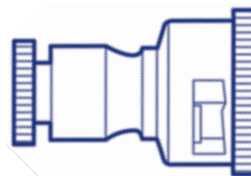
### BD PhaSeal™ Connector Luer Lock C35

SKU: 515200

Attaches to the patient's IV line, providing a closed connection to the injector. Standard luer lock connection.

**Shelf pack:** 50 each

**Case:** 200 each



### BD PhaSeal™ Y-site Connector C80

SKU: 515304

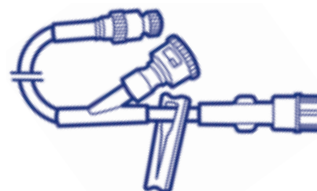
Extension tubing with built-in BD PhaSeal™ Connector.

**Shelf pack:** 30 each

**Case:** 120 each

**Priming volume:** 1.6 mL

**Length:** 21 cm



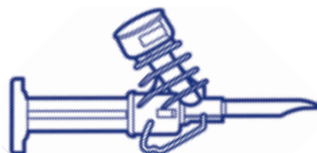
### BD PhaSeal™ Infusion Adapter C100

SKU: 515306

Connection between IV bag and non-vented infusion set. Built-in BD PhaSeal™ Connector for closed transfer to IV bag.

**Shelf pack:** 50 each

**Case:** 200 each



### BD PhaSeal™ Infusion Adapter C100 Multi-pack

SKU: 515307

Connection between IV bag and non-vented infusion set. Built-in BD PhaSeal™ Connector for closed transfer to IV bag.

**Shelf pack:** 5 each

**Case:** 250 each







## BD PhaSeal™ System Accessories

These devices help aid in the preparation, transport and administration of HDs.

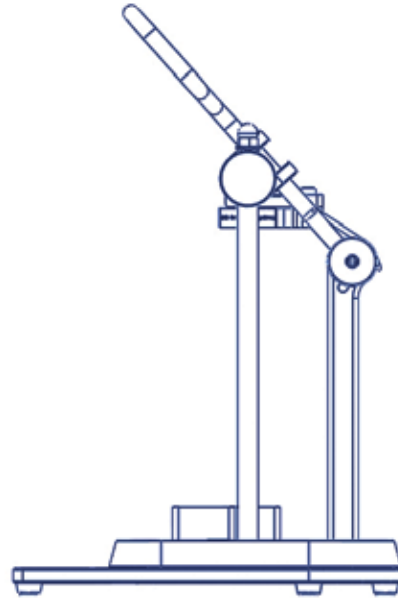
## BD PhaSeal™ System Accessories\*

### BD PhaSeal™ Assembly Fixture M12\*

SKU: 515400

Assembly fixture used for consistent and simple attachment of a protector to a drug vial. Non-sterile.

Case: 1 each



### BD PhaSeal™ Cap for Injector Membrane M50\*

SKU: 515404

Protects membrane on Injector from direct contact with contaminated surfaces during transport and storage.

Shelf pack: 50 each

Case: 200 each



### BD PhaSeal™ Hanger for IV Bag M55\*

SKU: 515406

Hanger for securing the IV bag on the IV pole.

Shelf pack: 40 each

Case: 160 each



\* BD PhaSeal™ System Accessories are optional.

# The Texium™ System

The Texium™ System utilizes the mechanical valve technology to achieve a leak-free drug transfer and promotes the safe handling of HDs.

The centerpiece of the Texium™ System is the Texium™ Closed Male Luer.\* This is an airtight, leak-free and drip-free CSTD, and when paired with a BD SmartSite™ Needle-free Connector, mechanically prohibits the transfer of environmental contaminants into the system and the escape of drug vapor concentrations outside the system.

The Texium™ System offers bonded syringes which, when used with a BD SmartSite™ Needle-free Connector, is designed to promote safe handling of non-HDs and HDs during preparation, administration and/or waste handling.

\* The BD Texium™ Closed Male Luer minimizes individual and environmental exposure to drugs, leaks and spills when connected to a BD SmartSite™ Needle-free connector. BD Texium™ IV sets have not been indicated for use as a closed system drug-transfer device.



## BD SmartSite™ Vented Vial Access Devices

### Universal BD SmartSite™ Vented Vial Access Device

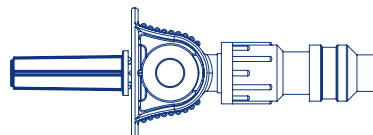
SKU: MV0400

Universal vented vial access device. 0.2 micron hydrophobic air-venting filter.

**Shelf pack:** N/A

**Case:** 100 each

**Compatible neck diameter:** Universal



### 13 mm BD SmartSite™ Vented Vial Access Device

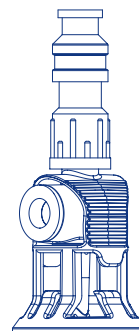
SKU: MV0413

13 mm vented vial access device. Vial adaptor for reconstitution.

**Shelf pack:** N/A

**Case:** 100 each

**Compatible neck diameter:** 13 mm





## BD SmartSite™ Vented Vial Access Devices

### 20 mm BD SmartSite™ Vented Vial Access Device

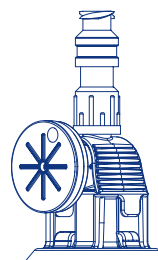
SKU: MV0420

20 mm vented vial access device. Vial adaptor for reconstitution.

**Shelf pack:** N/A

**Case:** 100 each

**Compatible neck diameter:** 20 mm



### 20 mm BD SmartSite™ Vented Vial Access Device Multi-pack

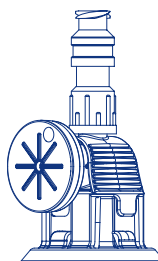
SKU: MV042005

20 mm vented vial access device. Vial adaptor for reconstitution.

**Shelf pack:** 5 each

**Case:** 100 each

**Compatible neck diameter:** 20 mm



### 28 mm BD SmartSite™ Vented Vial Access Device

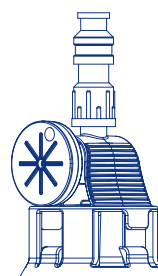
SKU: MV0428

28 mm vented vial access device. Vial adaptor for reconstitution.

**Shelf pack:** N/A

**Case:** 100 each

**Compatible neck diameter:** 28 mm



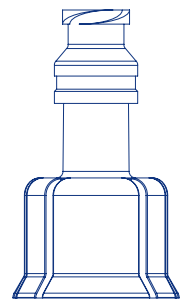
# BD SmartSite™ Non-Vented Vial Access Devices

13 mm BD SmartSite™ Non-vented Vial Access Device

SKU: 2203E

13 mm non-vented vial access device. Vial adaptor for reconstitution.

**Shelf pack:** N/A  
**Case:** 100 each  
**Compatible neck diameter:** 13 mm

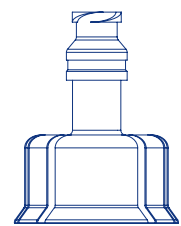


20 mm BD SmartSite™ Non-vented Vial Access Device

SKU: 2205E

20 mm non-vented vial access device. Vial adaptor for reconstitution.

**Shelf pack:** N/A  
**Case:** 100 each  
**Compatible neck diameter:** 20 mm

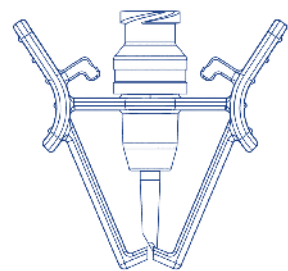


Universal BD SmartSite™ Non-vented Vial Access Device

SKU: 2202E

Universal non-vented vial access device. Vial adaptor for reconstitution.

**Shelf pack:** N/A  
**Case:** 100 each  
**Compatible neck diameter:** Universal







## Texium™ Syringe Safety Devices

These devices utilize mechanical valve technology and help aid in the transfer of hazardous medication. When the Texium™ System and the BD SmartSite™ Needle-free Connector are paired together, they provide a leak-free, drip-free connection and disconnection.

## Texium™ Syringe Safety Devices

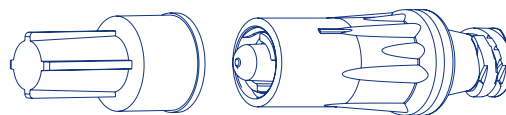
### Texium™ Closed Male Luer with Female Cap

SKU: 10012241-0500

Transfer device that attaches to a disposable syringe or IV tubing with a standard luer lock connection.

**Shelf pack:** N/A

**Case:** 100 each



# Texium™ Syringe Safety Devices

Texium™ Needle-free Syringe, 3 mL

SKU: MY8003

3 mL needle-free syringe with bonded Texium™ Closed Male Luer.  
Bonded components designed to promote the closed safe handling of fluids and medications.

Shelf pack: N/A  
Case: 100 each

STERILE







Texium™ Needle-free Syringe, 5 mL

SKU: MY8005

5 mL needle-free syringe with bonded Texium™ Closed Male Luer.  
Bonded components designed to promote the closed safe handling of fluids and medications.

Shelf pack: N/A  
Case: 100 each

STERILE







Texium™ Needle-free Syringe, 10 mL

SKU: MY8010

10 mL needle-free syringe with bonded Texium™ Closed Male Luer.  
Bonded components designed to promote the closed safe handling of fluids and medications.

Shelf pack: N/A  
Case: 100 each

STERILE









## Texium™ Syringe Safety Devices

### Texium™ Needle-free Syringe, 20 mL

SKU: MY8020

20 mL needle-free syringe with bonded Texium™ Closed Male Luer.  
Bonded components designed to promote the closed safe handling of fluids and medications.

**Shelf pack:** N/A

**Case:** 100 each



### Texium™ Needle-free Syringe, 30 mL

SKU: MY8030

30 mL needle-free syringe with bonded Texium™ Closed Male Luer.  
Bonded components designed to promote the closed safe handling of fluids and medications.

**Shelf pack:** N/A

**Case:** 50 each



### Texium™ Needle-free Syringe, 50 mL

SKU: MY8060

50 mL needle-free syringe with bonded Texium™ Closed Male Luer.  
Bonded components designed to promote the closed safe handling of fluids and medications.

**Shelf pack:** N/A

**Case:** 50 each





## Texium™ IV Bag/Line Access Devices

These devices help to support closed transfer to infusion bags and closed administration\* of the drug via the patient's IV line.

## Texium™ IV Bag/Line Access Devices

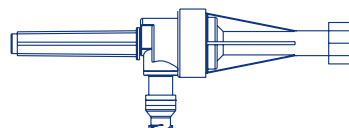
### BD SmartSite™ Add-on Bag Access Device, Spike Adapter

SKU: 10013365

Connection between IV bag and infusion set. Built-in BD SmartSite™ Bag Access Port Connector for closed transfer to IV bag.

**Shelf pack:** 25 each

**Case:** 100 each



### BD SmartSite™ Needle-Free Connector

SKU: 2000E

Permits a closed injection and aspiration of fluids without the use of needles. The BD SmartSite™ Needle-free Connector is compatible with a Texium™ Closed Male Luer.

**Shelf pack:** N/A

**Case:** 100 each



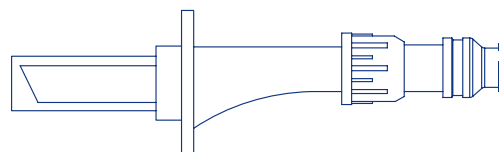
### BD SmartSite™ Bag Spike

SKU: 2300E-0500

Connection between IV bag and infusion set. Built-in BD SmartSite™ Needle-free Connector for closed transfer to IV bag.

**Shelf pack:** N/A

**Case:** 100 each



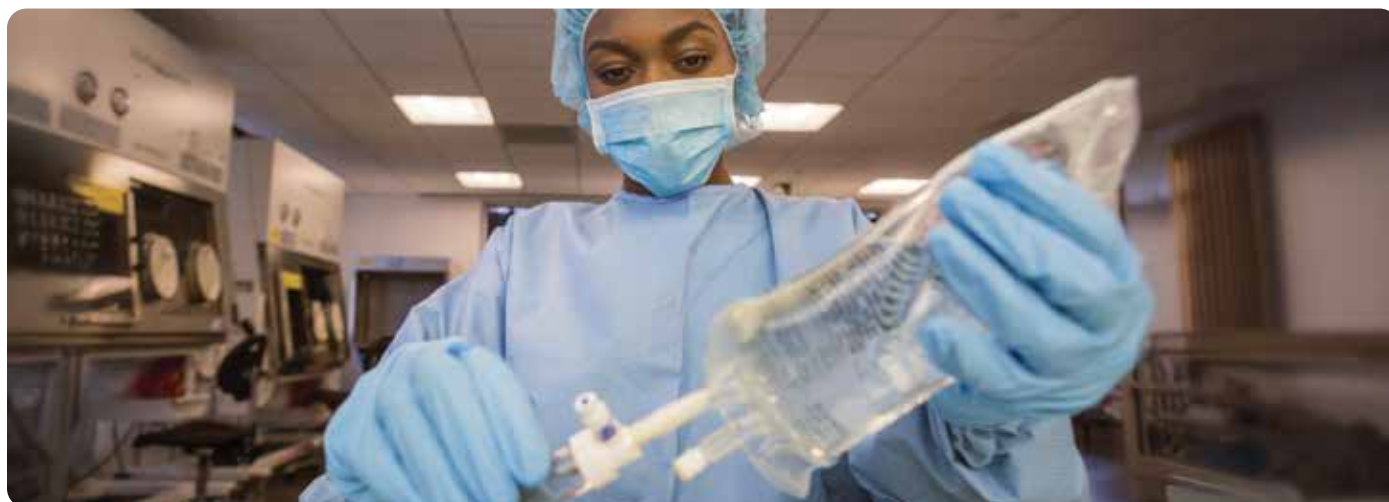
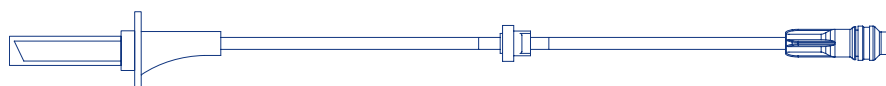
### BD SmartSite™ Bag Spike with Check Valve

SKU: 2309E

Connection between IV bag and infusion set. Built-in BD SmartSite™ Needle-free Connector for closed transfer to IV bag while mating with a Texium™ Closed Male Luer. Check valve allows no backflow of fluid into the IV bag.

**Shelf pack:** N/A

**Case:** 100 each





## Texium™ IV Primary Infusion Sets

All of these infusion sets are designed with work with the BD Alaris™ Pump Module. Various configurations are available.

## IV Primary Infusion Sets

### BD Alaris™ Pump Infusion Sets with BD SmartSite™ Bag Access Port

SKU: 10013361T

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment1 BCV 1 RC 2 BD SmartSite™ Y Texium™

**Case:** 20 each**Length:** 297 cm (117 in)**Priming volume:** 25 mL**Material:** PVC/DEHP

### BD Alaris™ Pump PE-lined PVC Infusion Sets with BD SmartSite™ Bag Access Port and Texium™ Closed Male Luer

SKU: 24601-B007T

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 1 BCV 1 RC 2 BD SmartSite™ Y Texium™

**Case:** 20 each**Length:** 300 cm (118 in)**Priming volume:** 24 mL**Material:** PE-lined, PVC/DEHP

### BD Alaris™ Pump PE-lined PVC Infusion Sets with Texium™ Closed Male Luer

SKU: 22600-0007T

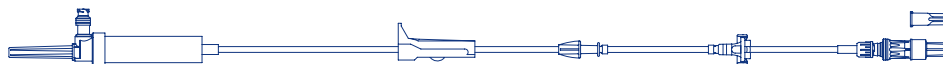
BD Alaris™ Pump Set standard bore V/NV 20 DPML Alaris™ Pump Segment 1 RC Texium™

**Case:** 20 each**Length:** 120 cm (47 in)**Priming volume:** 14 mL**Material:** PE-lined, PVC/DEHP

### BD Alaris™ Pump PE-lined PVC Infusion Sets with BD SmartSite™ Bag Access Port and Texium™ Closed Male Luer

SKU: 22603-B007T

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 1 RC Texium™

**Case:** 20 each**Length:** 120 cm (47 in)**Priming volume:** 14 mL**Material:** PE-lined, PVC/DEHP

# IV Primary Infusion Sets

**BD Alaris™ Pump PE-lined PVC filter Infusion Sets with 0.2µm inline filter, BD SmartSite™ Bag Access Port and Texium™ Closed Male Luer**

**SKU: 24301-0007T**

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 0.2µm large PES Filter 1 RC 1 PC 1 BD SmartSite™ Y Texium™

**Case:** 20 each  
**Length:** 292 cm (115 in)  
**Priming volume:** 27 mL  
**Material:** PE-lined, PVC/DEHP



**BD Alaris™ Pump Infusion Sets with BD SmartSite™ Bag Access Port and Texium™ Closed Male Luer**

**SKU: 22000-B007T**

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 1 RC Texium™

**Case:** 20 each  
**Length:** 115 cm (45 in)  
**Priming volume:** 14 mL  
**Material:** PVC/DEHP



**BD Alaris™ Pump Infusion Sets with Texium™ Closed Male Luer\***

**SKU: 24010-0007T**

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 0.2µm large PES Filter 1 RC 1 PC 1 BD SmartSite™ Y Texium™

**Case:** 20 each  
**Length:** 321 cm (126 in)  
**Priming volume:** 26 mL  
**Material:** PVC\*





## IV Primary Infusion Sets

### BD Alaris™ Pump PE-lined PVC filter Infusion Sets with 0.2µm inline filter and BD SmartSite™ Bag Access Port

SKU: 2465-0007

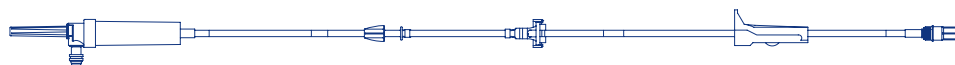
BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 0.2µm large PES filter 1 RC 1 PC 1 BD SmartSite™ Y RLL

**Case:** 20 each**Length:** 294 cm (116 in)**Priming volume:** 27 mL**Material:** PE-lined, PVC/DEHP

### BD Alaris™ Pump PE-lined PVC Infusion Sets with BD SmartSite™ Bag Access Port

SKU: 2466-0007

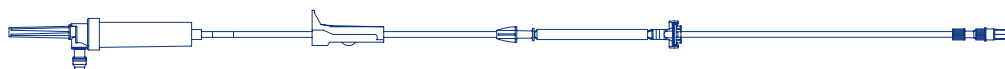
BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 1 RC RLL

**Case:** 20 each**Length:** 220 cm (87 in)**Priming volume:** 21 mL**Material:** PE-lined, PVC/DEHP

### BD Alaris™ Pump PE-lined PVC Infusion Sets with BD SmartSite™ Bag Access Port

SKU: 10015862

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 1 RC RLL

**Case:** 20 each**Length:** 115 cm (45 in)**Priming volume:** 14 mL**Material:** PE-lined, PVC/DEHP

### BD Alaris™ Pump PE-lined PVC Infusion Sets with BD SmartSite™ Bag Access Port

SKU: 10015861A

BD Alaris™ Pump Set standard bore NF container access 20 DPML Alaris™ Pump Segment 1 BCV 1 RC 1 PC 3 BD SmartSite™ Y RLL

**Case:** 20 each**Length:** 323 cm (127 in)**Priming volume:** 25 mL**Material:** PE-lined, PVC/DEHP



## Texium™ IV Secondary Infusion Sets

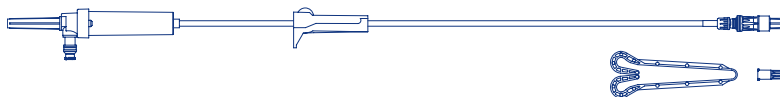
We offer a wide variety of secondary infusion sets designed to work with needle-free valves, including BD SmartSite™ Injection Ports.

## IV Secondary Infusion Sets

### Texium™ IV Secondary Infusion Set

SKU: 70001B-07T

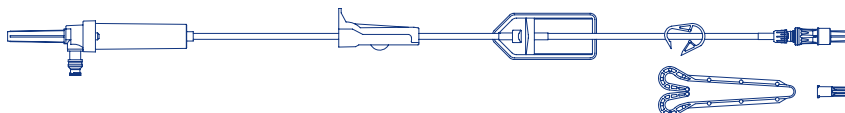
BD® Secondary Infusion Set standard bore NF container access 20 DPML 1 RC Texium™

**Case:** 100 each**Length:** 80 cm (31 in)**Priming volume:** 12 mL**Material:** PE-lined, PVC/DEHP

### Texium™ IV Secondary Infusion Set

SKU: 4030B-07T

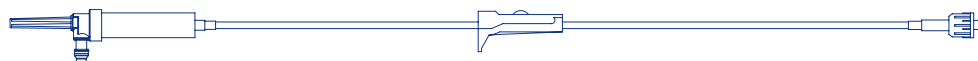
BD® Secondary Infusion Set standard bore NF container access 20 DPML 0.2um large PES filter 1 RC 1 PC Texium™

**Case:** 100 each**Length:** 81 cm (32 in)**Priming volume:** 12 mL**Material:** PE-lined, PVC/DEHP

### IV Secondary Infusion Set

SKU: 10014881

BD® Secondary Infusion Set standard bore NF container access 20 DPML 1 RC FLL

**Case:** 100 each**Length:** 80 cm (31 in)**Priming volume:** 12 mL**Material:** PE-lined, PVC\*

\* DEHP is not part of the material formulation.



## BD SmartSite™ Extension Infusion Sets

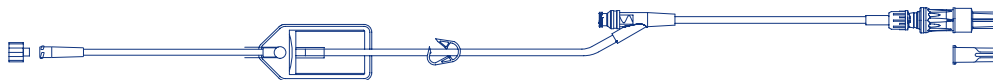
BD SmartSite™ Extension Sets are available with BD SmartSite™ Needle-free Connectors. We offer a variety of extension set configurations, bore sizes, priming volumes and lengths to meet your infusion needs

## IV Extension Infusion Sets

### BD SmartSite™ IV Extension Infusion Set with Bonded Texium™ Closed Male Luer

SKU: 20350ET

BD filter extension set standard bore 0.2um large PES filter 1 PC 1 BD SmartSite™ Y Texium™

**Case:** 100 each**Length:** 18 cm 7 in**Priming volume:** 6 mL**Material:** PE-lined, PVC/DEHP

### BD SmartSite™ Needle-free Connector with Bonded Texium™ Closed Male Luer

SKU: 22005E-07T

BD SmartSite™ Extension Set Microbore 1 BD SmartSite™ Bonded 1 PC Texium™

**Case:** 50 each**Length:** 157 cm 62 in**Priming volume:** 1.6 mL**Material:** PVC\*

\* DEHP is not part of the material formulation.

# The BD<sup>®</sup> HD Check System

The BD<sup>®</sup> HD Check System is the first rapid HD<sup>\*</sup> detection system that provides results in less than 10 minutes. It reliably<sup>†</sup> detects surface contamination on multiple surfaces for a select number of HDs<sup>\*</sup> using proven lateral flow assay technology.

The handheld design of the BD<sup>®</sup> HD Check System makes it easy and convenient to conduct testing at any location. The results are quick, reliable and easy to read, enabling immediate corrective action to be taken.

Users can easily integrate the BD<sup>®</sup> HD Check System into their daily routine or workflow, tracking contamination levels over time. It can also help facilities monitor their compliance with aspects of USP <800> and other safe handling guidelines.

\* The BD<sup>®</sup> HD Check System tests for select HDs—cyclophosphamide, doxorubicin and methotrexate.

† Surfaces with contamination at or above the limits of detection have 95% specificity and sensitivity.





## BD® HD Check Analyzer and Collection

### BD® HD Check Analyzer

SKU: 515020

Analyzer that reads results from specific assay cartridges and delivers results of surface contamination.

**Shelf pack:** 1 each

**Case:** 1 each



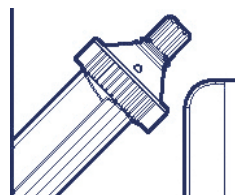
### BD® HD Check Hazardous Drug Collection Kit

SKU: 515033

Includes one collection tube/dropper with solution and one wipe used to collect a sample from desired surface.

**Shelf pack:** 10 each

**Case:** 20 each (2 shelf packs)



## BD® HD Check Assay Cartridges

### BD® HD Check Doxorubicin Assay Cartridge

SKU: 515025

Assay cartridge used to detect surface contamination of doxorubicin from a collection sample.

Case: 20 each



### BD® HD Check Methotrexate Assay Cartridge

SKU: 515029

Assay cartridge used to detect surface contamination of methotrexate from a collection sample.

Case: 20 each

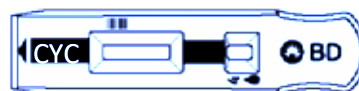


### BD® HD Check Cyclophosphamide Assay Cartridge

SKU: 515031

Assay cartridge used to detect surface contamination of cyclophosphamide from a collection sample.

Case: 20 each



# Material specifications and acronyms

This is a reference guide for specifications and acronyms for materials related to the BD PhaSeal™ Optima System, the BD PhaSeal™ System and the Texium™ System, to help provide health and safety information about our products and their chemical makeup/substances.





# BD PhaSeal™ Optima System

## material specifications and acronyms

**Table 1** includes a reference guide to the abbreviations for materials found within the BD PhaSeal™ Optima System products as detailed in **Tables 2–7**.



**Table 1**

Raw material abbreviations and descriptions	
AC	Acrylate polymer
DEHP	Di-(2-ethylhexyl) phthalate
PA	Polyamide
PI	Polyisoprene
POM	Polyoxymethylene
PP	Polypropylene
PVC	Polyvinyl chloride
TPE	Thermoplastic elastomer

**Table 2**

Protector materials	
BD PhaSeal™ Optima Protectors P13-O and P20-O*	
Protector membrane cap	PP
Membrane	PI
Protector body	PP
Hydrophobic and oleophobic filter	AC
Expansion chamber	PP
Expansion film	PA/PP
Lubricant on spike	Silicone
Sleeve	TPE
Grip cap	Colored PP (color specific to protector size)

- Materials in teal text indicate fluid path components.
- Materials in light blue text indicate components that may contact fluid.

\* BD PhaSeal™ Optima Protectors, Injectors, Connectors and Adapters do not contain DEHP, BPA, rubber latex or PVC.



Table 3

Injector and cannula materials	
BD PhaSeal™ Optima Injector N35-O*	
Hub	Colored PP
Cannula	Stainless steel
Cannula lubricant	Silicone
Grip 1	PP
Spring	Stainless steel
Collet	POM
Membrane	PI
Membrane lubricant	Silicone
Grip 2	PP
Cap	PP

Table 4

Connector materials	
BD PhaSeal™ Optima Connector C35-O*	
Membrane	PI
Body	PP
Luer cap	Colored PP

Table 5

Infusion adapter materials	
BD PhaSeal™ Optima Infusion Adapter C100-O*	
Spike cap	PP
Infusion adapter body	PP
Membrane	PI
Infusion adapter membrane cap	PP
Spike port	Colored TPV

Table 6

Spike set materials	
BD PhaSeal™ Optima Spike Set C180-O	
Spike body	PP
Spike cap	Low density polyethylene (LDPE)
Membrane	PI
Membrane cap	PP

Table 7

Connecting set materials	
BD PhaSeal™ Optima Connecting Set C83-O	
Luer adaptor	PP
Infusion adaptor port	Colored TPV



- Materials in teal text indicate fluid path components.
- Materials in light blue text indicate components that may contact fluid.

\* BD PhaSeal™ Optima Protectors, Injectors, Connectors and Adapters do not contain DEHP, BPA, rubber latex or PVC.

# BD PhaSeal™ System material specifications and acronyms

**Table 1** includes a reference guide to the abbreviations for materials found within the BD PhaSeal™ System products as detailed in **Tables 2–7**.



**Table 1**

Raw material abbreviations and descriptions	
ABS	Acrylonitrile-butadiene-styrene copolymer
DEHP	Di-(2-ethylhexyl) phthalate
LLDPE	Linear low-density polyethylene
PA	Polyamide
PE	Polyethylene
POM	Polyoxymethylene
PP	Polypropylene
PTFE	Polytetrafluoroethylene
PVC	Polyvinyl chloride
SEBS	Styrene ethylene butylene styrene
TPE	Thermoplastic elastomer

- Materials in teal text indicate fluid path components.
- Materials in light blue text indicate components that may contact fluid.

**Table 2**

Protector materials and cannula sizing	
BD PhaSeal™ Protectors P14, P21, P28, P50 and P55*	
Expansion film	PA/PP
Hydrophobic filter	P14, P55: PTFE on PP/PE support P21, P28, P50: ePTFE on PP/PE support
Filter cover	PP
Spike lubricant (P55 only)	Silicone
Membrane	TPE
Housing	PP
Protective lid	Colored PP
Cannula material (P14, P21 and P50)	Stainless steel
Cannula sizing	
P14	1.0 mm OD x 0.7 mm ID
P21 and P50	1.65 mm OD x 1.35 mm ID
P28 and P55	No cannula (PP spike)

\* DEHP is not part of the material formulation.

Table 3

Injector materials and cannula sizing	
BD PhaSeal™ Injectors (luer lock) N35 and N35C*	
Cylinder	ABS
Membrane	TPE
Piston	PP
Safety sleeve	POM
Piston sealing	Silicone
Cap	PP
Cannula housing	PP
Cannula material	Stainless steel
Cannula sizing	18G (1.2 mm OD x 0.9 mm ID)

Table 4

Connector materials	
BD PhaSeal™ Connectors (luer lock) C35 and C45*	
Housing	PP
Membrane	TPE
Protective cap	LLDPE

Table 5

Infusion adapter materials	
BD PhaSeal™ Infusion Adapter C100*	
Spike housing	PP
Spike port	TPV
Membrane	TPE
Protective cap	PP/PE



Table 6

Y-site connector materials	
BD PhaSeal™ Y-site Connector C80*	
Membrane	TPE
Connector housing	ABS
Solvent	Cyclohexanone
Cap	ABS
Tubing	PVC
Clamp	PP
Female luer lock	ABS
Second-way port	Acrylic
Male luer	ABS
Cap with filter	LDPE/Versapor

Table 7

Secondary IV set materials	
BD PhaSeal™ Secondary Set Drip Chamber C60*	
All IV protective cap (spikes)	PE
Sets	
Spike	ABS
Connector	ABS
Membrane	TPE
Tubing	PVC*
Drip chamber	PVC*
Clamp (not fluid path)	ABS
Male luer end	ABS
Male luer end cap	PE



- Materials in teal text indicate fluid path components.
- Materials in light blue text indicate components that may contact fluid.

\* DEHP is not part of the material formulation.

# Texium™ System material specifications and acronyms

**Table 1** includes a reference guide to the abbreviations for materials found within the Texium™ System products as detailed in **Tables 2–8**.

**Table 1**

Raw material abbreviations and descriptions	
ABS	Acrylonitrile-butadiene-styrene copolymer
DEHP	Di-(2-ethylhexyl) phthalate
HDPE	High-density polyethylene
LDPE	Low-density polyethylene
MABS	Methyl methacrylate-acrylonitrile-butadiene-styrene
PC	Polycarbonate
PE	Polyethylene
PP	Polypropylene
PTFE	Polytetrafluoroethylene
PVC	Polyvinyl chloride
TPE	Thermoplastic elastomer



- Materials in teal text indicate fluid path components.
- Materials in light blue text indicate components that may contact fluid.

\* DEHP is not part of the material formulation.

**Table 2**

Universal vented vial adapter materials	
SKU: MV0400	
Approximate flow rate	> 3,000 mL per hour
Residual fluid	< 1.2 mL
Priming volume	< 0.15 mL
Vial access device body	MABS
Air filter	Acrylic copolymer/nylon
Air filter housing	HDPE
BD SmartSite™ Needle-free Valve	
Body	Acrylic
Female luer	Polyurethane
Piston	Silicone

**Table 3**

BD SmartSite™ Vented Vial Adapter materials	
SKUs: MV0413, MV0420 and MV0428*	
Total length	
MV0413	2.3 in, PV = 0.08 mL
MV0420 and MV0428	2.3 in, PV = 0.1 mL
Vial access device body	MABS
Air filter	Acrylic copolymer/nylon
Air filter housing	
MV0413	HDPE
MV0420 and MV0428	MABS
BD SmartSite™ Needle-free Valve	
Body	Acrylic
Female luer	Polyurethane
Piston	Silicone

Table 4

BD SmartSite™ IV Bag Access Device materials	
SKU: 2300E*	
Total length	3.5 in, PV = 0.51 mL
Cap	PE
Body	Acrylic
Solvent	Cyclohexanone
BD SmartSite™ Needle-free Valve	
Body	Acrylic
Female luer	Polyurethane
Piston	Silicone

Table 5

BD SmartSite™ Add-on Bag Access Device materials	
SKU: 10013365*	
Total length	4.0 in, PV = 0.60 mL
Spike	PE
Port cap	ABS
Spike/body	ABS
Spike port	PVC
Solvent	Cyclohexanone
BD SmartSite™ Needle-free Valve	
Body	PC
Female luer	Polyurethane
Piston	Silicone



Table 6

BD SmartSite™ Needle-free Valve materials	
SKUs: 2000E and 2000EA	
PV	0.11 mL labeled for use with low-pressure power injectors up to 325 psi and maximum flow rate of 10 mL/second
Body	Acrylic
Female luer	Polyurethane
Piston	Silicone
Cap	PE

Table 7

Texium™ Closed Male Luer	
SKU: 10012241-0500	
Body	PC
Actuator	TPE
Piston	Silicone
Cap	LDPE

Table 8

Texium™ Syringe Safety Devices	
SKUs: MY8003, MY8005, MY8010, MY8020, MY8030, MY8060	
Syringe body and plunger	PP
Syringe stopper	PI
Syringe lubricant	Polydimethyl Siloxane
Body	PC
Actuator	TPE
Piston	Silicone
Cap	LDPE

- Materials in teal text indicate fluid path components.
- Materials in light blue text indicate components that may contact fluid.

\* DEHP is not part of the material formulation.

# Key terms, abbreviations and symbols

This is a reference guide for key medical terms, abbreviations and symbols that are used to describe materials found within the products for the BD PhaSeal™ Optima System, the BD PhaSeal™ System, the Texium™ System and the BD® HD Check System.





# Key terms

## 0.2-micron filter

Removes particulate matter larger than 0.2 microns and virtually all fungi and bacteria. Often used as a final filter for air elimination.

Note: Filters are self-priming. DO NOT INVERT FILTER. Filters contain Supor® (polyethersulfone) membranes, which have low-protein and drug-binding characteristics.

## Two-piece male luer lock

Male luer lock with retractable rotating collar.

## 20 drop

Spike is designed so that 20 drops equal approximately 1 mL.

## Bag access

BD SmartSite™ Port integrated into the drip chamber spike, which allows direct fluid path access into a spiked container.

## Check valve

A device that allows flow in only one direction. Commonly used for secondary piggyback drug administration or to protect certain elements of the set from high pressures that can occur when a syringe injects into the set.

## Content sterile

The entire content of the package is sterile, and is tested/validated and labeled for placing directly on a sterile field.

## DEHP Di-(2-ethylhexyl) phthalate

A plasticizer used in PVC tubing to make it soft and pliable.

Note: All sets contain DEHP unless otherwise noted.

## Fixed male luer lock

Male luer and collar are one piece. Collar does not spin or move freely.

## Fluid path sterile

Only the capped, fluid path portion of the administration set was tested to meet sterility requirements.

## Microbore/ultra-minibore

Tubing with smaller internal diameter of  $\leq 0.04$  in, to minimize the contained volume.

## Needle-free/needleless

Needle-free connectors or valves, also known as needleless connectors or valves. Offer a safe way to access IV lines without the use of a needle, which greatly reduces the risk of accidental needlestick injuries.

## Non-vented

Characteristic of the spike that enters the solution container. Designed for collapsible plastic containers, as no air is required to enter the container for fluid to flow.

## Not made with DEHP

Set/component is not made with DEHP.

## Not made with natural rubber

Latex is known to cause hypersensitivity reactions and allergies in significant percentages of patients and healthcare workers.\*

## Spin male luer lock

Male luer lock with rotating collar.

## Standard bore

Tubing with larger diameter of  $\geq 0.1$  in.

Note: All sets with tubing are standard bore unless otherwise noted.

## Vented/non-vented

Characteristic of the spike that enters the solution container. Designed for containers that do not collapse when emptying (glass or semi-rigid plastic). Vent allows air to enter the container to allow fluid to flow.

Note: All sets with drip chambers are vented/non-vented unless otherwise noted.

\* Nguyen K, Kohli A. Latex Allergy. [Updated 2023 July 10]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 09/2024. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK545164/>

# Abbreviations and symbols

## Abbreviations

<b>ABS</b>	Acrylonitrile-butadiene-styrene copolymer
<b>BPA</b>	Bisphenol A
<b>CYC</b>	Cyclophosphamide
<b>DEHP</b>	Di-(2-ethylhexyl) phthalate
<b>DOX</b>	Doxorubicin
<b>HDPE</b>	High-density polyethylene
<b>MABS</b>	Methyl methacrylate-acrylonitrile-butadiene-styrene
<b>MTX</b>	Methotrexate
<b>PA</b>	Polyamide
<b>PC</b>	Polycarbonate
<b>PE</b>	Polyethylene
<b>POM</b>	Polyoxymethylene
<b>PP</b>	Polypropylene
<b>PTFE</b>	Polytetrafluoroethylene
<b>PVC</b>	Polyvinyl chloride
<b>SEBS</b>	Styrene ethylene butylene styrene
<b>TPE</b>	Thermoplastic elastomer

## Symbols

 Sterilized using ethylene oxide

 Sterilized using irradiation

 Non-sterile

 Do not reuse

 Does not contain DEHP



# BD: Your partner in advancing the quality of oncology care

A key part of oncology care is the safe and effective delivery of medications that contain HDs.

The risk of HD exposure to healthcare workers is real and significant. The threat of exposure can come from any place where HDs are present in your facility. Our Safe Handling Assessment will help address HD exposure and create a plan to help protect your healthcare workers with BD product recommendations and training.

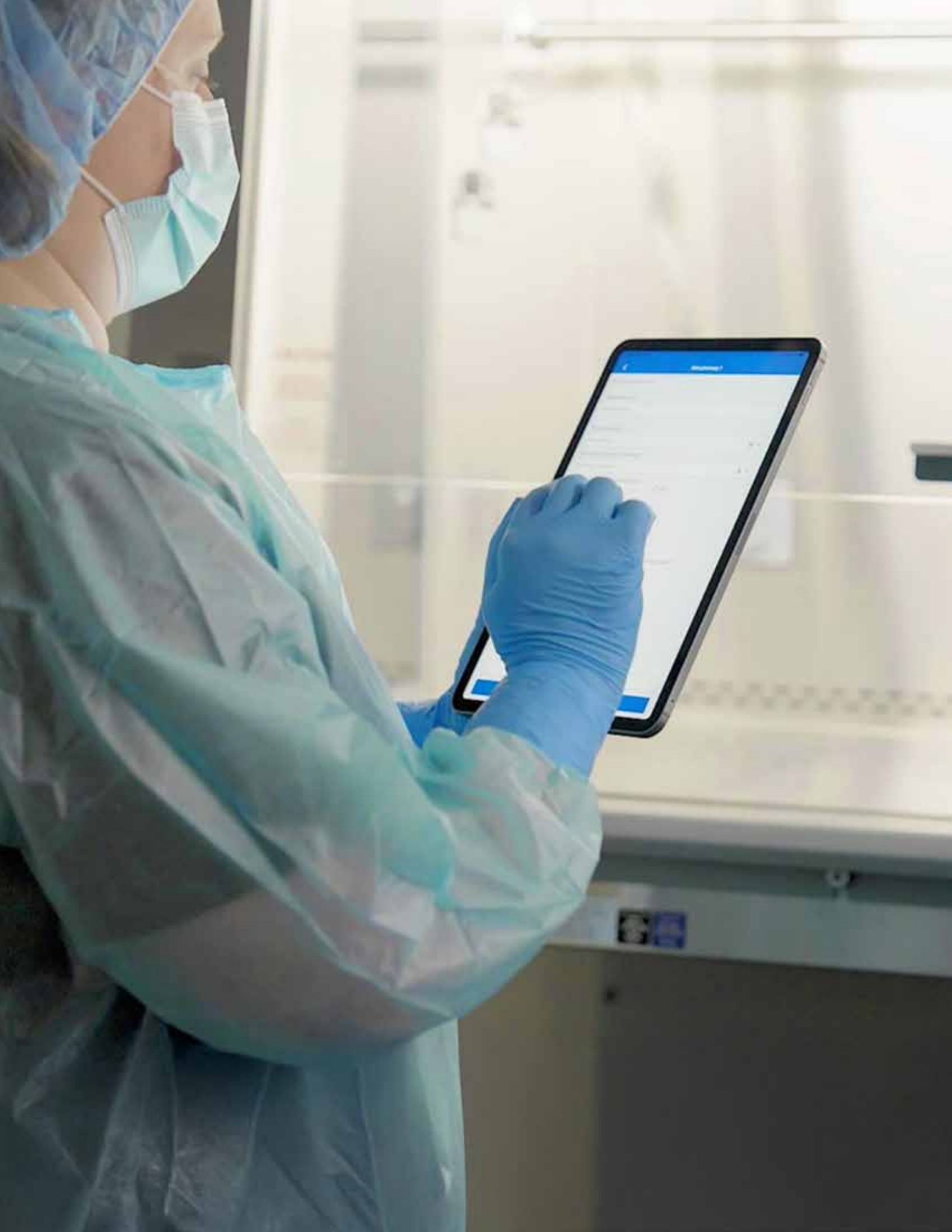
The potential impact of our recommendations is driven by the quality of the data. The assessments conducted by our staff include interviews, observations and surface contamination testing for both pharmacy and administration areas.

Once an assessment is complete, we analyze your data, comparing it to best-practice standards and guidelines.

The resulting recommendations provide a detailed, actionable road map for safe handling of HDs with BD products for oncology care.

To learn more, contact your oncology and vascular care territory manager today.

 **Let's advance oncology care in your facility.**





For more information on our products and services,  
talk to your BD sales representative or call **1.888.237.2762**.

Visit us online at **bd.com**



BD, Franklin Lakes, 07417 U.S.  
800.323.9088

**bd.com**

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