

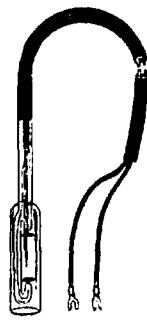
FED. SUP CLASS  
6630ARMY - MD, DM  
NAVY - MS

USER ACTIVITIES:

ARMY - ME  
NAVY - OS  
AIR FORCE - 82

REVIEWER ACTIVITIES:

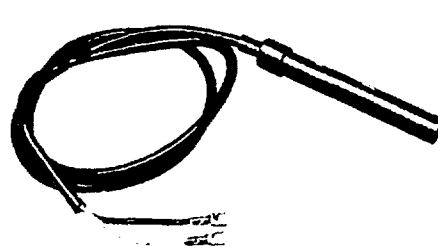
This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document.



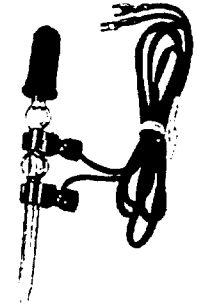
MS51442-1



MS51442-2



MS51442-3 and -4



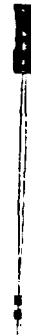
MS51442-5 and -6



MS51442-7



MS51442-8



MS51442-9



MS51442-10

**MATERIAL:** Conductivity cells, unless otherwise specified, shall be made of borosilicate glass in accordance with Federal Specification DD-G-541, type 1.

**DESIGN:**

-1 Cell is for solutions of high or medium conductivity. Cell constant 1.0 reciprocal centimeter. Platinum electrodes are permanently sealed in a glass bell. Electrodes are circular and parallel in a horizontal plane, and have a coating of platinum black. Rubber-covered lead wires are 750 mm long.

-2 Cell is similar to -1, but for solutions of low conductivity. Electrodes are rectangular and in vertical plane. Cell constant approximately 0.1 reciprocal centimeter.

-3 and -4 Cells are made of heavy wall epoxy resin tube that will withstand up to 88°C. Electrodes are gold-plated nickel, platinized, with waterproof cord. -3 Cell is for solutions of medium to high conductivity and a constant of 1.0 reciprocal centimeter. -4 Cell is for solutions of low conductivity and a constant of 0.1 reciprocal centimeter.

-5 and -6 Cells are for use when measuring small sample volumes. They have platinum electrodes coated with platinum black. Leads and contacts clips are removable for cleaning. Rubber bulb at top. -5 Cell is for use with solutions of high to medium conductivity and has a constant of 1.0 reciprocal centimeter. Approximate capacity 2 mL. -6 Cell is for use with solutions of low conductivity and a constant of 0.1 reciprocal centimeter. Approximate capacity 2.5 mL.

P.A.	EA	INTERNATIONAL INTEREST	TITLE	MILITARY STANDARD
Other Cust	MS 99		CONDUCTIVITY CELL	MS51442
Procurement Specifications	NONE	SUPERSEDES:	SHEET 1 OF 2	

FED. SUP CLASS

6630

USER ACTIVITIES:

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-7 Cell is for solutions of high or medium conductivity; cell constant 1.0 reciprocal centimeter,  $\pm 1\%$ . The two electrode bands, of platinum-iridium alloy coated with platinum black, are gold-soldered to platinum lead wires. Sealed in a vented glass bell, 76 mm long x 25 mm OD. Overall cell length 241 mm. Rubber-covered leads are 1.2 m long, with spade lug connectors.

-8 Cell is similar to -7, but for solutions of low conductivity; cell constant 0.1 reciprocal centimeter,  $\pm 1\%$ . Electrodes are parallel rectangular plates. Glass bell is 57 mm long x 25 mm OD. Overall cell length 210 mm. Rubber covered leads are 1.2 m long, with spade lug connectors.

-9 Cell is for solutions of high or medium conductivity; cell constant 1.0 reciprocal centimeter,  $\pm 1\%$ . Electrode bands are similar to -7, but glass sheath is 13 mm OD, permitting use in 5 mL samples. Minimum immersion depth 44 mm. Overall cell length 216 mm. Rubber covered leads are 1.2 m long, with spade lug connectors.

-10 Cell is for solutions of high or medium conductivity; cell constant approximately 1.0 reciprocal centimeter. Electrodes are rectangular and in vertical plane. Maximum OD of cell 12.5 mm, which permits use in 5 mL liquid sample. Lead wire 750 mm long, encased in protective rubber tube.

NOTE: Items differing from this Military Standard by minor variations in design or dimensions are considered standard under this document, provided such variations do not affect performance and are not in conflict with the material requirements specified herein.

APPROVED 25 MAY 1983 REVISED

P.A.	INTERNATIONAL INTEREST	TITLE	MILITARY STANDARD
Other Cust		CONDUCTIVITY CELL	MS51442
Procurement Specifications	SUPERSEDES:	SHEET	OF
		2	2