

Electric Double Layer Capacitor (Capacitor UN3499) Handling Guidance

Comp. by ANA, JUL, 2012

Pressure Release	Capacitors must be designed and constructed to safely relieve pressure that may build up in use, through a vent or a weak point in the capacitor casing. Any liquid which is released upon venting must be contained by packaging or by equipment in which a capacitor is installed.					
Wh Marking	Capacitors must be marked with the energy storage capacity in Wh (Watt-hour).					
Electrolyte	Electrolyte meeting the classification criteria of any class or division of DG			Electrolyte not meeting the classification criteria of any class or division of DG		
Type	More than 10Wh *1	Not more than 10Wh *2	Contained in equipment *3	More than 10Wh *4	Not more than 10Wh *5	contained in equipment *6
	Capacitors not exceeding 0.3 Wh are not subject to Dangerous Goods Regulations. *7					
Pressure Differential Test	Capacitors must be designed to withstand a 95KPa pressure differential.			Not applicable		
Applicable restrictions	Packing Instruction 971 as Class 9 DG		Special Provision A186			
Packing requirements	<p>1) An uncharged state</p> <p>2) Fitted with a <u>metal strap</u> connecting terminals</p> <p>3) Capacitors must be securely cushioned in the outer packagings</p>	<p>1) An uncharged state</p> <p>2) <u>Protected against short circuit</u></p> <p>or Fitted with a metal strap connecting terminals</p> <p>3) Capacitors are capable of withstanding a 1.2m drop test unpackaged on an unyielding surface without loss of contents</p>	<p>1) An uncharged state or <u>Protected against short circuit</u></p> <p>2) Provided the equipment is packed in a strong outer packaging constructed of suitable material and of adequate strength and design in relation to the packaging's intended use and in such a manner as to prevent accidental functioning of capacitors during transport.</p> <p>3) Large robust equipment containing capacitors may be offered for transport unpackaged or on pallets when capacitors are offered equivalent protection by the equipment in which they are contained.</p>	<p>1) An uncharged state</p> <p>2) Fitted with a <u>metal strap</u> connecting terminals</p>	<p>1) An uncharged state</p> <p>2) <u>Protected against short circuit</u></p> <p>or Fitted with a <u>metal strap</u> connecting terminals</p> <p>3) Protected against short circuit</p> <p>or Fitted with a metal strap connecting terminals</p>	<p>1) An uncharged state or <u>Protected against short circuit</u></p>

To be continued

Electrolyte	Electrolyte meeting the classification criteria of any class or division of DG			Electrolyte not meeting the classification criteria of any class or division of DG		
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	Capacitors not exceeding 0.3 Wh are not subject to Dangerous Goods Regulations. *7					
Label	Class 9	Not required				
Shipper's Declaration for Dangerous Goods (DGD)	Required	Not required				
AWB Indication	"Dangerous Goods as per attached Shipper's Declaration"	"Capacitor in compliance with SP A186" (Required by ANA)				
Electrolyte	Electrolyte meeting the classification criteria of any class or division of DG			Electrolyte not meeting the classification criteria of any class or division of DG		
Type	More than 10Wh *1	Not more than 10Wh *2	Contained in equipment *3	More than 10Wh *4	Not more than 10Wh *5	contained in equipment *6
	Capacitors not exceeding 0.3 Wh are not subject to Dangerous Goods Regulations. *7					
Shipper-built ULDs	Must not be included in Shipper-built ULDs	Can be included in Shipper-built ULDs				
☆ Acceptance Check	Required	Not required				
☆ NOTOC	Required	Not required				

*7 The words of "**Capacitor, Not restricted**" must be indicated on the AWB.

Metal strap ... Metal strap or conductive cable

Protected from short circuit ... Capacitor terminals must be protected against short circuit avoiding contact with each terminal (e.g.) by placing each capacitor between insulating dividers made of paper and the like. Or, place a sheet of paper above the terminal side of capacitors avoiding short circuit due to impurities of conductive material like metal pieces.

☆ Operator's Responsibilities

Note : Please understand that ANA is not in a position to take any responsibility for the accuracy of this table. For more details the current IATA dangerous Goods Regulations must be observed.