IEC 61340-4-11

Edition 1.0 2025-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electrostatics –
Part 4-11: Standard test methods for specific applications – Testing of electrostatic properties of composite IBC

Électrostatique –
Partie 4-11 : Méthodes d'essai normalisées pour des applications spécifiques – Essais des propriétés électrostatiques des GRV composites

IEC 61340-4-11:2025-03(en-fr)

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 17.220.99, 29.020, 55.080

ISBN 978-2-8327-0245-1

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTROSTATICS –

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FOREWORD

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The text of this International Standard is based on the following documents:

Draft	Report on voting
101/723/FDIS	101/727/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

Rigid Intermediate Bulk Containers (RIBC), including composite IBC, are widely used for storage, transportation and handling of liquids.

Only composite IBCs are considered in this part of IEC 61340. The detailed definition of composite IBC is specified in 6.5.1.3.4 of [1][1]. Composite IBC with plastic inner receptacles comprises a rigid outer casing surrounding a plastic inner receptacle, together with appropriate service and structural equipment. The assembled outer casing and inner receptacle form an integral unit for filling, storage, transportation and emptying.

The inner receptacle is not intended to perform a containment function without its outer casing. A "rigid" inner receptacle is a receptacle which retains its general shape when empty without closures in place and without benefit of the outer casing. Any inner receptacle that is not "rigid" is considered to be "flexible" (see 6.5.5.4.2 of [1]).

Usually such a receptacle is made of HDPE (High Density Polyethylene) which shows a good chemical resistance to various liquids. The volume is usually between 0,5 m^3 and 1,3 m^3 and is typically 1 m^3.

HDPE is an electrically insulating material which can become electrostatically charged. Often the liquid inserted into a composite IBC is also electrically insulating. High electrostatic charges can occur during filling and emptying processes and remain for a long period of time. An ignition hazard can occur which is why electrostatically unprotected composite IBC are not used in hazardous areas. Electrostatic protected IBCs are designed to be safe for use in hazardous areas.

[1] Numbers in square brackets refer to the Bibliography.