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## **Guideline 01**

### **Annex IBC05**

**Minimum requirements set for the quality plans of the quality assurance system for the production of packaging:**  
Composite Intermediate Bulk Containers with a rigid plastics inner receptacle.

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7

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This annex is part of the guideline:

**Requirements to the quality assurance system for the production, reconditioning, repair and remanufacturing of packagings, Intermediate Bulk Containers and Large Packagings for the transport of dangerous goods.**

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# 1 Introduction

The production quality of each construction type of composite-IBCs, consisting of a plastic inner receptacle and an outer encasement, used in the transport of dangerous goods, should be equal to the quality of the construction type approved for the relevant UN mark.

Three elements are distinguished during production:

- Production of the plastic inner receptacle.
- Production of the outer encasement.
- Combination of these two into a single IBC.

Refer to the quality control plans for the outer encasement and plastic inner receptacle, contained in the applicable annex (material dependent) and Annex IBC03 respectively, for the quality requirements for the manufacture of the separate elements (outer encasement and plastic inner receptacle). The final inspection and verification outlined in the quality plans need not be carried out. They will generally have to be performed during the final inspection and verification of the composite-IBC.

The quality control plan described below only concerns the assembly of both packaging elements, any additional elements, as well as the final inspection, if relevant.

The inspections required to ensure this are described in paragraphs 2 to 5.

For these inspections to be conducted, the nominal values of the relevant properties are to be recorded in the type test report.

The tolerances of the (average) values of various characteristics to be inspected as compared to the nominal values of the type test (to be provided by the manufacturer) are (as far as not specified otherwise in this annex):

±1% for the package's main dimensions;

±3% for its other properties.

The necessary written instructions must be drawn up to ensure proper performance of the inspections.

## 2 Inspection of incoming goods

Prior to commencing the manufacture of the packagings, the semi-manufactures and auxiliary materials required for the manufacturing process should be inspected to ensure that they correspond with those used in the samples for the UN-type test.

### 2.1 Semi-manufactures

For each delivery of semi-manufactures, it must be verified whether the plastic inner containers and steel drums to be used, have been manufactured in accordance with the provisions of Annex P01 and Annex P03, respectively, and whether the specifications conform to those used in the UN type test samples.

#### Note

The supplier may also use test results of his supplier. This can be of importance for example for a check of the composition of certain raw materials used and/or materials used.

### 2.2 Auxiliary materials not mentioned in paragraph 2.1.

The auxiliary materials supplied are to be subjected to an identity check comprising comparison with the supplier's factory test report (which does not have to relate to the products as supplied) in accordance with EN 10204:2004 §3.2 (Type 2.2). A list of the properties to be inspected in this check is to be compiled by both supplier and producer.

Each delivery (e.g. fittings, valves, etc.) is to be inspected to check whether the auxiliary materials correspond with the permitted construction type, which has been subjected to a UN type inspection.

#### Note

The supplier may also use test results of his supplier. This may be of importance for example for a check of the composition of certain applied raw materials and/or materials.

### 2.3 Procedure

The organisation of the inspection of incoming goods is to be described in a procedure and the methods of inspection are to be laid down in inspection instructions.

## 3 Production Inspection

### 3.1 Production preparation

Prior to starting up the production process, all production machinery and accessory equipment are to be inspected to ensure that they are set correctly.

To this end, staff involved in the production process and inspection work is to have adequate and appropriate working and inspection instructions on the UN-approved construction type at their disposal, as well as the correct documentation.

Prior to starting up the production process, at least one packaging is to be subjected to the following inspections:

- Comparison with the construction type;
- General external condition;
- Dimensions in accordance with the construction drawing;
- Weight of the container;
- Inspection of the constructional equipment;
- Dimensional consistency and correct operation of connections for operation equipment and control;
- Seams (visual inspection);
- Damage to the walls;
- Correctness and legibility of the identification markings.

### 3.2 During production

While the production process is running, the machines and systems are to be subjected to continuous inspection to ensure that they have been set accurately and that the work instructions are being observed.

The following inspections are also required:

Inspections to be performed	Frequency
Comparison with the construction type	Once every 10 IBCs
General external condition	Once every 10 IBCs
Weight	Once every 10 IBCs
Dimensions	Once every 10 IBCs
Damage to the walls	Once every 10 IBCs
Connection flanges (visual inspection)	Once every 10 IBCs

If the number of a particular type of packaging produced is less than the inspection interval stated, each property of the manufactured batch is to be tested/inspected at least once.

### 3.3 Procedure

The organisation of the production inspections is to be described in a procedure and the methods of inspection are to be laid down in inspection instructions.

## 4 Final Inspection

### 4.1 Inspections required

The final inspection comprises the following inspections:

Inspections to be performed	Frequency
Comparison with the construction type	Once every 10 IBCs
Correctness and legibility of the identification markings	Once every 10 IBCs
Leakproofness test (types: 21HZ1, 21HZ2, 31HZ1, 31HZ2)	Every IBC
Completeness of accompanying documents (indications for use and operation and the documents for the periodic tests and inspections)	Every IBC

If the number of a particular type of packaging produced is less than the inspection interval stated, each property of the manufactured batch is to be tested/inspected at least once.

### 4.2 Testing method

The indicated tests are to be conducted in accordance with the regulations of the transport of dangerous goods and the test programme of the applicable UN-type test.

### 4.3 Procedure

The organisation of the final inspections is to be described in a procedure and the methods of inspection are to be laid down in inspection instructions.

## 5 Verification

### 5.1 Verification required

The verification comprises the following tests:

Tests to be performed	Frequency
Hydraulic pressure test (types: 21HZ1, 21HZ2, 31HZ1, 31HZ2)	Once every 500 IBCs
Drop test	Once every 500 IBCs

### 5.2 Testing method and sampling

The indicated tests are to be conducted in accordance with the regulations of the transport of dangerous goods and the test programme of the applicable UN-type test.

Sampling is to take place at a suitable point in the production period and to be spread evenly over the various UN-marks.

### 5.3 Procedure

The organisation of the verification is to be described in a procedure and the test methods are to be laid down in test instructions.