

ISTA® PROCEDURES AND PROJECTS:

IMPORTANT: Procedures periodically receive corrections or revisions before the publish date of the next Resource Book. Please visit the ISTA® website at www.ista.org for the most up-to-date procedures and projects. Members receive free and complete online access to all Test Procedures.

1 SERIES: NON-SIMULATION INTEGRITY PERFORMANCE TESTS

Challenge the strength and robustness of the product and package combination. Not designed to simulate environmental occurrences. Useful as screening tests, particularly when used as a consistent benchmark over time.

- 1A Packaged-Products weighing 150 lb (68 kg) or Less
- 1B Packaged-Products weighing Over 150 lb (68 kg)
- 1C Extended Testing for Individual Packaged-Products weighing 150 lb (68 kg) or Less
- 1D Extended Testing for Individual Packaged-Products weighing Over 150 lb (68 kg)
- 1E Unitized Loads
- 1G Packaged-Products weighing 150 lb (68 kg) or Less (Random Vibration)
- 1H Packaged-Products weighing Over 150 lb (68 kg) (Random Vibration)

2 SERIES: PARTIAL SIMULATION PERFORMANCE TESTS

Tests with at least one element of 3 Series type General Simulation performance tests, such as atmospheric conditioning or mode-shaped random vibration, in addition to basic elements of a 1 Series type Non-Simulation Integrity test.

- 2A Packaged-Products weighing 150 lb (68 kg) or Less
- 2B Packaged-Products weighing Over 150 lb (68 kg)
- 2C Furniture Packages

3 SERIES: GENERAL SIMULATION PERFORMANCE TESTS

Designed to provide a laboratory simulation of the general damage-producing motions, forces, conditions, and sequences of transport environments. Applicable across broad sets of circumstances, such as a variety of vehicle types and routes, or a varying number of handling exposures. Characteristics will include simple shaped random vibration, different drop heights applied to the sample package, and/or atmospheric conditioning.

- 3A Packaged-Products for Parcel Delivery System Shipment weighing 70kg (150 lb) or Less
- 3B Packaged-Products for Less-Than-Truckload (LTL) Shipment
- 3E Unitized Loads of Same Product
- 3F Packaged Products for Distribution Center to Retail Outlet Shipment, 100 lb (45 kg) or Less
- 3H Products or Packaged-Products in Mechanically Handled Bulk Transport Containers
- 3K Fast-Moving Consumer Goods in the European Retail Supply Chain

4 SERIES: ENHANCED SIMULATION PERFORMANCE TESTS

General Simulation tests with at least one element of Focused Simulation, such as test sequence or test conditions linked to actual known distribution. Project 4AB is currently the only protocol in this Series. 4AB is a web-based Enhanced Simulation Test Plan generator, with on-line access available at no charge to all ISTA members. Project 4AB closely ties the tests and sequence to a user-defined pattern of distribution, and includes a broad range of current and quantitative information on distribution environment hazards. See the Project 4AB section of the ISTA® website (www.ista.org) for more details.

- 4AB Project: Packaged-Products for Shipment in Known Distribution Channels

5 SERIES: FOCUSED SIMULATION GUIDES

Guides for the creation of laboratory simulations based on actual field-measured and observed hazards and levels. The 5-Series are not performance tests per se, but information and instructions related to establishment of user-defined Focused Simulation tests. The 5-Series is not currently active.

6 SERIES: MEMBER PERFORMANCE TESTS

Test protocols created by ISTA members or by ISTA in cooperation with a member company, to meet their particular purposes and applications. The tests may be completely original, or may be modifications or variations of ISTA Procedures or Projects or other published and accepted tests. The ISTA Testing Council reviews and accepts these tests, but primary responsibility rests with the originating members.

6-Amazon.com-B Project Heavy/Bulky Packaged-Products for Amazon.com Distribution System Shipment

6-FEDEX-A FedEx Procedures for Testing Packaged Products Weighing Up to 150 lb (domestic and international)

6-FEDEX-B FedEx Procedures for Testing Packaged Products Weighing More Than 150 lb (domestic and international)

6-SAMSClub Project: Packaged-Products for Sam's Club Distribution System Shipment

7 SERIES: DEVELOPMENT TESTS

These tests are used in the development of transport packages. They can be used to compare relative performance of two or more container designs, but are not intended to evaluate the protection afforded packaged-products.

7D Temperature Test for Transport Packaging

7E Testing Standard for Thermal Transport Packaging Used in Parcel Delivery System Shipment

ISTA PROCESS STANDARDS

STANDARD 20 ISTA Standard 20 is a design and qualification process that provides the structure and path to design, test, verify and independently certify a specific Insulated Shipping Container (ISC) for use. Included with Standard 20 is the Standard 7E set of global thermal profiles for testing thermal transport packaging used in parcel delivery system shipments.

RESPONSIBLE PACKAGING BY DESIGN (RPbD) GUIDE The RPbD Guide is a step-by-step process management standard for the design, testing and qualification of responsible packaging that meets industry, consumer and regulatory expectations.

The process provides a framework and guidance to evaluate two or more different packages to:

- provide appropriate packaging for protecting the product and perform all the other functions of a packaging system
- minimize product waste through the prevention of damage or spoilage
- optimize use of materials, energy, water in production, distribution and use
- maximize recovery of materials and energy from used packaging

The protocol provides a procedure for analyzing packaging systems—from broad to narrow—and is data-driven. Eight steps guide the packager in a Stage-Gate Process, with each stage accompanied by a template to help users gather data.