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RAILWAY INDUSTRY

EN 45545-2

DIN 5510-2

PRODUCT CATALOGUE

RAIL VEHICLES | RAILWAY INDUSTRY EN 45545-2, DIN 5510-2

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ZY6243-I-PC

Cone Calorimeter

EN ISO 5660-1

Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement)

SCOPE: This test apparatus is for assessing the heat release rate and dynamic smoke production rate of specimens exposed in the horizontal orientation to controlled levels of irradiance with an external igniter. The heat release rate is determined by measurement of the oxygen consumption derived from the oxygen concentration and the flow rate in the combustion product stream. The time to ignition (sustained flaming) is also measured in this test.



ZY6234-PC

Oxygen Bomb Calorimeter

EN ISO 1716

Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)

SCOPE: Intended to be applied to solid products, this test apparatus is for the determination of the gross heat of combustion (Q_{pc}) of products at constant volume in a bomb calorimeter.



ZY6209

45° Flammability Test Apparatus

UIC 564-2

Regulations relating to fire protection and firefighting measures in passenger carrying railway vehicles or assimilated vehicles used on international services

NF F16-101

Railway Rolling Stock Fire Behavior Choice of Material

SCOPE: This test apparatus is for railway materials flame retardant test at a 45° angle.



ZY6263

Lateral Flame Spread Test Apparatus, LIFT

EN ISO 5658-2

Reaction to fire tests - Spread of flame - Part 2: Lateral spread on building and transport products in vertical configuration

SCOPE: This test apparatus is for measuring the lateral spread of flame along the surface of a specimen of a product orientated in the vertical position. It provides data suitable for comparing the performance of essentially flat materials, composites or assemblies that are used primarily as the exposed surfaces of walls in buildings and transport vehicles, such as ships and trains. Some profiled products (such as pipes) can also be tested under specified mounting and fixing conditions.



ZY6017F

Single Flame Source Test Apparatus

EN ISO 11925-2

Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test

SCOPE: This test apparatus is for determining the ignitability of building products by direct small flame impingement (single-flame source test) under zero impressed irradiance using vertically oriented test specimens.



ZY6235-PC

Flooring Radiant Panel Test Apparatus

EN ISO 9239-1

Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source

SCOPE: This test apparatus is for assessing the wind-opposed burning behaviour and spread of flame of horizontally mounted floorings exposed to a heat flux radiant gradient, when ignited with pilot flames. It is applicable to all types of floorings, e.g. textile carpet, cork, wood, rubber and plastics coverings as well as coatings.



ZY6257F

Seat Fire Test Apparatus

EN 16989

Railway applications -

Fire protection on railway vehicles Fire behaviour test for a complete seat

SCOPE: This test apparatus is to determine the burning behaviour of a complete rail vehicle seat. It is also for fire characteristics of furniture and subassemblies exposed to flaming ignition source.



ZY6257D-PC

Large Scale Oxygen Consumption Calorimetry

ISO 9705-1

*Reaction to fire tests - Room corner test for wall and ceiling lining products -
Part 1: Test method for a small room configuration*

SCOPE: Not intended to evaluate floor coverings, this test apparatus is to evaluate the reaction of wall and ceiling products to fire when installed at the surface of a small room and exposed directly to a specified ignition source. A fire scenario starts under well-ventilated conditions in a corner of a specified room with a single open doorway.



FTIR

Toxic Gas Analysis / Gas Analyser

ISO 19702

Sampling and analysis of toxic gases and vapours in fire effluents using Fourier Transform Infrared (FTIR) spectroscopy

SCOPE: This instrument is for sampling systems for use in small-scale and large-scale fire tests, for the selection of parameters and use of the FTIR instrument, and for the collection and use of calibration spectra.



ZY6282A

CIT Tester Conventional Index of Toxicity Test Apparatus

NF X70-100

*Fire behaviour tests - Analysis of pyrolysis and combustion gases
- Pipe still method*

SCOPE: In compliance with EN 50305 by a tubular furnace thermal degradation method, this test apparatus is for measuring the Conventional Index of Toxicity (CIT) and evaluating the toxicity of smoke generated by burning railway cables.



ZY6155B

Elevated Temperature Oxygen Index Apparatus for Plastics, TOI

ISO 4589-3

*Plastics - Determination of burning behaviour by oxygen index
- Part 3: Elevated-temperature test*

SCOPE: This test apparatus is for determining the minimum volume fraction of oxygen, in a mixture with nitrogen, that will support combustion of small vertical test specimens under specified test conditions over a range of temperatures between 25 °C and 150 °C. The range of temperatures is typically between 40 °C and 150 °C. The results are defined as temperature index values at the test temperature, which is typical of the practical temperature that a plastic material can experience in an overheated service situation.



ZY6014B

Vertical Flame Propagation Test Apparatus for Single Insulated Cables

EN 60332-1-2

*Tests on electric and optical fibre cables under fire conditions
Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame*

SCOPE: Given in EN 60332-1-1, this test apparatus is for testing the resistance to vertical flame propagation for a single vertical electrical insulated conductor or cable, or optical fibre cable, under fire conditions.



ZY6014D

Vertical Flame Spread Test Apparatus for Bunched Cables

EN 60332-3-24

*Tests on electric and optical fibre cables under fire conditions -
Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category C*

SCOPE: Intended for type approval testing, this test apparatus covers category C for methods of test for the assessment of vertical flame spread of vertically mounted bunched wires or cables, electrical or optical, under defined conditions.



ZY6055

Glow Wire Test Apparatus

EN IEC 60695-2-11

*FIRE HAZARD TESTING - Part 2-11: Glowing/hot-wire based test methods
- Glow-wire flammability test method for end products (GWEPT)*

SCOPE: This test apparatus is to simulate the effects of thermal stresses which may be produced by heat sources such as glowing elements or overloaded resistors, for short periods, in order to assess the fire hazard by a simulation technique. It is widely applied to end products and to solid electrical insulating materials or other solid combustible materials.



ZY6166-PC

3 Metre Cube Smoke Density Test Apparatus

EN 61034-2

*Measurement of smoke density of cables burning under defined conditions
Part 2: Test procedure and requirements*

SCOPE: Per as decribed in EN 61034-1, this test apparatus is to be used for measuring smoke emission when electric or optical fibre cables are burnt under defined conditions, for example, a few cables burnt horizontally. The light transmittance (It) under flaming combustion and smouldering conditions can be used as a means of comparing different cables or complying with specific requirements.



ZY6166D-PC

NBS Smoke Density Test Chamber

BS 6401

Method for measurement, in the laboratory, of the specific optical density of smoke generated by materials

SCOPE: This test apparatus is for the determination of specific optical density of smoke generated from solid materials exposed to a radiant heat source within a closed cabinet with or without the application of a pilot flame.



ZY6014I-S1

Flammability Test Apparatus

DIN 53438 - 1

*Testing of combustible materials -
Response to ignition by a small flame - General data*

DIN 53438 - 2

*Testing of combustible materials -
Response to ignition by a small flame - Edge ignition*

DIN 53438 - 3

*Testing of combustible materials -
Response to ignition by a small flame - Surface ignition*

SCOPE: This test apparatus is for determining the response of flammable materials to a small flame from a DIN 50051 burner in a DIN 50050 flame test chamber under controlled test conditions - DIN 53438 Part 2 (Edge ignition) and Part 3 (Surface ignition).



ZY6244

Large Burning Cabinet

DIN 54837

Testing of materials, small components and component sections for rail vehicles – Determination of burning behaviour using a gas burner

SCOPE: This test apparatus is for determining the burning behaviour of materials and components for rail vehicles when exposed to a gas burner fitted with a wide-slot attachment. It serves as the basis for their classification according to DIN 5510-2 in terms of flammability, smoke generation, and dripping behaviour.



ZY6235-PC

Flooring Radiant Panel Test Apparatus

EN ISO 9239-1

Reaction to fire tests for floorings -

Part 1: Determination of the burning behaviour using a radiant heat source

SCOPE: This test apparatus is for assessing the wind-opposed burning behaviour and spread of flame of horizontally mounted floorings exposed to a heat flux radiant gradient, when ignited with pilot flames. It is applicable to all types of floorings, e.g. textile carpet, cork, wood, rubber and plastics coverings as well as coatings.



ZY6257A

Large Scale Oxygen Consumption Calorimetry

DIN 14390

Fire test - Large-scale room reference test for surface products

SCOPE: This large-scale test apparatus is for heat release, smoke production and mass loss rate for materials used for furniture and other components of high-speed craft. It adopts full-scale room test for surface materials on bulkheads, wall and ceiling linings, including their supporting structure, of high-speed craft.



FTIR

Toxic Gas Analysis / Gas Analyser

ISO 19702

Sampling and analysis of toxic gases and vapours in fire effluents using Fourier Transform Infrared (FTIR) spectroscopy

SCOPE: This instrument is for sampling systems for use in small-scale and large-scale fire tests, for the selection of parameters and use of the FTIR instrument, and for the collection and use of calibration spectra.



ZY6193B

IP54 Dust and Waterproof Test Chamber

DIN EN 60529

Degrees of protection provided by enclosures (IP Code)

SCOPE: This test chamber applies to the classification of degrees of protection (IP54) provided by enclosures for electrical equipment with a rated voltage not exceeding 72.5 kV.



ZY6017-UL94-V

Horizontal and Vertical Flame Test Apparatus

DIN EN 60695-11-10

Fire hazard testing -

Part 11-10: Test flames - 50 W horizontal and vertical flame test methods

SCOPE: This test apparatus is for small-scale laboratory test procedures intended to compare the burning behaviour of different materials used in electrotechnical products when vertically or horizontally oriented test bar specimens are exposed to a small flame ignition source with nominal thermal power of 50 W. These test methods determine either the linear burning rate or the self-extinguishing properties of materials.



ZY6155A

Oxygen Index Analyzer, LOI

DIN EN ISO 4589-2

*Plastics - Determination of burning behaviour by oxygen index
- Part 2: Ambient-temperature test*

SCOPE: This test instrument is for determining the minimum volume fraction of oxygen, in admixture with nitrogen, that will support combustion of small vertical test specimens under specified test conditions. The results are defined as oxygen index (OI) values.

PROJECT CASES

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