

RAPPORTO DI PROVA NO. 1779.1S0050/16

Test Report no.

METODO DI PROVA:

Test method

UNI EN 45545-2: 2015

DENOMINAZIONE DELLA PROVA:

Description of the standard

Requisiti di comportamento al fuoco di materiali e componenti
Requirements for fire behaviour of materials and components

TITOLO DEL METODO:

Method title

NF X 70-100-1/-2

Determinazione del CIT_{NLP} / CIT_{NLP} determination

RICHIEDENTE:

Sponsor

RST Rail System Testing GmbH

Walter-Kleinow-Ring 7

D-16761 Hennigsdorf (Germany)

DENOMINAZIONE DEL MATERIALE:

Denomination of the material

Cable duct (DIN halogen-free / F2000 halogen-free)

DATA RICEVIMENTO CAMPIONI:

Date of the samples receipt

11/10/2016

Il presente Rapporto di Prova è costituito da / *This Test Report consists of:*

- no. 3 pagine (compresa questa prima pagina) / *no. 3 pages (including this one).*
- no. 1 allegato / *no. 1 annex.*

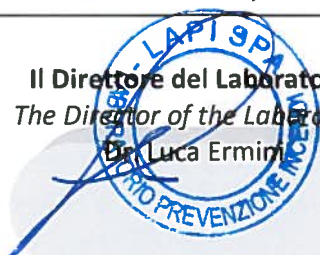
I risultati riportati in questo Rapporto si riferiscono esclusivamente al materiale sottoposto a prova fornito dal Richiedente (rif. codice Laboratorio no. 1779/16). Un campione del materiale è stato conservato dal Laboratorio.

The results reported in this Report refer exclusively to the material submitted to test sent by the Sponsor (ref. Laboratory code no. 1779/16). A sample of the material has been retained by the Laboratory.

Prato, 18/10/2016

Il Direttore del Laboratorio
The Director of the Laboratory

Dr. Luca Ermirani



DESCRIZIONE DEL MATERIALE

Description of the material

Aspetto: campione in materiale plastico di colore grigio.

Appearance: sample in gray plastic material.

Ordine / Order RST: no. 60-16-0472

Nota: composizione e dati tecnici: non forniti (prova interlaboratorio).

Per la composizione e i dati tecnici di dettaglio si rimanda alle schede di controllo di lavorazione gestite dal sistema di qualità dell'azienda. Il Laboratorio LAPI non avendo ricevuto da parte del Richiedente nessuna altra informazione riguardante i componenti, non si assume la responsabilità di alcuna corrispondenza tra il prodotto sottoposto a prova e il prodotto finale commercializzato.

Note: composition and technical data: not supplied (interlaboratory test).

For the composition and the detail technical data refer to the sheets of workmanship control managed by the quality system of the Company. The Laboratory LAPI not having received from the Sponsor any other information regarding the components/raw material is not responsible of any correspondence between the prototype and the final product put on the market.

DESCRIZIONE DELLA PROCEDURA DI CAMPIONAMENTO

Description of the sampling procedure

Il campionamento è stato effettuato a cura del Richiedente.

Il Laboratorio non è stato coinvolto in alcuna operazione di campionamento della produzione.

The sampling has been effected by the Sponsor.

The Laboratory has not been involved in any sampling procedure of the material from the production.

DESCRIZIONE DELLA COSTRUZIONE E PREPARAZIONE DEI PROVINI

Description of the construction and preparation of the specimen

I provini sono stati ottenuti dal Laboratorio dal materiale inviato dal Richiedente.

Essi non sono stati sottoposti ad alcuna operazione preliminare alla prova diversa dal condizionamento previsto dalla norma.

The specimens have been obtained by the Laboratory from the material sent by the Sponsor.

They have not been submitted to any operation prior being tested except for the conditioning prescribed by the standard.

DESCRIZIONE GENERALE DELLA EFFETTUAZIONE DELLA PROVA

General description of the execution of the test

La prova è stata effettuata secondo quanto descritto in AFNOR NF X 70-100-1 e -2 come richiamata da UNI EN 45545-2: 2015, temperatura di prova 600°C. Sono state applicate le condizioni di prova prescritte da EN 45545-2 per materiali definibili come NLP (Non Listed Products), requisito R22 o R23.

The test has been effected according to the prescriptions AFNOR NF X 70-100-1 and -2 as recalled by UNI EN 45545-2: 2015, test temperature 600°C. The test conditions prescribed by EN 45545-2 for materials defined as NLP (Non Listed Products) have been applied, requirement R22 or R23.

INCERTEZZA DI MISURA

Uncertainty of measurement

Non richiesta dal Cliente / Not required by the Sponsor.

LUOGO E DATA PROVA: Prato, 13/10/2016

Place and test date

Operatore / Operator
Dr. Francesca Scatano



RISULTATI / RESULTS

I risultati si riferiscono solo al comportamento di provini del prodotto nelle condizioni particolari definite dal presente metodo di prova; essi non devono essere considerati come il solo criterio per valutare il pericolo potenziale legato alla produzione di fumo nelle condizioni di uso del materiale.

These results relate only to the behaviour of the specimens of the product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential smoke obscuration hazard of the material in use.

| Specie gassosa Gas component | Concentrazione di riferimento Reference concentration Ci (mg/m ³) | Massa gassosa emessa relativa Relative emitted mass ci (mg/g) | Limiti di quantificazione Quantification limits (mg) |
|---------------------------------|---|--|--|
| CO ₂ | 72000 | 775 | 87 |
| CO | 1380 | 115 | 9 |
| HF | 25 | < 1 | 1 |
| HCl | 75 | < 1 | 1 |
| HBr | 99 | < 1 | 1 |
| HCN | 55 | < 1 | 1 |
| SO ₂ | 262 | < 1 | 1 |
| NO _x | 38 | < 1 | 1 |
| $CIT_{NLP} = \sum ci/Ci = 0.09$ | | | |

Foto / Photos



Foto 1: prima della prova / Picture 1: before testing



Foto 2: dopo la prova / Picture 2: after testing

LUOGO E DATA PROVA: Prato, 13/10/2016
Place and test date

Operatore / Operator
Dr. Francesca Scarano



ERGÄNZUNG NR. 1 ZUM PRÜFBERICHT NR. 1779.1IS0050/16

| | |
|-----------------------------------|--|
| PRÜFMETHODE: | UNI EN 45545-2: 2015 |
| BEZEICHNUNG DER PRÜFUNG: | Anforderungen an das Brandverhalten von Materialien und Komponenten |
| TITEL DER METHODE: | NF X 70-100-1/-2 Bestimmung der CIT _{NLP} |
| AUFTRAGGEBER: | RST Rail System Testing GmbH Walter-Kleinow-Ring 7 D-16761 Hennigsdorf (Deutschland) |
| BEZEICHNUNG DES MATERIALS: | Cable duct (DIN halogen-free / F2000 halogen-free) |
| EINGANGSDATUM DER PROBEN: | 11.10.2016 |

- Die vorliegende Ergänzung wurde ohne Wiederholung des Tests ausgestellt; es handelt sich um die Übersetzung in die deutsche Sprache des Testberichts Nr. 1779.1IS0050/16 vom 18.10.2016, auf den für jedwede Streitigkeit verwiesen wird. Sie umfasst:
 - Nr. 3 Seiten (einschließlich der vorliegenden ersten Seite).
 - Nr. 1 Anlage.
- Die in diesem Prüfbericht aufgeführten Ergebnisse beziehen sich ausschließlich auf das Material, das der Prüfung unterzogen und vom Auftraggeber geliefert wurde (Labor-Bezugsnummer 1779/16). Eine Probe des Materials wurde vom Labor zurückbehalten.

Prato, 18.10.2016

Der Direktor des Labors

Dr. Luca Ermirani



BESCHREIBUNG DES MATERIALS

Aussehen: Probe in grau Kunststoff Material.
Bestellung RST : no. 60-16-0472

Anmerkung: Zusammensetzung und technische Daten: nicht vorgesehen (Ringversuches).
Für die Zusammensetzung und das Detail beziehen sich technische Daten auf die Blätter der Kontrolle Verarbeitung durch das Qualitätssicherungssystem des Unternehmens verwaltet. Das Labor LAPI nicht vom Sponsor andere Informationen erhalten zu haben in Bezug auf die Komponenten / Rohstoff ist nicht verantwortlich jeglicher Korrespondenz zwischen dem Prototyp und dem letzten auf den Markt gebrachten Produkt.

BESCHREIBUNG DES VERFAHRENS DER PROBENNAHME

Die Probennahme wurde vom Auftraggeber durchgeführt.
Das Labor war an keinem Vorgang der Probennahme von der Produktion beteiligt.

BESCHREIBUNG DER HERSTELLUNG UND VORBEREITUNG DER PRÜFKÖRPER

Die Prüfkörper wurden vom Labor aus dem vom Auftraggeber zugesandten Material gewonnen.
Sie wurden vor der Prüfung keinem anderen vorbereitenden Vorgang als der von der Norm vorgesehenen Konditionierung unterzogen.

ALLGEMEINE BESCHREIBUNG DER DURCHFÜHRUNG DER PRÜFUNG

Die Prüfung wurde wie in der AFNOR NF X 70-100-1 und – 2 beschrieben durchgeführt, so wie es verlangt wird von der UNI EN 45545-2:2015, Prüftemperatur 600°C. Es wurden die von der EN 45545-2 für als NLP (*Non Listed Products*) definierte Materialien vorgeschriebenen Prüfbedingungen, Anforderungssatz R22 oder R23, angewendet.

MESSUNSICHERHEIT

Nicht vom Auftraggeber beantragt.

ORT UND DATUM PRÜFUNG: Prato, 13.10.2016



PRÜFERGEBNISSE

Die Prüfergebnisse beziehen sich nur auf das Verhalten der Prüfkörper des Produktes unter den von der vorliegenden Prüfung festgelegten speziellen Bedingungen; sie dürfen nicht als einziges Kriterium für die Bewertung der mit der Rauchgasopazität verbundenen potentiellen Gefahr bei der Anwendung des Materials betrachtet werden.

| Gaskomponente | Referenzkonzentration C_i (mg/m ³) | Relative ausgestoßene Gasmasse c_i (mg/g) | Bestimmungsgrenzen (mg) |
|-----------------------------------|---|--|----------------------------|
| CO ₂ | 72000 | 775 | 87 |
| CO | 1380 | 115 | 9 |
| HF | 25 | < 1 | 1 |
| HCl | 75 | < 1 | 1 |
| HBr | 99 | < 1 | 1 |
| HCN | 55 | < 1 | 1 |
| SO ₂ | 262 | < 1 | 1 |
| NO _x | 38 | < 1 | 1 |
| $CIT_{NLP} = \sum c_i/C_i = 0.09$ | | | |

Beobachtungen : keine.

Foto



Foto 1: vor dem Test



Foto 2: nach dem Test

ORT UND DATUM PRÜFUNG: Prato, 13.10.2016

Techniker
Dra. Francesca Scarfano





LABORATORY TESTS REQUEST

to send back to LA.P.I. filled in one for each specimen

Responsible Person to contact : Mr Harder

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Table with 2 columns: TEST REQUEST HEADING (full address) and INVOICE HEADING (full address). Both contain RST Rail System Testing GmbH, Walter-Kleinow-Ring 7, 16761 Hennigsdorf, Germany.

COMMERCIAL NAME OF THE ARTICLE ¹⁾: Cable duct (DIN halogen-free / F2000 halogen-free)

Technical data of the specimen ²⁾: (see annexed sheet for stratified and composite materials)

Form fields for specimen data: Composition (%), Appearance, Colour, Thickness (mm), Weight (g/m²), Density (kg/m³), Possible fire retardant treatment, The specimen is (Isotropic/Anisotropic), The specimen usually composes a side in view (Yes/No), The two sides are identical (Yes/No): 50g, If the two sides are not identical, identify which of the two must be tested, End use of the article: (CURTAIN, WALL, FLOOR, CEILINGS, etc...) R22 / R23, Laying of the article (if stuck specify the type of glue g/m²).

Table with 2 columns: REQUESTED TESTS ON THE SPECIMEN ³⁾⁵⁾ and IN ACCORDANCE TO SPEC. N. ³⁾. Includes NF X-70-100 1/2 and REQUEST FOR MEASUREMENT UNCERTAINTY (IF REQUIRED IT WILL BE ANNEXED TO THE TEST REPORT ⁶⁾): YES NO [X].

NOTES ON THE SPECIMEN (POSSIBLE DEROGATIONS ³⁾) :

Table with 2 columns: SAFETY DATA SHEET, TECHNICAL DATA SHEET, BATCH. Includes fields for N° and Date.

Date 26/09/2016

Stamp and signature of Responsible [Signature]

- Notes (to be read to fill this form): 1) The commercial name of the article represents the exact name that will be written on the Test Report. It has to be univocal and match exactly to possible names written on the specimen. LA.P.I reserves itself the right to not accept specimen whose identification is unclear or ambiguous. 2) Technical data reported below will be written on the Test Report as indicated by the reference specification. The side to be tested has to be clearly identified, marking it in a suitable way if possible. 3) List the tests to perform and their reference methods. If the tests have the purpose to verify the matching of a specimen to a specification, it is useful to mention it in this field and to enclose a copy of the specification. If not specified, we assume the request refers to the latest valid edition of the specification. Indicate in this field possible derogations to the method or supplementary procedures to apply during the test. Every derogation and/or supplementary procedure will be referred and described on the Test Report. In methods expecting a preliminary treatment of the specimen, indicate only if you don't want those treatments to be performed on the sample. 4) In case UNI EN ISO 3386 "Resistance to compression of low density materials" has to be effected, the material has to be sent to the Laboratory not before 72 hours from its production. 5) The evaluation performed by the Laboratory does not involve the approval of the product either by the Laboratory or by the Accreditation Body 6) The Responsibility of LAPI SpA is limited to the value of the activities regarding tests requested 7) In case LAPI can not finish the tests for technical reasons attributable to LAPI SpA , tests will not be charged and no recourse in terms of additional costs will be due in respect of LAPI SpA 8) LAPI SpA submitted to test a prototype and LAPI is not responsible, in the event of a negative result of the test, of the previous marketing in case of not-compliance. 9) The customer / Producer, (who presents and signs the request to perform the laboratory tests) if does not properly and clearly explicit in the data sheets any safety risks arising from simple handling ,conditioning as a result of thermal cycling or destructive tests laboratory on of their own material, is responsible for any damage to people, equipment and property. 10) In case of whiteness to test (when allowed) LAPI is exempted from any responsibility for accidents and damages to people and things could happen during testing due to the material under testing. 11) The "Declaration of Measure uncertainty" will be annexed to the Test Report if the test method is under ACCREDIA accreditation and includes a Declaration of conformity.