

## Technical Data Sheet

### BENMAN LOW & FAST EXPANSION POLYURETHANE FOAM PU PRO 60

Product code: 73019

The one-component polyurethane foam cures under the influence of humidity contained in the air and is characterized by a homogeneous, fine-cellular structure. The foam is produced in a plant with the Quality Management System ISO 9001:2015 implemented.

#### BENEFITS

- high foam yield
- decreased foam pressure
- decreased foam volume increase (post expansion)
- standard foam flammability
- increased foam multipositioning
- normal foam adhesion to surface

#### RECOMMENDED USES

- filling free spaces, cracks, gaps, pipe penetrations
- sealing roof, wall and floor joints
- sealing for window fitting
- sealing for door fitting
- thermal insulation
- acoustic insulation



#### TECHNICAL DATA

Parameter (+23°C/50% RH)	Value
Yield (free foaming) (RB024) [l]	≤ 60
Yield in gap (The value given for a gap with dimensions 35*1000*35 (width *length *depth [mm])) (RB024) [l]	36 - 40
Skin formation time (EN 17333-3:2020) [min]	≤ 10
Cutting time (EN 17333-3:2020). The result given for a foam cord of 3 cm diameter. [min]	≤ 40

Full cure time (RB024) [h]	24
Heat conductivity coefficient ( $\lambda$ ) (RB24) [W/mK]	0,036
Secondary increase in volume (post-expansion) (EN 17333-2:2020) [%]	130 - 180
Dimensional stability (EN 17333-2:2020) [%]	$\leq 5$
Flammability class (DIN 4102)	B3
Reaction to fire (EN 13501-1:2008)	F
Acoustic insulation (EN ISO 10140-1:2010+A1:2012+A2:2014)	62
Compressive strength [PN-EN 1607:2013-07] [kPa]	$\geq 35$
Tensile strength perpendicular for frontal surfaces [PN-EN 1607:2013-07] [kPa]	$\geq 60$
Certification M1	M1
Certification O2	O2
Compressive stress at 10% relative deformation [PN EN 826:2013] [kPa]	$\geq 20$
Adhesion of foam applied at 0°C to wood substrate [PN-EN 1607: 2013] [kPa]	$\geq 50$
Adhesion of foam applied at 0°C to metal substrate [PN-EN 1607: 2013] [kPa]	$\geq 50$
Adhesion of foam applied at 0°C to PVC substrate [PN-EN 1607: 2013] [kPa]	$\geq 50$
Adhesion of foam applied at +30°C to wood substrate [PN-EN 1607: 2013] [kPa]	$\geq 50$
Adhesion of foam applied at +30°C to metal substrate [PN-EN 1607: 2013] [kPa]	$\geq 50$
Adhesion of foam applied at +30°C to PVC substrate [PN-EN 1607: 2013] [kPa]	$\geq 50$
<b>Colour</b>	<b>Value</b>
Yellow	+
<b>Conditions of application</b>	<b>Value</b>
Can / applicator temperature (optimal +20°C) [°C]	+5 - +30
Ambient / surface temperature [°C]	-10 - +30

## METHOD OF USE

Prior to application, read safety instruction presented at the end of TDS and in SDS.

### Surface preparation

- The foam presents adhesion to typical construction materials, such as: brick, concrete, plaster work, wood, metals, styrofoam, hard PVC and rigid PUR.
- The working surface should be cleaned and degreased.
- The surface should be sprinkle with water at application temperature above 0°C.
- Secure surfaces exposed to accidental foam contamination.

### Product preparation

- Too cold can should be brought to room temperature, e.g. by immersion in warm water with temperature up to 30°C or leaving it in room temperature for at least 24 h.

### Application

- Put on protective gloves.
- Vigorously shake the can (10-20 seconds, the valve facing down) to thoroughly mix the components.
- Screw the applicator onto the valve.
- Working position of the can is “valve facing down”, however in case of a can at the temperature >15°C you can work with foam in any working position.
- Vertical gaps should be filled with foam starting at the bottom and moving up.
- Do not fill the entire gap - the foam will increase in volume.
- When sealing doors and windows, keep a minimum distance of 10 mm and a maximum of 30 mm between the opening framing and the door or window frame. Gaps > 30 mm are not recommended. Fill in gaps wider than 30 mm working bottom to top moving from one gap wall to another alternately, creating a zigzag pattern. Gaps > 50 mm are not permitted.
- Should application be interrupted for more than 5 minutes, the applicator nozzle with fresh foam should be cleaned with polyurethane foam cleaner and the can should be shaken prior to application.
- In case of foam drying in the applicator, the applicator tip with strainer at its end should be cut off, which enables resuming work with foam as standard.

## Works after completion of application

- Immediately after full foam hardening, it should be secured against exposure to UV rays by using e.g. plaster or paints.

## Remarks / restriction

- DOOR AND WINDOWS FITTING WITHOUT USING MECHANICAL COUPLING IS FORBIDDEN. LACK OF MECHANICAL COUPLINGS MAY CAUSE DEFORMATION OF THE MOUNTED ELEMENT.
- The curing process is dependent on temperature and humidity. The decrease in ambient temperature within 24 h after the application below the minimum application temperature can affect the quality and / or correctness of the seal.
- Hurried attempts at preliminary treatment may cause irreversible changes in foam structure and its stability and may affect deterioration of foam utility parameters.
- The foam displays lack of adhesion to polyethylene, polypropylene, polyamide, silicone and Teflon. Fresh foam should be removed with polyurethane foam cleaner.
- Hardened foam may only be removed mechanically (e.g. with a knife).
- Quality and technical condition of used applicator affect the parameters of final product.
- The foam should not be used in spaces without access of fresh air and poorly ventilated or in places exposed to direct sunlight.
- Working in other position than "valve facing down" will decrease foam's efficiency.
- Cutting off the strainer at the end of applicator will decrease foam's efficiency.

## ADDITIONAL INFORMATION

All given parameters are based on laboratory tests compliant with internal manufacturer's standards and strongly depend on foam hardening conditions (ca, ambient, surface temperature, quality of used equipment and skills of person applying the foam).

The manufacturer recommends to commence finishing works after full hardening is completed, i.e. after 24 h.

Producer uses test methods approved by FEICA designed to deliver transparent and reproducible test results, ensuring customers have an accurate representation of product performance. FEICA OCF test methods are available at: <http://www.feica.com> (Our industry -> PU Foam (OCF) -> OCF Test Methods). FEICA is a multinational association representing the European adhesive and sealant industry, including one-component foam manufacturers.

## TRANSPORT / STORAGE

The foam maintains its usability within 12 months from manufacturing date, provided that it is stored in original packaging in vertical position (valve facing up) in a dry place in temperature +5°C do +30°C . Storage in temperature exceeding +30°C shortens the shelf life of the product, adversely affecting its parameters. The product may be stored in temperature -5°C, no longer however than for 7 days (excluding transport). Storage of foam cans in temperature exceeding + 50°C or in vicinity of open flame is not allowed. Storage of the product in a position other than recommended may result in jamming the valve. The can cannot be squeezed or pierced even when it is empty.

Do not store the foam in the passenger compartment. Transported only in the trunk.

Detailed transport information is included in the Safety Data Sheet (SDS).

Transport temperature	Foam transport period [days]
< -20°C	4
-19°C ÷ -10°C	7
-9°C ÷ 0°C	10

## PACKAGING

Product code	Packaging
73019	Can 850ml

## SAFETY AND HEALTH PRECAUTIONS

The information contained herein is offered in good faith based on Producer's research and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information shall not be used in substitution for customer's tests to ensure that Producer's products are fully satisfactory for your specific applications. Producer's sole warranty is that the product will meet its current sales specifications. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Producer specifically disclaims any other expressed or implied warranty of fitness for a particular purpose or merchantability. Producer disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.

## Φύλλο Τεχνικών Προδιαγραφών

### BENMAN ΑΦΡΟΣ ΠΟΛΥΟΥΡΕΘΑΝΗΣ ΧΑΜΗΛΗΣ ΚΑΙ ΤΑΧΕΙΑΣ ΔΙΟΓΚΩΣΗΣ PU PRO 60

Κωδικός προϊόντος: 73019

Αφρός πολυουρεθάνης ενός συστατικού που σκληραίνει υπό την επίδραση της υγρασίας του αέρα και χαρακτηρίζεται από ομοιογενή, κυψελλοειδή δομή. Ο αφρός παράγεται σύμφωνα με το Σύστημα Διαχείρισης Ποιότητας ISO 9001:2015.

#### ΠΛΕΟΝΕΚΤΗΜΑΤΑ

- υψηλή απόδοση αφρού
- μειωμένη πίεση αφρού
- μειωμένη αύξηση όγκου αφρού (μετά τη διόγκωση)
- τυπική ευφλεκτότητα αφρού
- εφαρμογή σε πολλαπλές θέσεις
- κανονική προσκόλληση του αφρού στις επιφάνειες

#### ΠΡΟΤΕΙΝΟΜΕΝΕΣ ΧΡΗΣΕΙΣ

- γέμισμα κενών, ρωγμών, ανοιγμάτων για σωλήνες
- στεγανοποίηση αρμών οροφής, τοίχου και δαπέδου
- στεγανοποίηση κουφωμάτων παραθύρων
- στεγανοποίηση κουφωμάτων πορτών
- θερμομόνωση
- ηχομόνωση



#### ΤΕΧΝΙΚΑ ΔΕΔΟΜΕΝΑ

Παράμετρος (+23°C/50%Σ.Υ)	Τιμή
Απόδοση (ελεύθερος αφρισμός) (RB024) [l]	≤ 60
Απόδοση στο διάκενο (Η τιμή αφορά διάκενο με διάσταση 35*1000*35 (πλάτος * μήκος * βάθος [mm])) (RB024) [l]	36 - 40
Χρόνος δημιουργίας επιδερμίδας (EN 17333-3:2020) [min]	≤ 10
Χρόνος κοπής (EN 17333-3:2020). Το αποτέλεσμα αφορά κορδόνι διαμέτρου 3cm. [min]	≤ 40

Χρόνος πλήρους σκλήρυνσης (RB024) [h]	24
Συντελεστής θερμικής αγωγιμότητας (λ) (RB24) [W/mK]	0,036
Δευτερεύουσα αύξηση όγκου (μετά τη διόγκωση) (EN 17333-2:2020)[%]	130 - 180
Σταθερότητα διαστάσεων (EN 17333-2:2020) [%]	≤ 5
Κατηγορία ευφλεκτότητας (DIN 4102)	B3
Αντίδραση στη φωτιά (EN 13501-1:2008)	F
Ακουστική μόνωση (EN ISO 10140-1:2010+A1:2012+A2:2014)	62
Δύναμη συμπίεσης [PN-EN 1607:2013-07] [kPa]	≥ 35
Αντοχή σε εφελκυσμό κάθετη για μετωπικές επιφάνειες [PN-EN 1607:2013-07] [kPa]	≥ 60
Πιστοποίηση M1	M1
Πιστοποίηση O2	O2
Αντοχή στη συμπίεση σε 10% σχετική παραμόρφωση [PN EN 826:2013] [kPa]	≥ 20
Προσκόλληση αφρού στους 0°C σε υπόστρωμα ξύλου [PN-EN 1607: 2013] [kPa]	≥ 50
Προσκόλληση αφρού στους 0°C σε υπόστρωμα μετάλλου [PN-EN 1607: 2013] [kPa]	≥ 50
Προσκόλληση αφρού στους 0°C σε υπόστρωμα PVC [PN-EN 1607: 2013] [kPa]	≥ 50
Προσκόλληση αφρού στους +30°C σε υπόστρωμα ξύλου [PN-EN 1607: 2013] [kPa]	≥ 50
Προσκόλληση αφρού στους +30°C σε υπόστρωμα μετάλλου [PN-EN 1607: 2013] [kPa]	≥ 50
Προσκόλληση αφρού στους +30°C σε υπόστρωμα PVC [PN-EN 1607: 2013] [kPa]	≥ 50
<b>Χρώμα</b>	<b>Τιμή</b>
Κίτρινο	+
<b>Συνθήκες εφαρμογής</b>	<b>Τιμή</b>
Θερμοκρασία περιέκτη / εφαρμογέα (βέλτιστη +20°C) [°C]	+5 - +30
Θερμοκρασία περιβάλλοντος / επιφάνειας [°C]	-10 - +30

## ΤΡΟΠΟΣ ΧΡΗΣΗΣ

Πριν από την εφαρμογή, διαβάστε τις οδηγίες ασφαλείας που παρουσιάζονται στο τέλος του παρόντος φύλλου και στο ΔΔΑ.

### Προετοιμασία επιφάνειας

- Ο αφρός προσκολλάται σε τυπικά υλικά κατασκευής, όπως: τούβλα, σκυρόδεμα, σοβά, ξύλο, μέταλλα, φελιζόλ, σκληρό PVC και άκαμπτο PUR.
- Η επιφάνεια εργασίας πρέπει να καθαριστεί και να απολιπανθεί.
- Η επιφάνεια πρέπει να ραντιστεί με νερό σε θερμοκρασία εφαρμογής πάνω από 0°C.
- Προστατέψτε τις επιφάνειες από τυχαία έκθεση στον αφρό.

### Προετοιμασία προϊόντος

- Αν ο περιέκτης είναι πολύ κρύος θα πρέπει να έρθει σε θερμοκρασία δωματίου, π.χ. με εμβάπτιση σε νερό θερμοκρασίας έως 30°C ή αφήνοντάς τον σε θερμοκρασία δωματίου για τουλάχιστον 24 ώρες.

### Εφαρμογή

- Φορέστε προστατευτικά γάντια.
- Ανακινήστε δυνατά τον περιέκτη για 10-20 sec, με τη βαλβίδα προς τα κάτω.
- Βιδώστε το ακροφύσιο στη βαλβίδα.
- Κατά τη χρήση ο περιέκτης πρέπει είναι με τη βαλβίδα στραμμένη προς τα κάτω. Σε περίπτωση που η θερμοκρασία του περιέκτη είναι >15°C μπορείτε να εργαστείτε σε οποιαδήποτε θέση.
- Τα κάθετα κενά θα πρέπει να γεμίζονται, ξεκινώντας από το κάτω μέρος με κατεύθυνση προς τα πάνω.
- Μην γεμίζετε ολόκληρο το κενό καθώς ο όγκος του αφρού θα αυξηθεί.
- Κατά τη σφράγιση θυρών και παραθύρων, κρατήστε ελάχιστη απόσταση 10mm και μέγιστη 30mm μεταξύ του ανοιγόμενου πλαισίου και του πλαισίου της πόρτας ή του παραθύρου. Δεν συνιστώνται κενά >30mm. Γεμίστε κενά πλάτους μεγαλύτερου των 30mm από κάτω προς τα πάνω, εναλλάξ από το ένα κενό στο άλλο, δημιουργώντας ένα μοτίβο ζιγκ-ζαγκ. Δεν επιτρέπονται κενά > 50mm.
- Εάν διακόψετε την εφαρμογή για περισσότερο από 5 λεπτά, ο εφαρμογέας θα πρέπει να καθαριστεί με καθαριστικό αφρού πολυουρεθάνης και ο περιέκτης θα πρέπει να ανακινηθεί πριν από την εφαρμογή.
- Σε περίπτωση που ξεραθεί ο αφρός στον εφαρμογέα, το άκρο του με το φίλτρο θα πρέπει να κοπεί, έτσι ώστε να συνεχίσετε την εργασία.

### Εργασίες μετά την ολοκλήρωση της εφαρμογής

- Αμέσως μετά την πλήρη σκλήρυνση ο αφρός θα πρέπει να προστατευτεί έναντι της έκθεσης σε ακτίνες UV π.χ. χρησιμοποιώντας σοβά ή μπογιά.

## Παρατηρήσεις / περιορισμοί

- ΑΠΑΓΟΡΕΥΕΤΑΙ ΤΟΠΟΘΕΤΗΣΗ ΠΟΡΤΩΝ ΚΑΙ ΠΑΡΑΘΥΡΩΝ ΧΩΡΙΣ ΧΡΗΣΗ ΜΗΧΑΝΙΚΩΝ ΣΥΝΔΕΣΜΩΝ. Η ΑΠΟΥΣΙΑ ΜΗΧΑΝΙΚΩΝ ΣΥΝΔΕΣΜΩΝ ΜΠΟΡΕΙ ΝΑ ΠΡΟΚΑΛΕΣΕΙ ΠΑΡΑΜΟΡΦΩΣΗ ΤΩΝ ΤΟΠΟΘΕΤΗΜΕΝΩΝ ΣΤΟΙΧΕΙΩΝ. Η διαδικασία σκλήρυνσης εξαρτάται από τη θερμοκρασία και την υγρασία. Η μείωση της θερμοκρασίας περιβάλλοντος εντός 24 ωρών μετά την εφαρμογή κάτω από την ελάχιστη θερμοκρασία εφαρμογής μπορεί να επηρεάσει την ποιότητα ή/και την ορθότητα της σφράγισης.
- Πρόωρες προσπάθειες για προκαταρκτική επεξεργασία μπορεί να προκαλέσουν μη αναστρέψιμες αλλαγές στη δομή και τη σταθερότητά του αφρού ενώ μπορεί να επηρεάσουν τις παραμέτρους υποβάθμισης της χρησιμότητας του αφρού.
- Ο αφρός δεν προσκολλάται σε πολυαιθυλένιο, πολυπροπυλένιο, πολυαμίδιο, σιλικόνη και τεφλόν.
- Ο φρέσκος αφρός πρέπει να αφαιρείται με καθαριστικό αφρού πολυουρεθάνης.
- Ο σκληρυμένος αφρός μπορεί να αφαιρεθεί μόνο μηχανικά (π.χ. με μαχαίρι).
- Η ποιότητα και η κατάσταση του χρησιμοποιούμενου εφαρμογέα επηρεάζουν τις παραμέτρους του τελικού προϊόντος.
- Ο αφρός δεν πρέπει να χρησιμοποιείται σε ανεπαρκώς αεριζόμενους και χωρίς πρόσβαση σε καθαρό αέρα χώρους ή σε χώρους εκτεθειμένους στο άμεσο ηλιακό φως.
- Η εργασία σε άλλη θέση, μη έχοντας τη βαλβίδα στραμμένη προς τα κάτω, θα μειώσει την απόδοση του αφρού.
- Η αποκοπή του φίλτρου στο τέλος του εφαρμογέα θα μειώσει την απόδοση του αφρού.

## ΠΡΟΣΘΕΤΕΣ ΠΛΗΡΟΦΟΡΙΕΣ

Όλες οι παρεχόμενες παράμετροι βασίζονται σε εργαστηριακές δοκιμές που συμμορφώνονται με τα εσωτερικά πρότυπα του κατασκευαστή και εξαρτώνται σε μεγάλο βαθμό από τις συνθήκες σκλήρυνσης του αφρού (θερμοκρασία περιβάλλοντος και επιφάνειας, ποιότητα χρησιμοποιούμενου εξοπλισμού και δεξιότητες του ατόμου που εφαρμόζει τον αφρό).

Ο κατασκευαστής συνιστά οι εργασίες φινιρίσματος να γίνουν μετά την πλήρη σκλήρυνση του αφρού, δηλαδή μετά από 24 ώρες από την εφαρμογή.

Ο κατασκευαστής χρησιμοποιεί μεθόδους δοκιμών που έχουν εγκριθεί από τη FEICA και έχουν σχεδιαστεί για να παρέχουν αναπαραγώγιμα αποτελέσματα δοκιμών με διαφάνεια, διασφαλίζοντας ότι οι πελάτες έχουν ακριβή εικόνα της απόδοσης του προϊόντος. Οι μέθοδοι δοκιμής FEICA OCF είναι διαθέσιμες στη διεύθυνση: <http://www.feica.com> (Our industry -> PU Foam (OCF) -> OCF Test Methods). Η FEICA είναι μια πολυεθνική ένωση που εκπροσωπεί την ευρωπαϊκή βιομηχανία συγκολλητικών και στεγανωτικών, συμπεριλαμβανομένων των κατασκευαστών αφρού ενός συστατικού.

## ΜΕΤΑΦΟΡΑ ΚΑΙ ΑΠΟΘΗΚΕΥΣΗ

Ο αφρός διατηρεί τη χρηστικότητα του για 12 μήνες από την ημερομηνία παραγωγής, υπό την προϋπόθεση ότι φυλάσσεται στην αρχική του συσκευασία σε κάθετη θέση (με τη βαλβίδα προς τα επάνω), σε ξηρό μέρος σε θερμοκρασία +5°C έως +30°C. Η αποθήκευση σε θερμοκρασία άνω των +30°C μειώνει τη διάρκεια ζωής του προϊόντος, επηρεάζοντας αρνητικά τις παραμέτρους του. Το προϊόν μπορεί να φυλάσσεται σε θερμοκρασία -5°C, όχι όμως περισσότερο από 7 ημέρες (εκτός της μεταφοράς). Δεν επιτρέπεται η αποθήκευση δοχείων αφρού σε θερμοκρασία άνω των + 50°C ή κοντά σε ανοιχτή φλόγα. Η αποθήκευση του προϊόντος σε θέση διαφορετική από τη συνιστώμενη μπορεί να οδηγήσει σε εμπλοκή της βαλβίδας. Ο περιέκτης δεν πρέπει να πιεστεί ή να τρυπηθεί ακόμα και όταν είναι άδειος.

Μην αποθηκεύετε τον αφρό στο χώρο επιβατών. Μεταφέρεται μόνο στο χώρο αποσκευών.

Λεπτομερείς πληροφορίες μεταφοράς περιλαμβάνονται στο δελτίο δεδομένων ασφαλείας (ΔΔΑ).

Θερμοκρασία μεταφοράς	Χρόνος μεταφοράς [ημέρες]
< -20°C	4
-19°C ÷ -10°C	7
-9°C ÷ 0°C	10

## ΣΥΣΚΕΥΑΣΙΑ

Κωδικός προϊόντος	Συσκευασία
73019	Δοχείο 850ml

## ΠΡΟΦΥΛΑΞΕΙΣ ΑΣΦΑΛΕΙΑΣ ΚΑΙ ΥΓΕΙΑΣ

Οι πληροφορίες που περιέχονται στο παρόν παρέχονται καλή τη πίστει με βάση την έρευνα του Παραγωγού και πιστεύεται ότι είναι ακριβείς. Ωστόσο, επειδή οι συνθήκες και οι μέθοδοι χρήσης των προϊόντων μας είναι πέρα από τον έλεγχό μας, αυτές οι πληροφορίες δεν πρέπει να χρησιμοποιηθούν ως υποκατάστατο των δοκιμών του πελάτη για να διασφαλιστεί ότι τα προϊόντα του Παραγωγού είναι πλήρως ικανοποιητικά για τις συγκεκριμένες εφαρμογές του. Η μόνη εγγύηση του παραγωγού είναι ότι το προϊόν θα πληροί τις τρέχουσες προδιαγραφές πώλησης του. Η αποκλειστική σας αποζημίωση για την παραβίαση αυτής της εγγύησης περιορίζεται στην επιστροφή χρημάτων της τιμής αγοράς ή στην αντικατάσταση οποιουδήποτε προϊόντος που αποδεικνύεται ότι είναι διαφορετικό από αυτό που εγγυάται. Ο παραγωγός αποποιείται συγκεκριμένα οποιαδήποτε άλλη ρητή ή σιωπηρή εγγύηση καταλληλότητας για συγκεκριμένο σκοπό ή εμπορευσιμότητα. Ο παραγωγός αποποιείται την ευθύνη για τυχόν τυχαίες ή επακόλουθες ζημιές. Οι προτάσεις χρήσης δεν θα πρέπει να λαμβάνονται ως κίνητρα για παραβίαση οποιουδήποτε διπλώματος ευρεσιτεχνίας.

## Fișă tehnică

### BENMAN SPUMĂ POLIURETANICĂ DE EXPANSIUNE REDUSĂ SI RAPIDĂ PU PRO 60

Cod Product: 73019

Spumă poliuretanică monocomponentă care se întărește datorită umidității aerului. Produsul este fabricat în conformitate cu cerințele standardului ISO 9001:2015.

#### BENEFICII

- consumul ridicat de spumă
- presiune redusă a tubului de spumă
- creșterea redusă a volumului spumei (post expansiune)
- inflamabilitatea spumei - standard
- posibilitatea aplicării multipoziționată a spumei
- aderența spumei la suprafețe – normală

#### UTILIZARE RECOMANDATĂ

- umplerea spațiilor libere, a crăpăturilor, a golurilor, a trecerilor de conducte
- etanșarea rosturilor în acoperișuri, pereți și pardoseli
- montaj și etanșare ferestre
- montaj și etanșare uși
- izolare termică
- izolare acustică



#### DATE TEHNICE

Parametru (+23°C/50% RH)	Valoare
Capacitate, randament (spuma liberă) (RB024) [l]	≤ 60
Capacitatea în rost (Valoarea dată pentru un rost cu dimensiunile 35*1000*35 (lățime*lungime*adâncime [mm])). (RB024) [l]	36 - 40
Timp formare crustă (EN 17333-3:2020) [min]	≤ 10
Timp de tăiere (EN 17333-3:2020). Pentru un cordon de spumă cu un diametru de 3 cm. [min]	≤ 40

Întărire finală (RB024) [h]	24
Coeficientul de conductivitate a căldurii ( $\lambda$ ) (RB24) [W/mK]	0,036
Expandarea secundară a volumului (post-expandare) (EN 17333-2:2020) [%]	130 - 180
Stabilitatea dimensională (EN 17333-2:2020) [%]	$\leq 5$
Clasa de inflamabilitate class (DIN 4102)	B3
Clasa de reacție la foc (EN 13501-1:2008)	F
Izolație acustică (EN ISO 10140-1:2010+A1:2012+A2:2014)	62
Rezistența la compresiune [PN-EN 1607:2013-07] [kPa]	$\geq 35$
Rezistența la tracțiune perpendiculară pe suprafețele frontale [PN-EN 1607:2013-07] [kPa]	$\geq 60$
Certificare M1	M1
Certificare O2	O2
Rezistența la compresiune la o deformare relativă de 10% [PN EN 826:2013] [kPa]	$\geq 20$
Aderența spumei aplicate la 0°C pe suport de lemn [PN-EN 1607: 2013] [kPa]	$\geq 50$
Aderența spumei aplicate la 0°C pe suport de metal [PN-EN 1607: 2013] [kPa]	$\geq 50$
Aderența spumei aplicate la 0°C pe suport de PVC [PN-EN 1607: 2013] [kPa]	$\geq 50$
Aderența spumei aplicate la +30°C pe substrat de lemn [PN-EN 1607: 2013] [kPa]	$\geq 50$
Aderența spumei aplicate la +30°C pe suport de metal [PN-EN 1607: 2013] [kPa]	$\geq 50$
Aderența spumei aplicate la +30°C pe suport de PVC [PN-EN 1607: 2013] [kPa]	$\geq 50$
<b>Culoare</b>	<b>Valoare</b>
Galben	+
<b>Condiții de aplicare</b>	<b>Valoare</b>
Temperatură tub (optim +20°C) [°C]	+5 - +30
Temperatura mediului / substratului [°C]	-10 - +30

## INSTRUCȚIUNI DE UTILIZARE

Înainte de aplicare, citiți instrucțiunile de siguranță prezentate la sfârșitul fișei tehnice și de securitate.

### Pregătirea suprafeței

- Spuma are aderență la materialele de construcție tipice, cum ar fi: cărămidă, beton, tencuială, lemn, metale, polistiren, PVC dur și PUR rigid.
- Suprafața de lucru trebuie curățată și degresată.
- Suprafața poate fi stropită cu apă la temperatura de aplicare - peste 0°C.
- Protejați suprafețele expuse la contaminarea accidentală a spumei.

### Pregătirea produsului

- Tubul prea rece trebuie adus la temperatura camerei, de ex. prin imersare în apă caldă cu o temperatură de până la 30°C sau lăsându-l la temperatura camerei timp de cel puțin 24 de ore.

### Aplicarea

- Folosiți mănușile de protecție.
- Agitați puternic recipientul (10-20 secunde, cu valva în jos) pentru a amesteca bine componentele din interior.
- Înșurubați paiul special pe supapa.
- Poziția de lucru a recipientului este "valva orientată în jos", la temperaturi de >15°C puteți lucra cu spuma în orice poziție de lucru.
- Golurile verticale trebuie să fie umplute cu spumă de jos în sus, progresiv și în mișcare.
- Nu umpleți tot golul - spuma va crește în volum.
- Pentru etanșarea ramei ferestrelor și ușilor, între ramă și perete trebuie păstrat un spațiu de cel puțin 10 mm și de cel mult 30 mm. Nu se recomandă golurile > 30 mm. Golurile mai mari de 30 mm trebuie umplute de jos în sus, în zig-zag. Nu se admit goluri > 50 mm.
- La fiecare oprire a pistolului pentru mai mult de 5 minute, curățați imediat spuma proaspătă din vârful țevii cu Agentul de curățare pentru spumă poliuretanică. Apoi, la fiecare reluare a aplicării spumei, reagitați întotdeauna din nou tubul.
- În cazul uscării spumei în aplicator, vârful aplicatorului va fi tăiat, astfel permite reluarea lucrului.

## Lucrări după finalizarea aplicării

- Imediat după întărirea completă a spumei, protejați împotriva expunerii la razele UV folosind, de ex. tencuială sau vopsele.

## Observații / restricții

- MONTAREA UȘILOR ȘI A FERESTRELOR FĂRĂ UTILIZAREA FIXĂRII MECANICE ESTE INTERZISĂ. LIPSA FIXĂRII MECANICE POATE PROVOCA CĂDEREA SAU DEFORMAREA UȘILOR ȘI FERESTRELOR.
- Procesul de întărire depinde de temperatură și de umiditate. Scăderea temperaturii sub temperatura minimă de aplicare, în intervalul de timp imediat după aplicare și până la 24 de ore, poate afecta calitatea și/sau corectitudinea etanșării.
- Încercările de a grăbi uscarea spumei, pot cauza modificări ireversibile în structura și stabilitatea spumei, și alterarea performanțelor ei.
- Spuma nu are aderență la polietilenă, polipropilenă, poliamidă, silicon și teflon.
- Spuma proaspătă trebuie îndepărtată cu Agentul de curățare de spumă poliuretanică.
- Spuma întărită poate fi îndepărtată numai mecanic (de ex. cu un cuțit).
- Paiul pentru aplicarea spumei este de unica folosință deoarece afectează calitatea și starea tehnică a produsului final.
- Spuma nu trebuie folosită în spații fără acces la aer proaspăt și slab ventilate sau în locuri expuse la lumina directă a soarelui.
- Lucrul în altă poziție decât "supapa cu fața în jos" va scădea eficiența spumei.
- Tăierea capătului aplicatorului va scădea eficiența spumei.

## INFORMAȚII SUPLIMENTARE

Toți parametrii se bazează pe teste de laborator conforme cu standardele producătorului intern și depind în mare măsură de condițiile de întărire a spumei (de ex., ambient, temperatura suprafeței, calitatea pistolului folosit și abilitățile persoanei care aplică spuma).

Producătorul recomandă începerea lucrărilor de finisare după întărirea completă a spumei, adică după 24 h.

Producătorul folosește metode de testare aprobate de FEICA, concepute pentru a furniza rezultate de testare transparente și reproductibile, asigurând clienților o reprezentare exactă a performanței produsului. Metodele de testare OCF ale FEICA sunt disponibile la: <http://www.feica.com> (Our industry -> PU Foam (OCF) -> OCF Test Methods). FEICA este o asociație multinațională reprezentând industria europeană de adezivi și materiale de etanșare, inclusiv producătorii de spumă monocomponentă.

## TRANSPORT / DEPOZITARE

Spuma își păstrează gradul de utilizare în termen de 12 luni de la data fabricării, cu condiția să fie depozitat în ambalajul original în poziție verticală (supapă orientată în sus) într-un loc uscat, la temperaturi cuprinse între + 5° C și +30°C. Depozitarea la temperaturi mai mari de +30°C scurtează durata de valabilitate a produsului, afectând negativ parametrii acestuia. Produsul poate fi păstrat la temperatura de -5°C, nu mai mult de 7 zile (cu excepția transportului). Depozitarea tuburilor de spumă la temperaturi care depășesc +50°C sau în apropierea flăcării deschise nu este permisă. Depozitarea produsului într-o altă poziție decât cea recomandată poate duce la blocarea supapei. Tubul nu poate fi deformat sau perforat nici atunci când este golit de conținut.

Nu depozitați spuma în habitacul auto, transportați numai în portbagaj.

Informații detaliate privind transportul sunt incluse în fișa de securitate (SDS).

Temperatura de transport	Perioada de transport (zile)
< -20°C	4
-19°C ÷ -10°C	7
-9°C ÷ 0°C	10

## AMBALAJ

Cod Product	Ambalaj
73019	Tub 850 ml

## PRECAUȚII PRIVIND SIGURANȚA ȘI SĂNĂTATEA

Informațiile conținute aici sunt oferite cu bună credință pe baza cercetărilor producătorului și se presupune că sunt corecte. Cu toate acestea, deoarece condițiile și metodele de utilizare a produselor noastre nu sunt sub controlul nostru, aceste informații nu vor fi folosite în locul testelor clientului pentru a se asigura că produsele producătorului sunt pe deplin satisfăcătoare pentru aplicațiile dvs. specifice. Singura garanție a producătorului este că produsul va îndeplini specificațiile actuale de vânzare. Despăgubirea dvs. exclusivă pentru încălcarea unei astfel de garanții se limitează la restituirea prețului de achiziție sau la înlocuirea oricărui produs care nu este garantat. Producătorul declină în mod expres orice altă garanție exprimată sau implicată de adecvare pentru un anumit scop sau pentru vandabilitate. Producătorul nu își asumă răspunderea pentru eventualele daune adiționale sau consecvențiale. Sugestiile de utilizare nu trebuie luate ca stimulente pentru a încălca orice brevet.