

Interior Solid Surface Material

HI-MACS[®]
Natural Acrylic Stone[™]

TDS
TECHNICAL DATA SHEET
HI-MACS[®] 20MM SHEETS



The HI-MACS® 20mm Product offering is produced to serve market needs on design and fabrication efficiency.

HI-MACS® 20mm is a product which has several advantages, for example, less additional construction elements and labour costs thanks to reduced fabrication steps.

1. Products

1.1 Colours available on stock



Lucia



Ice Queen
W001 [20 mm]

Quartz



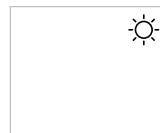
White Quartz
G004 [20 mm], Δ E5

Granite



Arctic Granite
G034 [20 mm], Δ E5

Solid



Alpine White
S028 [20 mm] Δ E5





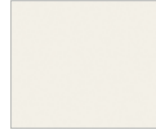

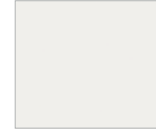
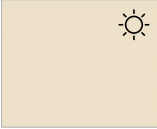
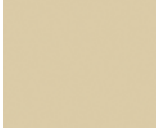













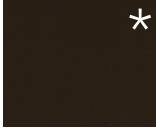


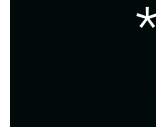
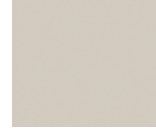



Concrete



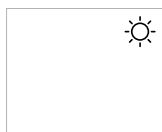
Urban Concrete
G554 [20 mm]

1.2 Colour Offering on special request

Solids

						
Nordic White S033 [20 mm] Δ E5	Diamond White S034 [20 mm] Δ E5	Arctic White S006 [20 mm]	Ivory White S029 [20 mm] Δ E5	Satin White S001 [20 mm]	Cream S009 [20 mm] Δ E5	Nougat Cream S201 [20 mm]
						
Almond S002 [20 mm] Δ E5	Babylon Beige S102 [20 mm]	Steel Grey S109 [20 mm]	Marta Grey S108 [20 mm]	Concrete Grey S103 [20 mm]	Toffee Brown S104 [20 mm]	Grey S005 [20 mm]
						
Sky Blue S203 [20 mm]	Light Green S212 [20 mm]	Lemon Squash S106 [20 mm]	Banana S026 [20 mm]	Orange S027 [20 mm]	Fiery Red S025 [20 mm]	Festival Pink S116 [20 mm]
						
Midnight Grey S117 [20 mm]	Coffee Brown S100 [20 mm]	Deep Indigo S115 [20 mm]	Dark Night S111 [20 mm]	Black S022 [20 mm]	Suede S121 [20 mm]	Mink S118 [20 mm]
						
Evergreen S119 [20 mm]	Cosmic Blue S120 [20 mm]					

Solid S728 CE MED



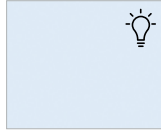
Alpine White
S728 Δ E5 [20 mm]

Interior Solid Surface Material

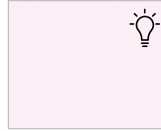
Lucent



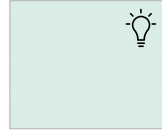
Opal
S302 [20 mm]
Δ E5



Sapphire
S303 [20 mm]



Ruby
S304 [20 mm]

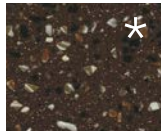


Emerald
S305 [20 mm]

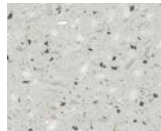
Lucia



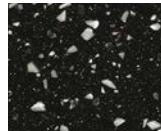
Lentil
W007 [20 mm]



Red Quinoa
W010 [20 mm]



Shadow Queen
W003 [20 mm]

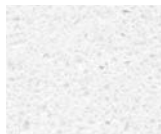


Star Queen
W004 [20 mm]

Aster



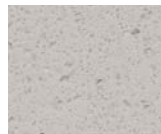
Nebula
T010 [20 mm]



Andromeda
T017 [20 mm]



Carina
T018 [20 mm]



New Moon
T019 [20 mm]



Venus
T011 [20 mm]



Hercules
T020 [20 mm]

Volcanics



Gemini
VW01 [20 mm]



Tambora
VE01 [20 mm]



Santa Ana
VA01 [20 mm]



Frosty
VA22 [20 mm]



Maui
VG21 [20 mm]



Cima
VB02 [20 mm]

Concrete Collection



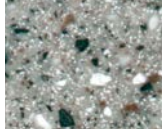
Steel Concrete
G555 [20 mm]

Interior Solid Surface Material

Granite



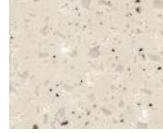
White Granite
G005 [20 mm]
Δ E5



Platinum Granite
G007 [20 mm]



Peanut Butter
G100 [20 mm]



Grey Crystal
G102 [20 mm]



Black Granite
G031 [20 mm]

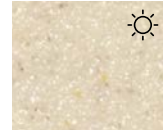
Sand



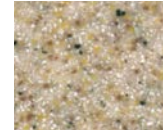
Lunar Sand
G108 [20 mm]



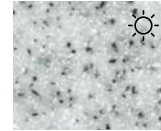
Riviera Sand
G106 [20 mm]



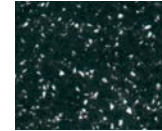
Beach Sand
G048 [20 mm]
Δ E5



Desert Sand
G001 [20 mm]

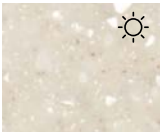


Grey Sand
G002 [20 mm]
Δ E5



Black Sand
G009 [20 mm]

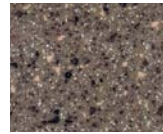
Quartz



Sea Oat Quartz
G038 [20 mm]
Δ E5



Moonscape Quartz
G058 [20 mm]

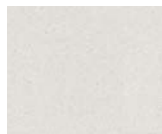


Allspice Quartz
G063 [20 mm]

Pearl



Tapioca Pearl
G050 [20 mm]



Pebble Pearl
G107 [20 mm]



Brown Pearl
G105 [20 mm]



Midnight Pearl
G015 [20 mm]



Black Pearl
G010 [20 mm]

Sparkle



Kold Silver
P102 [20 mm]

★ The basic HI-MACS® material is identical for every colour but it is important to note that darker and more heavily pigmented colours will show dust, scratches, haziness, marks left by hard water and other ordinary wear and tear more noticeably than lighter textured colours. Therefore colours marked with a are less suitable for applications that are exposed to extensive surface contact such as worktops located in heavy traffic area.

☀ Some HI-MACS® colours are particularly suitable for outdoor applications because of their good UV-resistance. HI-MACS®

offers a 10 Year Warranty on colours' UV resistance and loss of gloss over 40%, 10 Year Warranty on colour leaching and 20 Year Warranty on colour peeling, swelling or delaminating. The warranty is applicable after the first installation and is only valid for the sheet material; adhesives are excluded. The conditions for this warranty are based on practical experience and on-going tests.

💡 Lucent colours have a higher level of translucency, more evident when combined with light sources.

2. Product Specifications

2.1 Available Product: Product Code – Colour – Size – Weight

STOCK ITEM			SHEET MATERIAL	SHEET SIZE		M ² PER SHEET	WEIGHT		SHEETS ON PALLET
COLOUR CODE	COLOUR NAME	COLOUR FAMILY	THICKNESS IN MM	WIDTH IN MM	LENGTH IN MM		SHEET IN KG	M ² IN KG	
S028	Alpine White	Solid	20	760	3000	2,28	77,5	33,99	10
G004	White Quartz	Quartz	20	760	3000	2,28	77,5	33,99	10
G034	Arctic Granite	Granite	20	760	3000	2,28	77,5	33,99	10
G554	Urban Concrete	Concrete	20	760	3000	2,28	77,5	33,99	10
W001	Ice Queen	Lucia	20	760	3000	2,28	77,5	33,99	10

2.2 Product: Sheet – Adhesive

SHEET			ADHESIVE		
COLOUR CODE	COLOUR NAME	COLOUR FAMILY	COLOUR CODE	COLOUR NAME	PACKAGING UNIT
S028	Alpine White	Solid	H16	Alpine White	45ml / 250ml
G004	White Quartz	Quartz	H36	Silver	45ml / 250ml
G034	Arctic Granite	Granite	H36	Silver	45ml / 250ml
G554	Urban Concrete	Concrete	H22	Perna Grey	45ml / 250ml
W001	Ice Queen	Lucia	H16	Alpine White	45ml / 250ml

Note: the adhesive is not developed as filler for repairs. In the case of damage to the surface it is strongly recommended to make a plug repair if possible (tools are available on the market – please contact your local technical support).

2.3 Sheets LRV and Colour Codes Pantone – NSC – RAL

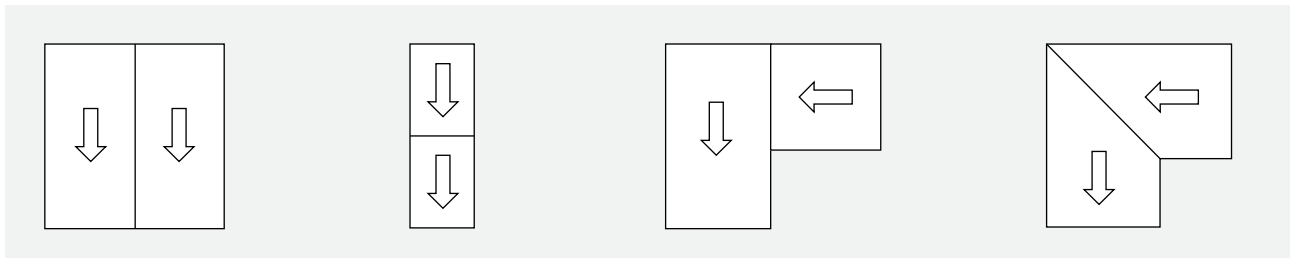
COLOUR CODE	COLOUR NAME	COLOUR FAMILY	LRV	PANTONE	NCS	RAL DESIGN	RAL CLASSIC
S028	Alpine White	Solid	85.12	11 -4201 TPX			9003
G004	White Quartz	Quartz	68.87				
G034	Arctic Granite	Granite	87.27	11-0601 TPX	S 0300-N		9016
G554	Urban Concrete	Concrete	31.96	15-0000 TPG	S 3502-Y		
W001	Ice Queen	Lucia	89.67				

3. Fabrication

3.1 Bonding Sheet to Sheet

When bonding sheet to sheet double check the best veining possibility according to its veining flowing look. There's no way to determine which method will work best with any particular colour other than to visually evaluate the configurations.

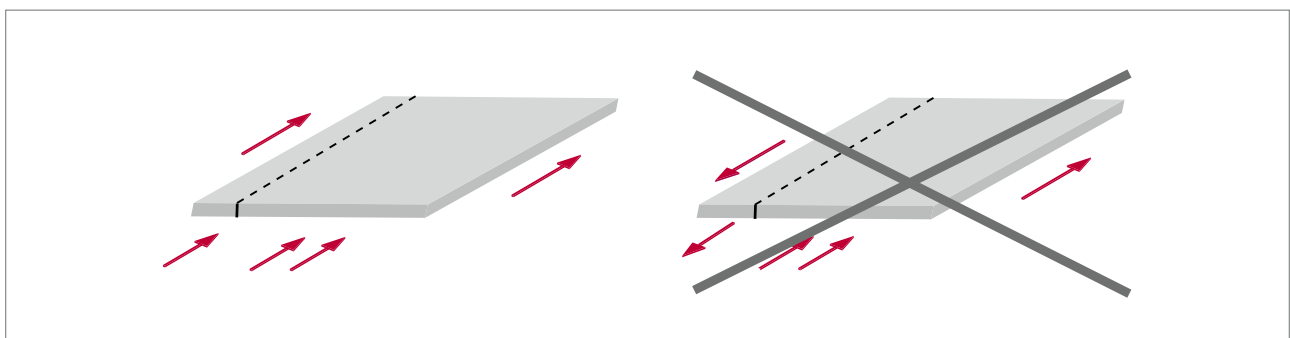
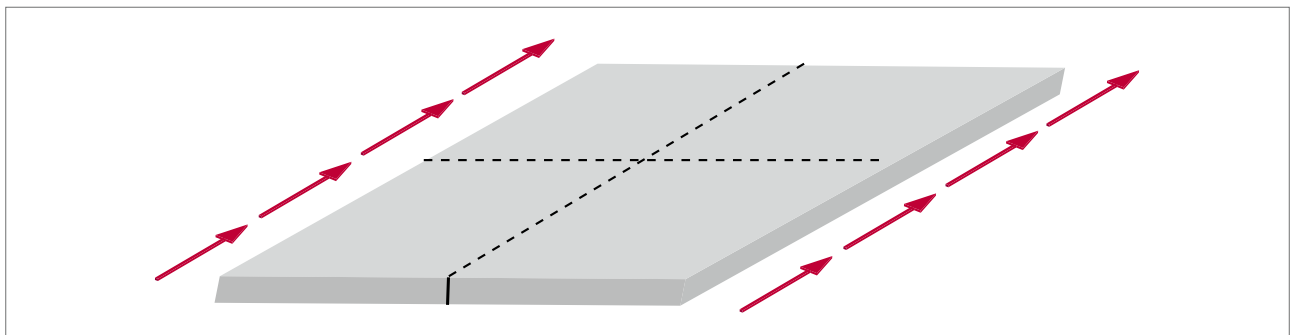
We strongly advise the fabricator to ensure the purchaser and end user understand these considerations before commencing work.



Schematic representation

When using several sheets for doing one job ensure a continuous flow of sequential numbers as well as the same production flow.

Do not turn one sheet into a different direction from the next or opposite side (**no turn** of any sheet by 90°, 180° or 270°). Production arrows are printed on the back of each sheet and the production date and its sequential number printed on the edge of each sheet.



3.2 Cut to size

When cutting 20mm-sheets to size use proper adjusted equipment, like panel saw, beam saw, table saw or CNC. Using hand tools, like on site during installation it is best to have 3 to 4 steps down and a final trimming cut to take off the last 10th of a millimeter for a smooth edge.

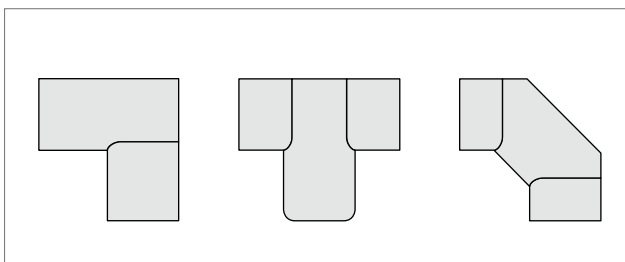
A mirror cut has the best result of a straight and parallel cutting line – a basic element for a good seam result later.



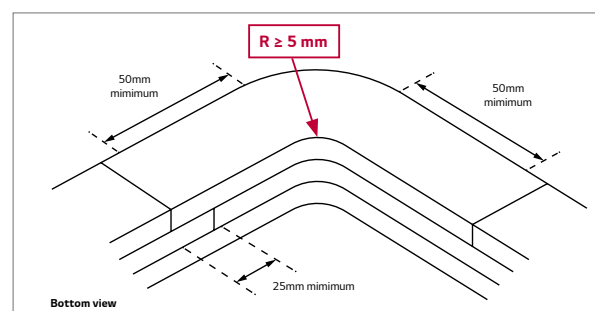
Hint: Please follow the detailed fabrication instruction guidelines according to the colour family chosen.

3.3 Sheet connection

Sheet connections need to be chosen according to its panel application, like kitchen counter tops, bath- and vanity tops, counters or other paneling's, like window sills, wall panels etc.



Edge Corners
HI-MACS® requires a minimum 5mm radius on all drop edge inside corners. (Diagram indicates recommended build-up).

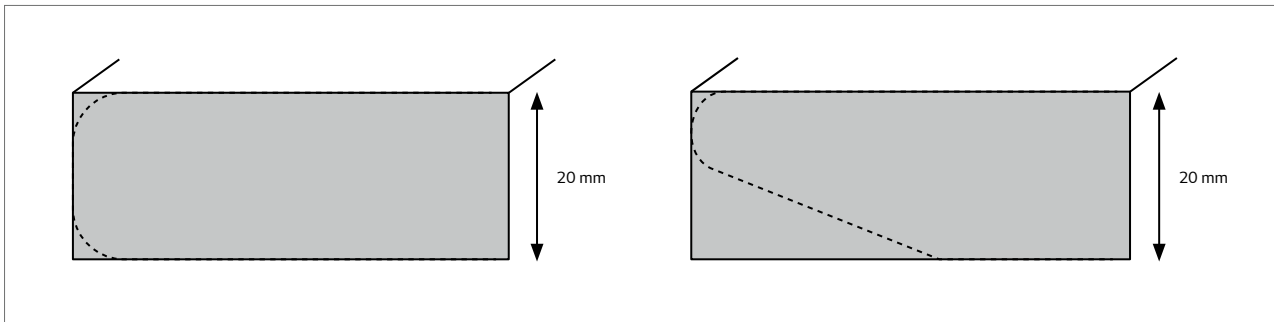


3.4 Sheet connection support

Whatever connection is best for its application: Ensure the sheets have enough and a strong support from underneath to avoid any deformations at a later time due to its own weight or placed heavy duty items on top.

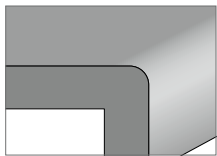
4. Edge

20mm sheets providing the opportunity to reduce fabrication costs by designing a thin edge (without cutting, and bonding a separate edge creation).

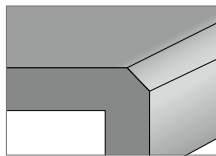


4.1 Standard Edge

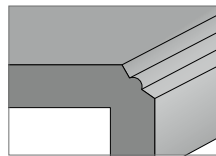
For standard edge-design proceed as described in the Fabrication Manual, section "Drop Edges..."



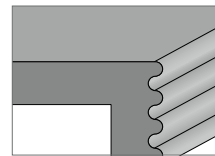
Standard with radius



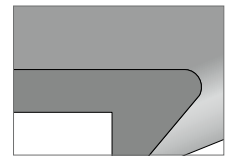
Standard with bevel



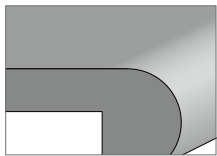
Standard with profile



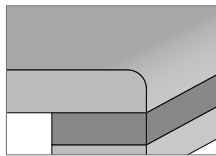
Standard with wave



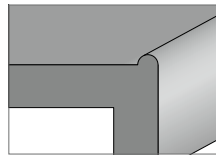
profil Standard with back bevel



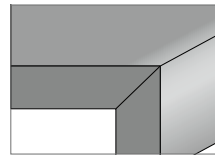
Bull-nose



Sandwich



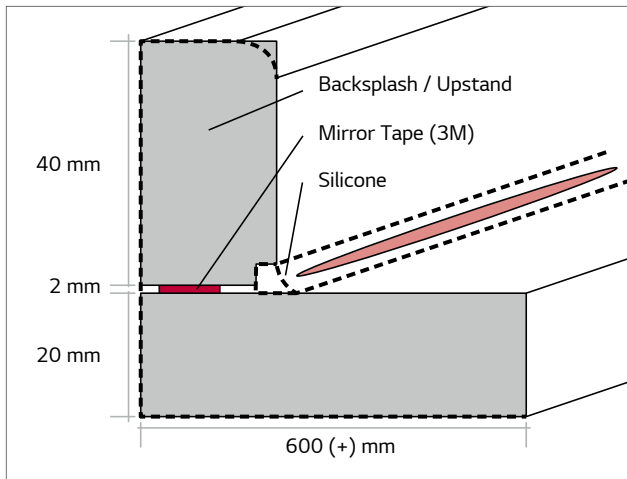
Waterfall edge



Standard v-grooved

5. Backsplash

5.1 Standard Backsplash



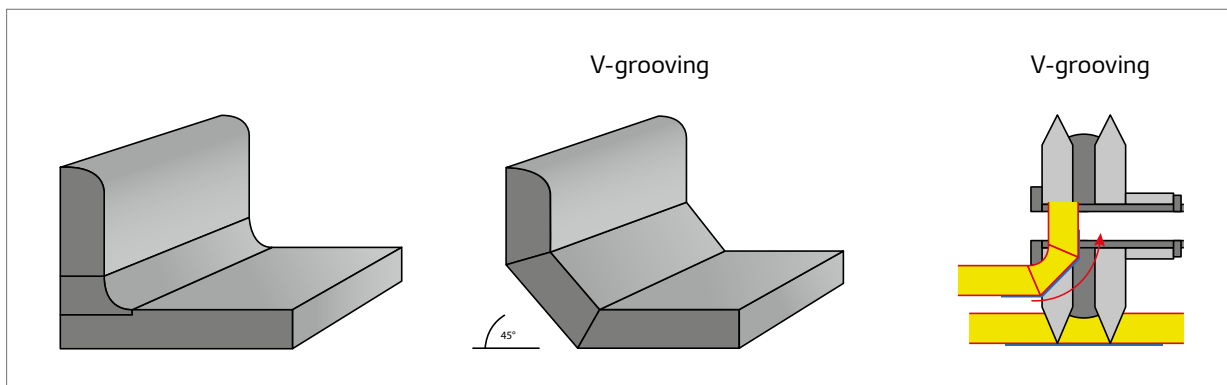
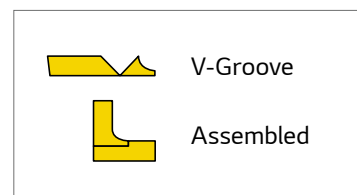
A simple splashback profile strip should be as in the drawing. A rounding off is required at the upper inner side of the profile and a small rebate on the underside of the strip. Then apply adhesive tape (double sided foam tape (3M)). Afterwards, seal the rebate area with silicone.

5.2 Curved Backsplash

To let the pattern flow around the edges a 45° angled cut of the edge or an alternative rebate is one of the best solutions.

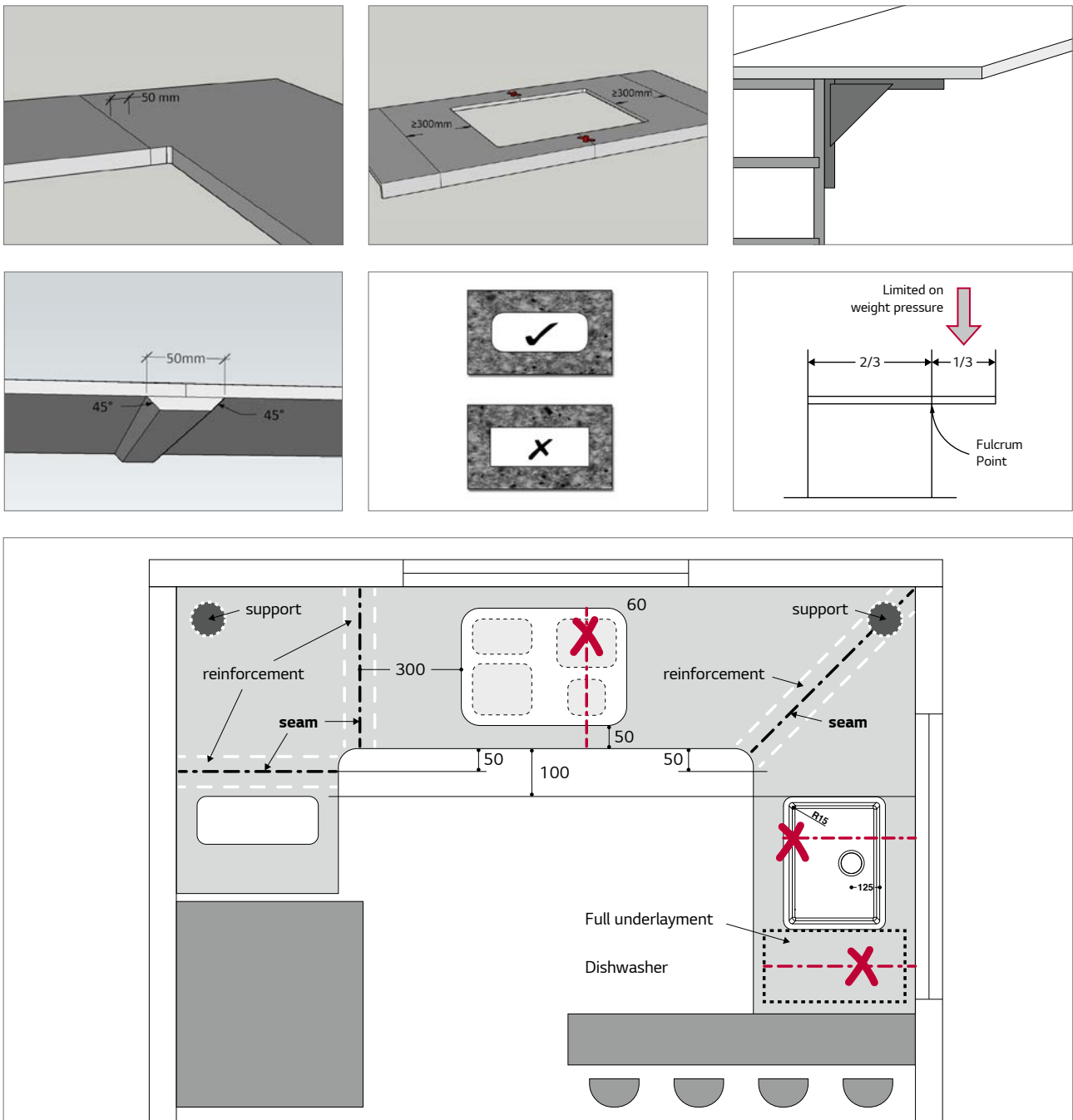
When preparing a curved upstand or downturn, customers may not accept the final result. One may not compare, though with UNI colours used in the kitchen market.

A downturn or an upstand are best achieved with a 45° angle or a profiled folding option – see picture 3 (V-grooving).



6. General fabrication guidelines

For all other applications follow our standard fabrication guidelines, like in kitchen application: cut-outs, hob-cut-outs, shape installations, reinforcement strips, dishwasher/washing machine protection support or even others, like overhangs for breakfast bars etc.



Before commencing any fabrication: write down the printed sheet-number of each sheet you will be using for the project. Ensure to work with sequential sheet numbers and mark always the production flow even best when assembling any kind of project.

6.1 Use of Application

Use of 20mm HI-MACS[®] sheet thickness:

For horizontal application, like kitchen countertops or food counters as well as many furniture applications 20mm HI-MACS[®] can be used. The sub-construction as well as the strength of the flooring has to commit to the heavy weight of long term use.

6.2 Material preparation

Before starting fabrication: note down in the production sheet (for eventual later reference) all sheet numbers and line out the job in a continuous sequential flow.

When fabricating Solid colours of HI-MACS[®] the smell during the fabrication process due to the acrylic based material is very unique whilst the formulation of each colour is the same and composed of the same ingredients. The material is emission free.

Get material to room temperatur (min. +17°C) before starting fabrication.

- Always handle the material with care to avoid any additional uncontrolled scratching from the top or from the back of the sheet.
- When cutting HI-MACS[®] material always use a new and sharp saw blade or trim off with a sharp CNC router to the size required.
- Ensure the sawing machine is properly adjusted and that it is running correctly and absolutely straight.
- If marks of the saw blade or cutter of the trimmer are visible ensure to re-sand the edges by using 180 or 220 (240) grit sandpaper.
- Ensure not to sand the edge round to avoid a bad result of the seam afterwards.
- Ensure the edge is smooth and cleaned off from dust.
- Wherever a connection is to make: resand the area smooth and take away any scratches.

The basic fabrication procedures for HI-MACS[®] colours is described mainly in the Fabrication Manual of latest publishing. Please note: Darker pigmented sheet colours need to have more precise fabrication work to provide the highest quality finish for the end user.

6.3 Edge preparation & build up

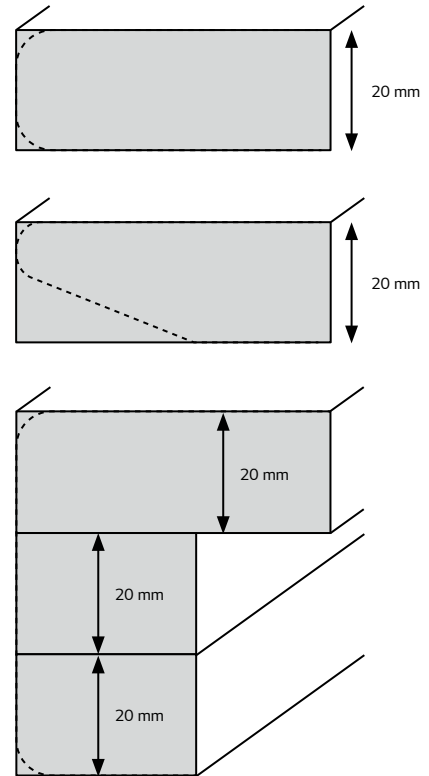
HI-MACS® sheets are delivered with a sanded backside of the sheet where it is highly recommended to sand smooth or to trim the edge making a rebate.

Turn the sheet over so that the back of the sheet is upside-down and you can work comfortably.

Ensure the HI-MACS® sheet does not sag and that the sheet is properly supported at each position of the sheet.

The 20mm sheet is developed for thin line design to reduce fabrication cost, but you may fabricate a edge thickness of 40 / 60 / 80 or 100mm. For this case: you must use HI-MACS® professional Joint-adhesive.

Check all edges carefully before bonding. Ensure that no chips are broken out and no heavy marks of the saw blade or any whitening of the edge is visible



6.4 Cut-Outs

When preparing cutouts in 20mm HI-MACS® sheet, you should have powerful machines and equipment.

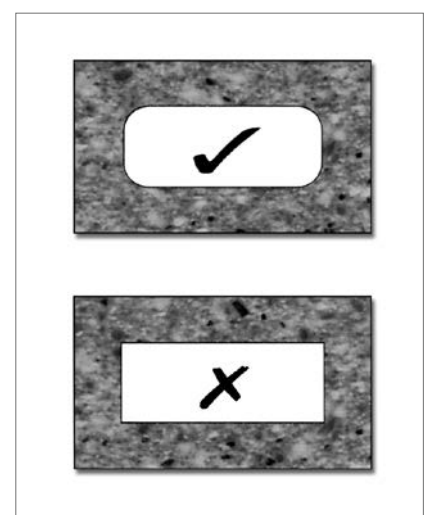
Using Handtools should have at least a minimum power of 2000 Watt/h and a proper shank mount for at least a 25mm long ground and side cutter. To finish a cut-out, 2 to 3 circles may be needed to avoid overheating of the machine.

Best to prepare all relevant measuring and trimming on a CNC.

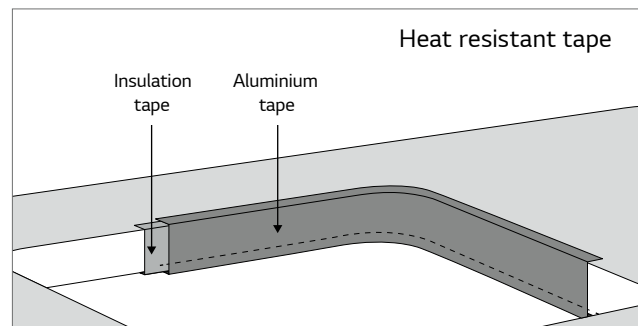
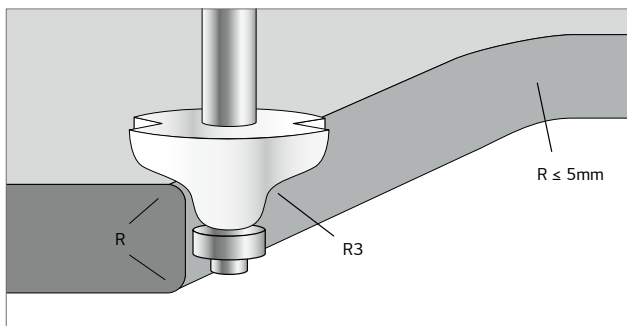
Internal corner cut-outs for sinks, hobs and other accessories will always be subject to higher stress and as such will require to be handled very accurately in accordance with the latest instructions given in these Fabrication Guidelines or additional Technical Bulletins.

Machine the cut-out using a CNC router or hand router and a template. Always machine a radius around these corners and make the radius as large as practical, ($R \geq 5 \text{ mm}$). Never leave a sharp corner or do not leave any sharp edge.

Always ensure that there is a radius of minimum R 3mm on both sides of the edge of the cut-out.

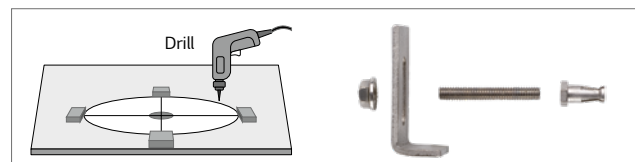


- Do not position a joint or any glue line across any kind of heating device.
- Keep a minimum distance for a seam of min. 300mm from cut-out for hobs.
- For hob cut-outs the internal edge should be covered with self-adhesive Neoprene tape or “Koawool” tape and covered with self-adhesive aluminium reflective tape (3M, tape no.: 425). This will prevent excessive heat buildup and the potential risk of stress cracking.
- Always leave a minimum of at least 3 mm space between the underneath of the appliance and the edge of the HI-MACS® if possible (depending on the type of hob you may have to include a filling piece)
- Ensure proper air ventilation and avoid any air to accumulate.
- For horizontal application – especially applications with heat sources use 12mm or 20mm material only.



6.5 Shape Installations

- Prepare cut-out accordingly to shape design.
- Drill holes for inserts with drilling machine.
- Place HI-MACS® adhesive on the flange position of shape
 - Alternative when using other type of shape (like stainless steel: place a moisture resistant silicone around the edge of shape).
- Place shape in correct centre position.
- Place mechanical fixings expl.: (KEIL WB50x20 complete set).



6.6 Adhesive

Prepare HI-MACS® Adhesive accordingly to its application use and follow the instructions as outlined in the latest TDS Adhesive or described in the Fabrication Manual.

Interior Solid Surface Material

HI-MACS®

Natural Acrylic Stone™

TECHNICAL DATA SHEET

HI-MACS® ADHESIVE 2-COMPONENT

01 | Last Revision Date: February 2019
HI-MACS® Natural Acrylic Stone – www.himacs.eu

7. Sanding (finishing)

The reference is as recommended with our standard products.
For further details: **See TDS-no.4 Sanding.**

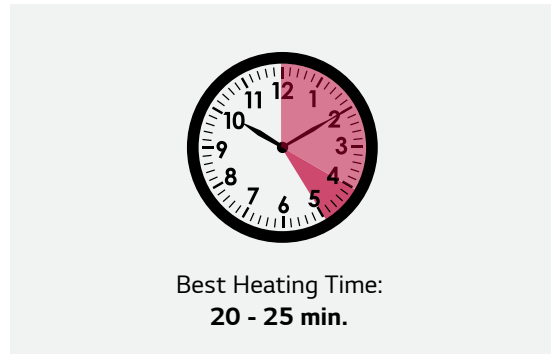
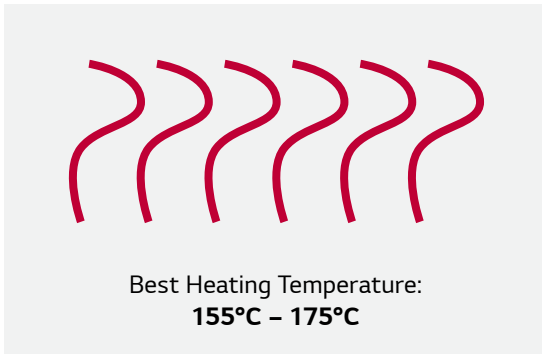


		Standard recommendation					
FINISH-LEVEL	MATT-FINISH		SEMI-GLOSS-FINISH		HIGH-GLOSS-FINISH		
HI-MACS® colour family	for all colours		for all colours		for all colours		
Sanding steps	micron-sandpaper	grid-sandpaper	micron-sandpaper	grid-sandpaper	micron-sandpaper	grid-sandpaper	
Step 1	100/80 µ	150/180 µ	100/80 µ	150/180 µ	100/80 µ	150/180 µ	
	take dust away		take dust away		take dust away		
Step 2	60 µ	220	60 µ	220	60 µ	220	
	take dust away		take dust away		take dust away		
Step 3	"useit®" Superpad S/G Scotch Brite™ Maroon 7447	280	40/30 µ	280/320	30 µ	280/320	
	take dust away		take dust away		take dust away		
Step 4	industrial paper towel	"useit®" Superpad S/G Scotch Brite™ Maroon 7447	"useit®" Superpad S/G Scotch Brite™ Maroon 7447	380/400	15 µ	380/400	
	take dust away		take dust away		take dust away		
Step 5		industrial paper towel	industrial paper towel	"useit®" Superpad S/G Scotch Brite™ Maroon 7447	9 µ	600/800	
			take dust away		take dust away		
Step 6				industrial paper towel	Finesse-it™ Finish-component	1200	
					take dust away		
Step 7						1500	
					1800		
					2500		

8. Thermoforming

To prepare the workpieces, follow the standard thermoforming process

For the Thermoforming process we recommend using a pre-heating oven with double sided heating plates.

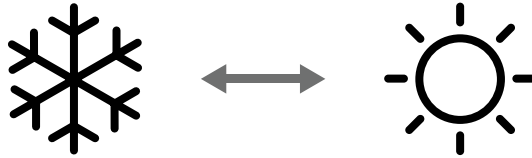


The heating time is similar to the general heating time of HI-MACS[®] products for the thermoforming process. The classification of a minimum radius for 20mm Sheet is approx. ≥ 100 mm. Be aware that any undertaking of recommended radii can cause some colour change or create some cracks. For any technical enquiry, contact your local technical support.

For more detailed thermoforming equipment or any thermoforming accessories please contact global@nabuurs.com or visit the web-site: www.globalvacuumpresses.com

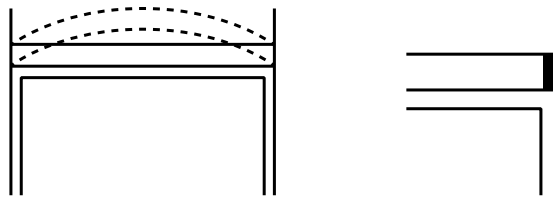


9. Thermal Expansion



Sufficient space should be given to compensate for expansion or contraction at the time of installation since this product may expand or contract depending on the temperature.

Allow 1.5 mm per linear meter for expansion and contraction.



Expansion coefficient HI-MACS® according to norm DIN EN 14851:

$$\Delta t = \text{ca. } 42 \times 10^{-6} / \text{K}$$

■ 10. Quality Check

- Check any fabricated item on quality aspects before leaving the workshop.
- Any mistakes can easily be repaired in the workshop at the time of fabrication. Repairs needed at a later date will be more costly and time consuming.

Important:

Remember that the 15 Year Limited Installed Warranty does not cover any failures due to fabrication or installation mistakes.

■ 11. Summary

Before starting any fabrication: write down the printed sheet-number of each sheet you using for the project. Ensure to work with sequential sheet numbers and mark always the production flow even best when assembling any kind of project.

The adhesive is not developed as a filler for repairs. In the case of damage to the surface it is strongly recommended to make a plug repair if possible (tools are available on the market – please contact your local technical support).

12. Specification Data Sheet

Specification Data Sheet 1/2

	SPECIFICATION	CODE	UNIT	19/20MM S028	TEST METHOD NORM
1	Density	P	g/cm ³	1.73	DIN EN ISO 1183
			kg/m ³	1730	
2	Flexural e-modulus	Ef	Mpa	10000	DIN EN ISO 178
3	Flexural strength	σ fm	Mpa	70.4	DIN EN ISO 12372
4	Ultimate elongation	Efm	%	0.81	DIN EN ISO 178
5	Tensile strength	σ fm	Mpa	51,3 (% 1,69)	DIN EN ISO 527
6	Thermal expansion coefficient	α	mm/mk		DIN EN 12664
			mm/°C	42x10 ⁻⁶	DIN EN 14581
7	Thermal conductivity	λ10try	W/mK	0.871	DIN EN 12664
8	Resistance to thermal insulation	R	m ² K/W	0.022	DIN EN 12664
9	Electrostatic contact resistance	Ω	>1x10 ⁹	513 x 10 ⁹	DIN IEC 1340-4-1, 04-'92
			>1x10 ¹²	>0,513x10 ¹²	EN 61340-5-1
10	Water vapour permeability	μ	μ	8060	DIN EN ISO 12572
	Coefficient of diffusion resistance				
	Water absorption				
	water absorption				
11	Increase of weight	Sp. G	%	0.1	DIN EN 438-12
12	Increase of thickness	D	%	0.3	
13	measure variation at humidity change length thickness mass		%		DIN EN ISO 318 5-'98
14	Slippery resistance Angle of acceptance 10° to 19°	R			GMG 100 (±R9)
					DIN 51130
15	Scratch fastness				DIN 68861_4, 11-'81
16	Ball indentation hardness hb		N/mm ²	270	EN ISO 19712-2-15
	Mohs-hardness Pin-hardness				
17	Barcol hardness		65		EN ISO 19712-2-15
18	Rockwell hardness		HR	119	EN ISO 19712-2-15
19	Impact resistance		mm	1808	EN ISO 19712-2-8
	Ball impact by large-diameter				
21	Resistance to dry heat	5=best	rating ²⁾	4	EN ISO 19712-2-12
22	Resistance to wet heat	5=best	rating	5	EN ISO 19712-2-13
23	Resistance to temperature change		rating	no change	EN ISO 19712-2-14
24	Resistance to cigarett burns	5=best	rating ²⁾	3	EN ISO 19712-2-11
25	Light resistance	5=best	Bl.w.ref6	3 – 4	EN ISO 19712-2-9
26	Food resistance				LMBG §31
27	Hygiene				LGA hygiene certificate
28	Emission				EN ISO 16000-9

1) Relevant for Sheet and cured adhesive

2) ISO 19712-2, Abs. 11

Rating scale:

Rating 5: No visible change

Rating 4: Slight change in gloss, only visible at certain viewing angles and/or slight brown stain

Rating 3: Moderate change in gloss and/or moderate brown stain

Rating 2: Severe brown mark, but no destruction of the surface

Rating 1: Blistering and/or cracks

3) ISO 19712-2, Abs. 12

Rating scale:

Rating 5: No visible change (no damage)

Rating 4: Slight change in gloss visible only when the light source is mirrored in the test area and the light is reflected towards the observer's eye, or a few isolated imperfections just visible

Rating 3: Slight mark(s) visible when viewed from several directions, for example an almost complete disc

Rating 2: Distinct mark(s) or region(s) of slight discolouration or region(s) of slight disturbance of the surface visible

Rating 1: Distinct mark(s) or region(s) of slight discolouration or region(s) of distinct disturbance of the surface visible

Specification Data Sheet 2/2

SPECIFICATION	PRODUCT	COLOUR CODE	COLOUR NAME	SHEET THICKNESS	CLASSIFICATION	TEST NORM
Sheet	HI-MACS®	S028	Alpine White	20 mm	B1	DIN 4102_2
					B - s1 - d0	EN ISO 13501

13. Fire Classification

13.1 Fire Classification Report according to DIN 4102-2 / S028 Alpine White 20mm "B1"

EVOVO
 Testing, Achieving, Assuring.

Test report No. 2015-2123
 for applying a required "Verwendbarkeitsachweis"
 issued 07.12.2015

Applicant: LG Hausys Europe GmbH, Lancy Branch
 12 Avenue des Morgins
 1213 Pétit-Lancy, Geneva
 Switzerland

Date of order: 26.10.2015
Date of sampling: no official sampling of the specimen by a representative of Exova Warringtonfire, Frankfurt
Date of arrival: 04.11.2015
Date of test: 19.11.2015 and 25.11.2015

Order:
 Testing of the flammability (building class B1) according to DIN 4102-1 (May 1998)

Description / designation of the test object
 Sample material designated as: HI-MACS® S028 Alpine White (white)

Description of the relevant test procedure
 DIN 4102 part 1 (Mai 1998)

This test report did not replace the required „Verwendbarkeitsachweis“. It is only used for issuing the „Verwendbarkeitsachweis“.

Testing, Achieving, Assuring.

Test report No. 2015-2123 issued 07.12.2015 page 5 of 8

Assessment
 The material, described in chapter one fulfils the requirements of the building class B2 according to DIN 4102-1 (Mai 1998).
 The determined test results show that the material also fulfils the requirements
 of the building class B1
 according to DIN 4102-1 (Mai 1998).

Special comment
 The fire test result is only valid for the in chapter one described material in the tested colour and square weight.
 The test was carried out in free hanging configuration.
 The distance to other plane material must be more or equal then 40 mm.
 The material wasn't tested after an outside storage.
 In combination with other materials (for example coatings, deposits) the burning behaviour could be influenced unfavourable so that the classification above is not valid any longer. According to DIN 4102-1 the burning behaviour in combination with other materials has to be tested separately.
 This test report did not replace the required „Verwendbarkeitsachweis“. It is only used for issuing the „Verwendbarkeitsachweis“.

Frankfurt, the 07.12.2015

H. Anders
 Tester in Charge

Dipl.-Ing. T. Zachus
 Laboratory supervisor

This test report is valid only for the behaviour of the test specimen which is designated on the top.
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 This test report is a translation of the German version 2015-2123 (issued 07.12.2015). In case of doubt only the German version is valid.
 This test report contains 8 pages and 2 annexes.

13.2 Fire Classification Report according to EN 13501 / S028 20mm Alpine White "B – s1 – d0"

EVOVO
 Testing, Achieving, Assuring.

Classification report
No. 2015-2127-K1
 issued 13.01.2016

Applicant: LG Hausys Europe GmbH, Lancy Branch
 12 Avenue des Morgins
 1213 Pétit-Lancy, Geneva
 Switzerland

Order: Classification of the burning behaviour according to DIN EN 13501-1 (2010-01)

Date of order 04.11.2015

Notification number of the test laboratory
 NB 1378

Designation of the classified building product
 HI-MACS® 19mm in S028 Alpine White
 This classification report lays down the classification of the building product above according to the procedures of DIN EN 13501-1.
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 This classification report is a translation of the German version 2015-2127-K1 (issued 13.01.2016). In case of doubt only the German version is valid.
 This classification report contains 3 pages.

Registered Office: Exova GmbH, Industriepark Höchst, 65926 Frankfurt, Germany. Registered Company No.: HRB 16346
 USt-IdNr.: DE25887713

Testing, Achieving, Assuring.

Classification report No. 2015-2127-K1 issued 13.01.2016 page 5 of 5

3 Classification and range of application

3.1 Reference
 The classification was carried out according to the chapter 11 of DIN EN 13501-1 (2010-01)

3.2 Classification
 The tested material is ranked into the class B related to its behaviour in case of fire.
 Concerning the smoke development the tested material is ranked into the class s1.
 Concerning the dripping of behaviour the tested material is ranked into the class d0.
 The classification of the tested material reads therefore:
B – s1 d0

3.3 Area of application
 The classification is only valid for the material described in chapter one, in the tested colour, thickness and square weight, in free hanging / free standing configuration.
 The distance to other plane material must be more or equal to 80 mm.

4 Reservation
 This classification report replaces not a possible required type admittance or type certification of the product.

Frankfurt 13th November 2016

F. Schenkling
 Tester in Charge

Dipl.-Ing. T. Zachus
 Head of Exova Warringtonfire Frankfurt

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 This classification report contains 3 pages.

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