Technical Data Sheet 020

The Technical Data Sheet applies to the following products:

charBIT R 220 H (R 220 besandet *for the Hungarian and Romanian speaking market***)**

charBIT R 220 SHS (R 220 SHS besandet *for the Hungarian and Romanian speaking market***)**

charBIT R 330 H (R 333 besandet *for the German speaking market***)**

charBIT R 330 SHS (R 330 SHS *for the Romanian speaking market)*

charBIT R 500 H (R 500 besandet *for the German speaking market***)**

According to determination pertaining to the test standards:

EN 13859-1 as the base and securing layer under built-up roofing
EN 13859-2 as the base and securing layer under walls
EN 13707 temporarily as the provisional roof sheet

Note: The above-mentioned sheets can be used as provisional covering even out of the civil engineering area (for example for the covering of various materials against rain water)

Description of the product

The R-type asphalt sheet is an impregnated moisture-absorbent carrying liner made of machine felt and coated with double-sided asphalt covering layer of oxidized asphalt and separation layers of fine (besandet) and very fine (SHS besandet) sand.

Layer composition of the

fine-grain mineral fill
oxidized asphalt
machine felt
oxidized asphalt
fine-grain mineral fill

Design and designation of the product

The carrying liner – machine felt – is impregnated with road asphalt and coated with a layer of oxidized asphalt on both sides. Both the top and bottom layers of the sheet are sanded.
Machine felts are produced with a weight of 220 g/m^2, 310 g/m^2 or 465 g/m^2. The sheets come in rolls of a width of 0.9 m or 1 m and the length as required by the customer. They are sold under the following trade names:

charBIT R 220 H (R 220 besandet *for the Hungarian and Romanian speaking market***)**
charBIT R 220 SHS (R 220 SHS besandet *for the Hungarian and Romanian speaking market***)**
charBIT R 330 H (R 333 besandet *for the German speaking market***)**
charBIT R 330 SHS
charBIT R 500 H (R 500 besandet *for the German speaking market***)**

Use of the product

The R-type asphalt sheet is designed as the base sheet, temporary and provisional insulation of buildings, simple insulation against ground moisture.

We do not recommend using the R-type asphalt sheets as the basic insulation of a building against ground moisture (EN 13969).

Application of the product

The sheet can be applied by means of sticking into hot asphalt or mechanical fastening using nails.

application classified acc. to ČSN EN	**charBIT R 220 H (charBIT R 220 besandet)** **charBIT R 220 SHS (charBIT R 220 SHS besandet)**
ČSN EN 13859-1 as base and securing layer for built-up roofing	**charBIT R 300 H (charBIT R 333 besandet)**
ČSN EN 13859-2 as base and securing layer under walls	**charBIT R 330 SHS**
ČSN EN 13707 temporarily as provisional roofing sheet	**charBIT R 500 H (charBIT R 500 besandet)**

The types of products manufactured according to TDS 020 are subjected to the tests of properties within the scope and frequency specified precisely in the above-mentioned standards.

All measuring equipment used for the measuring according to the below-mentioned standards are governed by internal regulations.

Technical parameters		Test according to ČSN	Note	Unit	**charBIT R 220 besandet R 220 SHS besandet**	**charBIT R 330 H R 333 besandet**	**charBIT R 330 SHS**	**charBIT R 500 H R 500 besandet**
Dimensions	length	EN 1848-1		m	minimum stated length			
	width	EN 1848-1		m	1.00 m ± 1 cm			
	straightness	EN 1848-1		mm	max. 20 mm/10 m of length			
Apparent defects		EN 1850-1		-	no defects			
Areal weight		EN 1849-1		kg/m2	1.2 ± 0.4	2.1 ± 0.3	1.35 ± 0.25	2.6 ± 0.3
Waterproofness		EN 13111		W2/ml	max. 0.5			
Water vapour permeability		EN 1931	acc. to 5.2.9	T	P 20,000			
Reaction to fire		EN 13501-1		Class	E			
Stress-strain properties: Strength	longitudinal	EN 12311-1		N/50 mm	250	+150 -100	250	+150 -100	250	+150 -100
	transverse				200	+150 -100	200	+150 -100	200	+150 -100
Stress-strain properties: Tensibility	longitudinal			%	3	+2 -2	3	+2 -2	3	+2 -2
	transverse				4	+2 -2	4	+2 -2	4	+2 -2
Resistance to tear by nail shank		EN 12310-1		N	50 ± 20			
Flexibility at low temperatures		EN 1109		°C	0			
Resistance to slumping at high temperatures		EN 1110		°C	70			
Behaviour during artificial ageing - only heat	Flexibility	EN 1109			0			
	Slumping	EN 1110			70			
	Waterproofness	EN 1926 EN 13111		W2/ml	max. 0.5 ml			
Impact resistance		EN 12691		mm	40			
Dimensional stability		EN 1107-1		%	max. ± 0.3			
Behaviour during artificial ageing - UV + heat	Waterproofness	EN 13111		W2/ml	max. 0.5 ml			
	Strength	EN 12311-1		N/50 mm	200	+150 -100	200	+150 -100	200	+150 -100
	Tensibility			%	3	+2 -2	3	+2 -2	3	+2 -2
Dangerous substances		does not contain components or additives considered dangerous			fulfils			

Work safety

- Do not eat, drink or smoke during work.
- When placing it wear protective working clothes, goggles, working shoes and protective gloves (these working aids protect you against possible burning by hot asphalt).
- Do not inhale smoke, vapour or released gases during the application. When working in enclosed areas, provide adequate ventilation.
- After performing the work it is necessary to wash your hands with soap and treat the skin with regenerative lotion.

- In the case of staining of the skin with hot asphalt cool the affected place immediately with cold water; do not remove the asphalt from the skin (except when the eyes are hit).
- Under normal conditions the sheets are non-flammable, the flash point of asphalt is above 250°C, but the asphalt sheet can be ignited; asphalt and asphalt sheets must not be extinguished with water, but with sand, extinguishing foam or powder.

Examples of use and proposal of the base

- The sheet is designed for the temporary roofing of smaller buildings (before applying the final layer this has to be removed), as the separation layer and as simple (auxiliary) proofing against ground moisture.
- The sheet can be applied by means of nailing or sticking into hot asphalt.

Conditions during the application of the material

- The sheets can only be applied under suitable weather conditions (not with rain, fog, dew, snow, frost or strong wind).
- The recommended temperatures for the processing of the sheet range from +5 °C to +30 °C.
- The foundation has to be dry, free of dirt and dust, possibly coated with penetration coating.

Note

- The asphalt sheets are not resistant to organic solvents, fats and oils.

Environmental information

- When used as specified by the manufacturer, the product has no harmful effect on human health.
- The product does not contain harmful substances in accordance with Act No. 356/2003 Coll., which complies with European dangerous substances regulations.
- The paper wrapping shall be disposed of in common municipal waste - waste paper.
- The product is not soluble in water; all remnants after the laying of the sheets shall be handed over to authorized persons in accordance with Act No. 15/2001 Coll., code of waste 170604 - category "O". As the manufacturer, we have a contract with the EKO-KOM company on the collection of waste wrappings.

Dispatch and storage

- The product is manufactured and dispatched in rolls; the rolls are always stored and dispatched standing in a vertical position.
- The collated package is dispatched on pallets 1,200 mm x 800 mm according to the production order.
- The recommended storage temperature is up to +30 °C; before the application the product has to be protected against radiant heat – sun (no heat sources are allowed near the products). Low temperatures during the storage of the product do not matter.
- The recommended storage period of the product is up to 12 months from the date of production.

Quality assurance

- The quality of the products is continuously checked by the company laboratory.
- The supervision is provided by the authorized test laboratory TZÚS Předměřice nad Labem.
- The quality control system complying with the ISO 9001 standard is applied during the production.

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13859-1

charBIT R330H - 1x10 m, areal weight 2.1±0.3 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue, to be placed under light and heavy roofing or under asphalt shingles

Reaction to fire	**Class E**
Resistance to water penetration :	
before artificial ageing	**Class W 2**
after artificial ageing	**Class W 2**
Longitudinal tensile strength	
before artificial ageing	250_{-100}^{+150}N/50 mm
after artificial ageing	250_{-100}^{+150}N/50 mm
Transverse tensile strength	
before artificial ageing	200_{-100}^{+150}N/50 mm
after artificial ageing	200_{-100}^{+100}N/50 mm
Tensibility	
before artificial ageing	3 ± 2 %
after artificial ageing	3 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13859-1

charBIT R500H - 1x10 m, areal weight 2.6±0.3 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue, to be placed under light and heavy roofing or under asphalt shingles

Reaction to fire	**Class E**
Resistance to water penetration :	
before artificial ageing	**Class W 2**
after artificial ageing	**Class W 2**
Longitudinal tensile strength	
before artificial ageing	250_{-100}^{+150}N/50 mm
after artificial ageing	250_{-100}^{+150}N/50 mm
Transverse tensile strength	
before artificial ageing	200_{-100}^{+150}N/50 mm
after artificial ageing	200_{-100}^{+100}N/50 mm
Tensibility	
before artificial ageing	3 ± 2 %
after artificial ageing	3 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13859-2

charBIT R330H - 1x10 m, areal weight 2.1±0.3kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue with overlap of at least 8 cm, unsuitable for indoor areas

Reaction to fire	**Class E**
Resistance to water penetration :	
before artificial ageing	**Class W 2**
after artificial ageing	**Class W 2**
Longitudinal tensile strength	
before artificial ageing	250_{-100}^{+150}N/50 mm
after artificial ageing	250_{-100}^{+150}N/50 mm
Transverse tensile strength	
before artificial ageing	200_{-100}^{+150}N/50 mm
after artificial ageing	200_{-100}^{+100}N/50 mm
Tensibility	
before artificial ageing	3 ± 2 %
after artificial ageing	3 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13859-2

charBIT R500H - 1x10 m, areal weight 2.6±0.3 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue with overlap of at least 8 cm, unsuitable for indoor areas

Reaction to fire	**Class E**
Resistance to water penetration :	
before artificial ageing	**Class W 2**
after artificial ageing	**Class W 2**
Longitudinal tensile strength	
before artificial ageing	250_{-100}^{+150}N/50 mm
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Transverse tensile strength	
before artificial ageing	200_{-100}^{+150}N/50 mm
after artificial ageing	200_{-100}^{+150}N/50 mm
Tensibility	
before artificial ageing	3 ± 2 %
after artificial ageing	3 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13707

charBIT R330H - 1x10 m, areal weight 2.1±0.3 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue with overlap of at least 8 cm, may be nailed under battens

Reaction to fire	**Class E**
Longitudinal tensile strength	250_{-100}^{+150}N/50 mm
Transverse tensile strength	200_{-100}^{+150}N/50 mm
Longitudinal tensibility	3 ± 2 %
Transverse tensibility	4 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C
Resistance to slumping at higher temperatures	70 °C
Impact resistance	40 mm
Waterproofness	W2/max. 0.5 ml

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13707

charBIT R500H - 1x10 m, areal weight 2.6±0.3 kg/m2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue with overlap of at least 8 cm, may be nailed under battens

Reaction to fire	**Class E**
Longitudinal tensile strength	250_{-100}^{+150}N/50 mm
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Flexibility at low temperatures	0 °C
Resistance to slumping at higher temperatures	70 °C
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Waterproofness	W2/max. 0.5 ml

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13859-1

charBIT R220SHS, R220 besandet - 1x10 m, areal weight 1.5±0.4 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue, to be placed under light and heavy roofing or under asphalt shingles

Reaction to fire	**Class E**
Resistance to water penetration :	
before artificial ageing	**Class W 2**
after artificial ageing	**Class W 2**
Longitudinal tensile strength	
before artificial ageing	250_{-100}^{+150}N/50 mm
after artificial ageing	250_{-100}^{+150}N/50 mm
Transverse tensile strength	
before artificial ageing	200_{-100}^{+150}N/50 mm
after artificial ageing	200_{-100}^{+100}N/50 mm
Tensibility	
before artificial ageing	3 ± 2 %
after artificial ageing	3 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13859-1

charBIT R330SHS - 1x10 m, areal weight 1.35±0.25 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue, to be placed under light and heavy roofing or under asphalt shingles

Reaction to fire	**Class E**
Resistance to water penetration :	
before artificial ageing	**Class W 2**
after artificial ageing	**Class W 2**
Longitudinal tensile strength	
before artificial ageing	250_{-100}^{+150}N/50 mm
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Transverse tensile strength	
before artificial ageing	200_{-100}^{+150}N/50 mm
after artificial ageing	200_{-100}^{+100}N/50 mm
Tensibility	
before artificial ageing	3 ± 2 %
after artificial ageing	3 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13859-2

charBIT R220SHS, R220 besandet - 1x10 m, areal weight 1.5±0.4 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue with overlap of at least 8 cm, unsuitable for indoor areas

Reaction to fire	**Class E**
Resistance to water penetration :	
before artificial ageing	**Class W 2**
after artificial ageing	**Class W 2**
Longitudinal tensile strength	
before artificial ageing	250_{-100}^{+150}N/50 mm
after artificial ageing	250_{-100}^{+150}N/50 mm
Transverse tensile strength	
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before artificial ageing	200_{-100}^{+150}N/50 mm
after artificial ageing	200_{-100}^{+150}N/50 mm
Tensibility	
before artificial ageing	3 ± 2 %
after artificial ageing	3 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C

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Charvát a.s. Družstevní 289 51742 Doudleby n.Orlicí

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EN 13707

charBIT R220SHS, R220 besandet - 1x10 m, areal weight 1.5±0.4 kg/m^2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue with overlap of at least 8 cm, may be nailed under battens

Reaction to fire	**Class E**
Longitudinal tensile strength	250_{-100}^{+150}N/50 mm
Transverse tensile strength	200_{-100}^{+150}N/50 mm
Longitudinal tensibility	3 ± 2 %
Transverse tensibility	4 ± 2 %
Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C
Resistance to slumping at higher temperatures	70 °C
Impact resistance	40 mm
Waterproofness	W2/max. 0.5 ml

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EN 13707

charBIT R330SHS - 1x10 m, areal weight 1.35±0.25 kg/m2, machine felt impregnated with asphalt with covering layer of oxidized asphalt, for nailing by clout nails or sticking by asphalt or glue with overlap of at least 8 cm, may be nailed under battens

Reaction to fire	**Class E**
Longitudinal tensile strength	250_{-100}^{+150}N/50 mm
Transverse tensile strength	200_{-100}^{+150}N/50 mm
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Tear resistance	50^{+20}_{-20} N
Flexibility at low temperatures	0 °C
Resistance to slumping at higher temperatures	70 °C
Impact resistance	40 mm
Waterproofness	W2/max. 0.5 ml

Manufacturer:

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