

Vulcanized Fiber VFG R(M)

厚さ / Thickness 8mm ・ 10mm ・ 16mm

天然素材のセルロース繊維をベースにした
積層バルカナイズドファイバー。優れた機械強度と
寸法安定性を備え、産業用途に適した材料です。

A laminated vulcanized fiber based on
natural cellulose fiber. It offers excellent
mechanical strength and dimensional
stability for industrial applications.



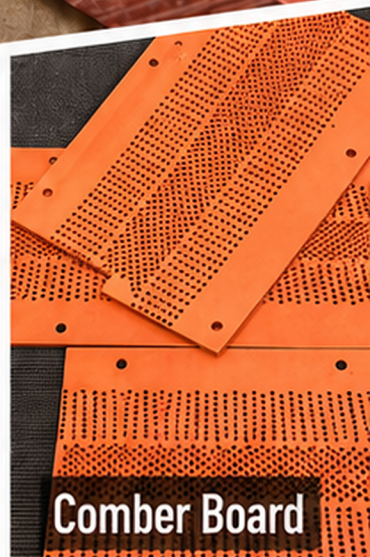
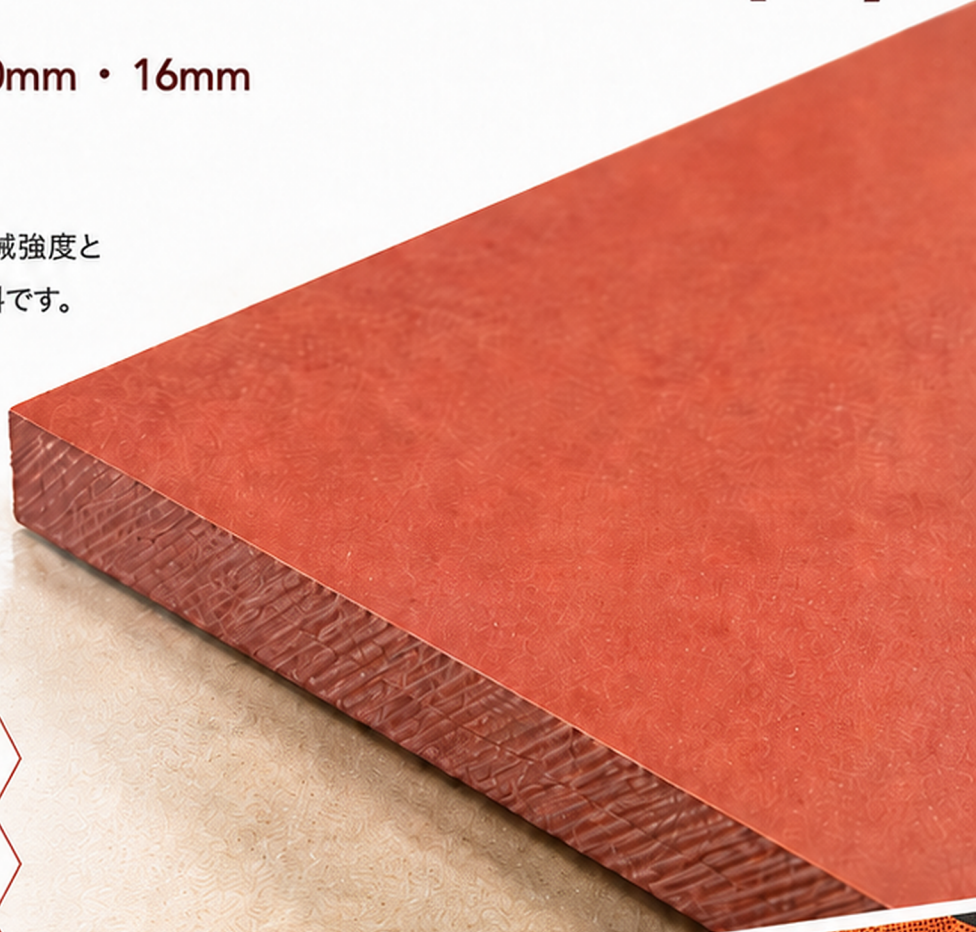
積層構造 / Laminated structure



高強度 / High strength



加工性 / Machinability



VULCANIZED FIBER

バルカナイズド ファイバー

Vulcanized Fiber (バルカナイズド ファイバー) は、天然セルロース繊維を原料とする原紙を塩化亜鉛溶液で処理し、積層、熟成、水洗、乾燥して製造される、高強度・高耐久の積層材料です。

Vulcanized Fiber is a high-strength and durable laminated material made from natural cellulose-fiber base paper through zinc-chloride treatment, lamination, aging, washing, and drying.

FEATURES

- 高い機械的強度と耐摩耗性 / High mechanical strength and wear resistance
- 優れた寸法安定性 / Excellent dimensional stability
- 耐熱性・絶縁性に優れる / Excellent heat resistance and electrical insulation
- 加工性が良く、様々な用途に対応 / Excellent machinability for various applications

APPLICATIONS

繊維機械部品、ガイドボード、コンバーボード、絶縁部材、治具、その他工業用部品など

Textile machinery parts, Guiding Boards, Comber Boards, insulation parts, jigs, and other industrial components.

STANDARD SIZES

Thickness (T)	Effective Size	Remarks
8mm	2000mm × 1250mm × T8mm	(1.0mm thick, 9-layer)
10mm	2000mm × 1250mm × T10mm	(1.0mm thick, 11-layer)
16mm	2000mm × 1250mm × T16mm	(1.0mm thick, 17-layer)

STRUCTURE (LAMINATED)

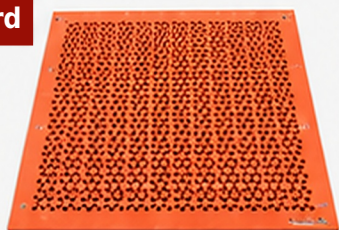


EXAMPLES OF FINISHED PRODUCTS

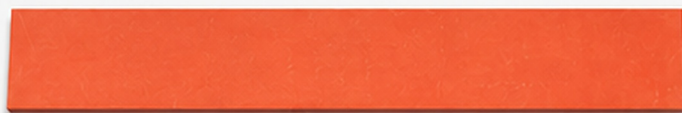
Raw Material



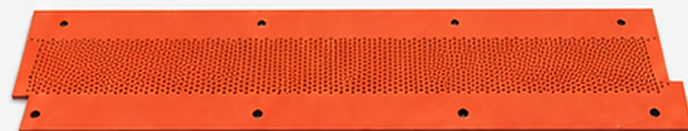
Guiding Board



Raw Material



Comber Board



PROCESSING SUPPORT

切削加工、穴あけ加工、フライス加工、接着加工など、各種加工に対応いたします。お気軽にご相談ください。

※ 上記は代表的な物性であり、保証値ではありません。
※ 仕様は予告なく変更する場合があります。



MACHINING GUIDELINES FOR VULCANIZED FIBER

硫化纤维板加工指南

For Comber Boards (CB) and Guiding Boards (GB) | 适用于 Comber Board (CB) 和 Guiding Board (GB)

ENGLISH

Excessive heat during drilling can scorch and embrittle the inner surface and edges of the holes.

Brittle areas are more susceptible to grooving, cutting, and premature wear caused by repeated friction with the harness cords. The drill tip and machined area must therefore be kept as cool as practicable.

1. Material conditioning before machining

- For applications requiring high dimensional stability, store the material for 6 months at 30-33°C while keeping it clamped flat in a dedicated press.
- Before machining, acclimatize the material for several days at approximately 22°C.
- Keep the material flat and properly supported during storage and acclimatization.

2. Recommended drilling method

- Typical thickness: CB 10 mm; GB 16 mm.
- Do not drill through in one continuous pass. Divide the drilling operation into three stages.
- After each stage, fully retract the drill to discharge chips and release accumulated heat.
- Direct compressed air at the drill tip and into the hole during machining.
- Use a sharp drill and securely clamp the workpiece.
- Place a backing board firmly against the underside to reduce breakout chipping, splitting, and fraying.

3. Do not use cutting oil

Do not use cutting oil, lubricant, or other machining fluid. Oil residue is difficult to remove completely from the holes and may adversely affect the harness cords during operation.

4. Overheating warning

A burnt smell is an important sign that the drill tip or hole surface is overheating and the Vulcanized Fiber may be starting to scorch. Stop machining, retract the drill, remove the chips, and cool the drill and workpiece with compressed air. Adjust the conditions so that no burnt smell is produced.

5. Inspection after drilling

Inspect the hole interiors and edges for: burnt smell; brown or black discoloration; scorching; raised fibers or fraying; chipping; burrs; brittle edges; and incorrect hole diameter.

6. Surface treatment after machining

Where required, apply diluted nitro lacquer (C1008) to the specified surfaces after machining and allow it to dry completely before use. The dilution ratio, coating area, and application method must be confirmed separately. This surface treatment is separate from drilling lubrication.

Note: Rotational speed and feed rate must be optimized by test machining. Acceptable conditions should produce no burnt smell, scorching, or abnormal discoloration.

中文

钻孔加工时产生的过高热量会使孔内壁和孔缘焦化、变脆。这些脆化部位在使用过程中更容易因 harness cord（通丝绳）的反复摩擦而产生切槽、割痕及提前磨损。因此，应尽可能控制钻头尖端和加工部位的温度。

1. 加工前的材料调节

- 对于尺寸稳定性要求较高的产品，加工前将材料置于30-33°C环境中，并用专用压机夹紧、保持平整，存放6个月。
- 正式加工前，在约22°C的环境中放置数日，使材料适应加工环境。
- 存放及环境适应期间，应保持材料平整并妥善支撑。

2. 推荐的钻孔方法

- 常用厚度：CB 10 mm；GB 16 mm。
- 不得一次连续钻透，应将钻孔过程分为3个阶段。
- 每个阶段完成后，应将钻头完全退回，以排出切屑并释放积聚的热量。
- 加工过程中，应向钻头尖端及孔内吹入压缩空气进行冷却和排屑。
- 应使用锋利的钻头，并将工件牢固夹紧。
- 材料底面应紧贴垫板，以减少钻透时的崩边、开裂和起毛。

3. 禁止使用切削油

不得使用切削油、润滑油或其他加工液。孔内残留的油分难以彻底清除，并可能在使用过程中对 harness cord（通丝绳）产生不良影响。

4. 过热判断标准

加工时出现焦味，是钻头尖端或孔内壁温度过高、材料可能开始焦化的重要信号。应立即停止加工，退回钻头，排出切屑，并使用压缩空气冷却钻头和工件。加工条件应调整到不产生焦味。

5. 钻孔后的检查

检查孔内壁及孔缘是否存在：焦味、棕色或黑色变色、焦化、纤维凸起或起毛、崩边、毛刺、孔缘脆化以及孔径异常。

6. 加工后的表面处理

如有要求，加工完成后应在指定表面涂布稀释后的硝基清漆（C1008），并在使用前使其充分干燥。稀释比例、涂布范围及施工方法应另行确认。该表面处理与钻孔润滑无关。

说明： 转速和进给速度应通过试加工确定。合适的加工条件不应产生焦味、焦化或异常变色。