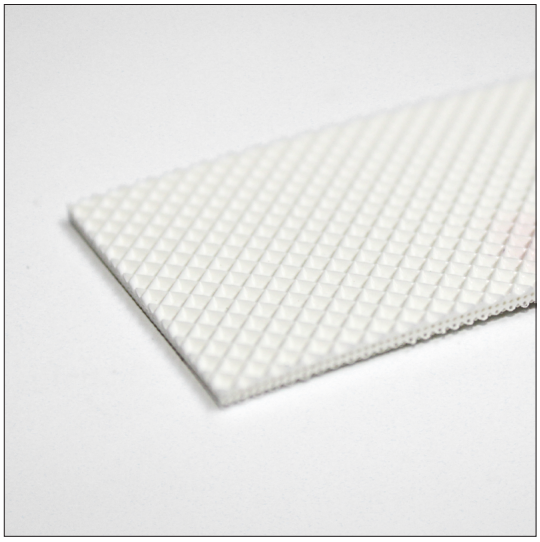
BANDO



F SERIES

SL-F2205

for Food Conveyance Applications

No. of Plies	Weight (Kg/m²)	Total Thickness (mm)	Minimum pulley diameter (mm) Knife edge			Belt support			Top friction coefficient	Backside friction coefficient	Non-fray	Antibacterial Antifungal	Applicable operating temperature (C°)		Maximun applicable width (mm)
			Finger	Hot lap	Cold lap	Table	Roller	Trough					Dry heat	Wet heat	
2	1.9	1.9	15/R5	30/R-	-	○	○	△	0.2	0.5	○	○	-10~80	-10~60	1800

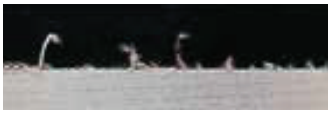
○: Suitable (functional) △: May be suitable. Please contact Bando or your distributor. ✖ : Not suitable —: Not functional
Hot joint is recommended. Delicate fabric material is used, and unprocessed belt edge and cold joint may result in unstable joint strength.

Non-fray specification

Suppresses belt edge fraying without additional processing, and reduces the risk of foreign matter inclusion.

＜Edge damage comparison＞ (after 7months on in-house tester)

Non-fray specification



Standard specification

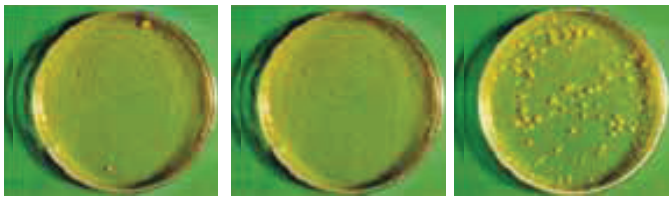
Antibacterial, antifungal

Contributes to belt sanitation by restraining bacterial reproduction and mold generation

＜Antibacterial performance＞
Test sample: Coliform bacteria
Viable cell count immediately after inoculation: 250,000
After 24 hours at 35°C: 10 or less

＜Antifungal performance＞
Antifungal test in compliance with JIS Z2911 (5 types of fungi)
After 28 days from cultivation: up to 25% less cultivation overall

＜Anti bacteria test＞



Pre-test | Antibacterial and antifungal specifications | Standard belts

Notes

• Unpackaged food conveyance

A "O" in tables for F. M and S Series indicates that the belts meet Article 370 standards of the Food Sanitation Act of the Ministry of health and welfare. Please do not use other belts for unpackaged food other than those marked "O" other belts maybe used to convey foods packaged in boxes, trays, etc.

• Ministry of Health, Labour and Welfare Food hygiene Bulletin No. 370

This standard addresses food additives and related topics, which it categorizes as (1) food products, (2)additives, (3) tools and packaging containers, (4) toys, and (5) cleaning agents. Synthetic resin tools and packaging containers are subject to the general standard as well as individual standards that have been formulated for each resin material. Manufacturers must carry out predetermined hygienic tests (material tests and elution tests) using the final product and obtain passing results.

• FDA (Federal Food, Drug, and Cosmetic Act: FFDCA)

This regulation governs tools and packaging containers for food products in the U.S. Indirect food additives are governed by 21 CFR §174 to §186 (Code of Federal Regulations). Materials with which foods make contact as listed in 21 CFR are regulated on the basis of individual materials, products, and applications, and their safety is subject to approval by the FDA.

• PIM (Plastic Implementation Measure): Regulation (EU) No. 10/2011

Basic provisions concerning materials with which foods make contact are set forth in Regulation (EU) No. 1935/2004 to eliminate discrepancies among the regulations of EU member counties. Regulation (EU) No. 10/2011 contains specific rules to ensure the safe use of plastic materials and other products that are intended to come into contact with foods.

Operating temperature range for belts

The operating temperature ranges for SUNLINE belts have been determined so as to take into account the strength of not only the belt itself, but also the joints. Due to the significant deterioration in strength that room-temperature gluing and finger joints exhibit at high temperatures, use of these belts under conditions that would expose them to high temperatures over extended periods of time should be avoided. They can withstand temperatures in excess of the operating temperature range for short periods of time (about 5 min.), for example to allow cleaning of the belt.

In addition, please review the dry- and wet-heat operating temperature ranges as the degree of the effect on the belt varies greatly depending on the amount of humidity present. If the belt surface temperature will range from -100°C to 0°C, choose a model with finger joints or hot lap joints. Models with cold lap joints should not be used under those conditions. If the belt surface temperature will range from -40°C to -10°C, choose a model with finger joints. Models with hot or cold lap joints should not be used under those conditions.

Cleaning and sterilization

Food manufacturing processes incorporate heat sterilization (using hot water or steam) that includes not only food products, but also mechanical equipment (conveyor belts) in order to ensure long shelf life and safety. Exposure of the polyurethane belts that are typically used with food products to wet heat will hasten joint damage as well as the degradation of the belt itself, eventually rendering the belt unusable. If your application includes cleaning and sterilization (with wet heat at temperatures from 80°C to 100°C), use one of the belts listed in the table to the right.

Belt model	
SL-F3102N	SL-F3211
SL-F3106N	SL-F3500
SL-F3202	SL-F3611
SL-F3206N	SL-F3207

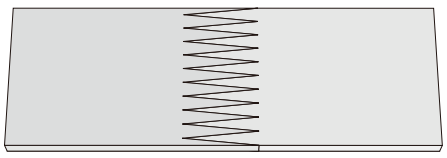
- The wet-heat operating temperature range is -10°C to 80°C for continuous operation and 100°C for momentary exposure (around 5 min.).
- If equipped with table supports and a cover for the bottom surface, use at a length of 10 m or less and a belt speed of 10 m/min. or less. The travel resistance increases when the belt is wet, which may lead to issues such as slippage when operation starts.
- SUNLINE belts not designed for use in wet-heat applications should be cleaned using cold or warm water at a temperature of 40°C or less. If using a cleaning agent, avoid use of powerful products such as those that are strongly alkaline.
- The SL-S8935N and SL-S8936N have a fluororesin film surface.

Joining Methods

SUNLINE Belts can be joined using hot or cold jointing methods. Joint types include finger, overlap, lace (fastener), but most common are finger or overlap.

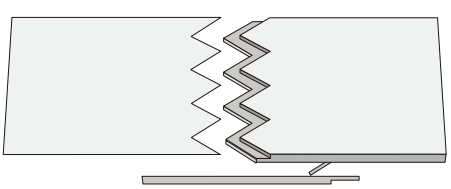
• Finger joints

Small pulleys and knife edges require flexibility, so smooth belt surfaces and precision thickness is required. This type of joint is not appropriate for high temperature areas or for roller applications with clinging matter on the belt.



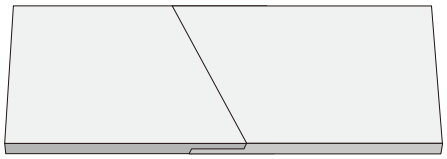
• Double finger joints (specialty)

Combination finger and overlap joint. Easy use on small pulleys, and strong against foreign matter. Applicable for 2 ply belts.



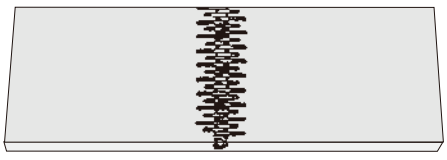
• Overlap joints

Overlap joints include hot joint and cold joint. Hot joint is more durable.Hot wrap is generally used where heat and humidity resistance is required. With one ply belts, finger joint is recommended because of better appear ance and higher flexibility compared to hot joint and cold joint, which may cause unevenness on belt surface.



• Lace joints

Simple joining method using metal clips or fasteners to easily join and replace belts. However, joint strength is inferior to hot and cold joints.



- Skiver joints are also possible. Please contact Bando or your distributor.

V-Guide Processing

V-guides can be used to prevent snaking. They can also be used to prevent products from falling off a conveyor by attaching them to the top of the belt, as V-guides are longitudinally flexible.

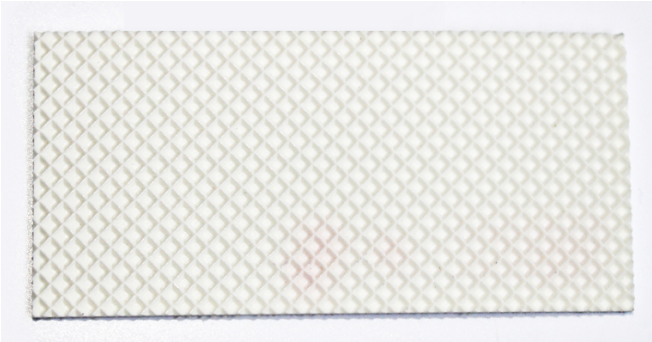
Features

- Effective in snaking and spillage prevention
- Heat vulcanization allows for use on small pulleys
- Nontoxic and odorless
  Standard PU and humidity and heat resistant PU meets Article 370 standards of the Food Sanitation Act of the Health and Welfare Ministry

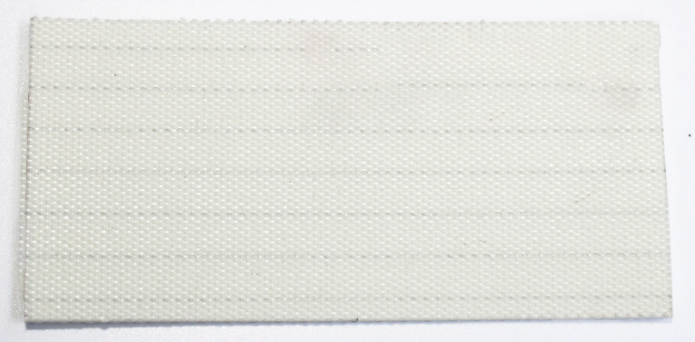
How to Read Specifications

SL- V M 2 C G
① ② ③ ④ ⑤

① V-guide ② Type
③ Shape：1...trapezoid 2...trapezoid with groove
④ Material： C...PVC
K... Humidity and heat resistant PU
R...Oil resistant PVC
U...PU
⑤ Color：G ...Green
W ...White
AW...White
DB...Navy blue



Front Side



Back Side