

Technical Information

溶液型ナイロン系接着剤

アロンマイティFS-175SV10

《特 徴》

- ・FS-175SV10は接着剤の加熱によって熔融と同時に架橋反応が起こり、三次元網状構造を形成して接着します。
- ・架橋密度が比較的強く設計しているため、剥離接着強さと剪断接着強さとのバランスがとれており、良好な接着耐久性を示します。
- ・基材に塗布・乾燥・加熱圧着、もしくは塗布・乾燥・予熱・冷熱圧着（または射出成形等）する事によりすぐれた接着性能を発揮します。
- ・金属、各種プラスチック、及び無機材料に対し良好な接着性を示します。特に軟質塩化ビニル樹脂に対する接着性に優れ、金属、ガラス等とのインサート成形用途に幅広く利用されています。

《性状》

外 観	淡黄色透明液体
溶 剤	変性エタノール
主成分	変性ナイロン
固形分	10%
比 重 (at 25℃)	0.84
粘 度 (mPa·s / 25℃)	65 ± 20
樹脂熔融温度	95 ~ 125℃
保存安定性	90日

注) 低温にて貯蔵もしくは放置した場合には樹脂成分の溶解度の低下により濁りが生じることがあります。濁りが生じたときには容器の口を開き、湯浴(60~70℃)で完全に透明になるまで溶かしてからご使用下さい。

《製品形態等》

荷姿 15kg入り金属缶

法規制 危険物第4類アルコール類 危険等級II

《接着性能》

環境条件	T字剥離接着強さ (N/25mm)
ブランク	167※
湿熱 70℃、95%RH×7日	147※
冷熱 -20~60℃、95%RH×18サイクル	147※
加熱 80℃×10hr	147※
耐熱 80℃中	49※
沸水 沸騰水×10hr	69

破壊形態 ※：塩ビシートの母材破壊 カ：接着剤と塩ビシートとの界面破壊

接着条件 被着材：1.0mm厚 可塑剤35%入り塩ビシート

熱プレス：120℃×3分 圧力1~5kg/cm²

接着剤厚さ：10~15μm（乾燥時）

《使用方法》

塗布方法：ロールコート、バーコート、刷毛塗り

乾燥条件：室温 45分

60℃ 20分

80℃ 10分

希釈溶剤：エタノール

※ここでは代表的な性状・特性・安全性・使用上の注意および用途をご紹介させていただきました。ご使用に際し、ご不明な点がございましたら弊社担当までご相談下さい。

本資料に記載してあるデータや各種事項は代表的な実験値や調査によるもので、保証値ではありません。従いまして、ご使用に当たっては、必ず事前に該当製品がお客様の使用目的、用途、条件に適合するか否かを充分にご検討下さいませ。

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Technical Data Sheet ARON MIGHTY FS-175SV10

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PRODUCT DESCRIPTION

ARON MIGHTY® FS-175SV10 is a solvent type nylon based adhesive. Heating process leads the strong bonding by resin melting and the cross linking reaction. This product performs excellent adhesion to metals and various plastics like softening PVC.

TYPICAL PROPERTIES

Item name	FS-175SV10
Appearance	Yellowish liquid
Main ingredient	Nylon resin
Viscosity (cps) @ 77 °F	50
NV (%)	10
Specific Gravity (d ²⁵)	0.84
Solvent	Modified ethanol
Shelf Life @ 77 °F	90 days

APPLICATION

TYPICAL PERFORMANCE

Bond Strength

	T-Peel Strength
Initial	SF (950 lb/inch)
After 7days@158 °F with 95%RH	SF (840 lb/inch)
After 18cycles@(-4 <-> 140 °F) with 95%RH	SF (840 lb/inch)
After 10hrs@176 °F	SF (840 lb/inch)
Within 176 °F	SF (280 lb/inch)
After 10hrs@boiled water	390 lb/inch

Test Material: Softening PVC

SF: Substrate Failure

Adhesion temperature: 3min.@250 °F with 1~5kg/cm² pressing

Thickness of the adhesive: 10 to 15 μm

APPLICATION CONDITION

Recommended condition:

	FS-175SV10
Method	Roll Coating, Bar Coating, Dip Coating, Spray Coating
Drying temperature	80 °F X 45min. or 140 °F X 20min. or 180 °F X 10min.
Adhesion temperature	250 °F X 3min.
Diluting solvent	Ethanol

Example Process:

Example for thermocompression bonding process

Example process for bonding PVC sheet to glass

1. Apply FS-175SV10 on glass by roll coating
2. Heat at 180 °F x 5min for drying to make the precoated glass
3. Overlap the PVC on the precoat glass
4. Heat at 250 °F x 3min with 2kg/cm²
5. Cool for 2min. with 3kg/cm²

Notes

Process 2: The precoated material should be heated until the solvent volatilization. The time will be changed by the various conditions of the materials and the environment, but the rough standard is as follows. 5~10min.@140 °F or 3~7min.@180 °F or 1~3min.@ 210 °F. Overheating will cause the loss of bonding by the reaction.

Process 4: The rough standard for heating temperature in the heat pressing with 1~5kg/cm² is as follows. 5~10min.@210 °F or 3~6min.@250 °F or 1~3min.@ 300 °F in the case the precoated material is 77 °F.

Process 5: The pressure in the cooling process should be higher than the heating process due to preventing from the thermal deformation.

Example for preheat bonding process

Example process for bonding PVC sheet to glass

1. Apply FS-175SV10 on glass by roll coating
2. Heat at 210 °F x 5min for drying to make the precoated glass
3. Preheat the PVC at 350~400 °F
4. Overlap the preheated PVC on the preheated precoat glass
5. Cool for 2min. with 3kg/cm²

Example process for bonding extruded PVC to glass

1. Apply FS-175SV10 on glass by roll coating
2. Heat at 210 °F x 5min for drying to make the precoated glass
3. Melt the PVC at 350~400 °F
4. Extrude the PVC on the preheated precoat glass

Notes

Process 2: This heating has the meaning of the preheating. The time will be changed by the various conditions of the materials and the environment, but the rough standard is as follows. 10~15min.@160 °F or 7~10min.@180 °F or 3~5min.@ 210 °F. Overheating will cause the loss of bonding by the reaction.

Process 3: The preheating should be enough as the process 2. At least 350 °F should be necessary for Softening PVC.

Process 4: This process should be conducted after the process 2&3 as soon as possible. The bond strength will decrease if the temperature of the precoated material reduce under 140 °F.

GENERAL INFORMATION

Warning:

For safe handling information on this product, consult the Safety Data Sheet (SDS) before using.

Storage:

Store at 60~85 °F. Avoid direct exposure to sunlight. Avoid an exposure to high humidity.

The white material may be caused stored under 50 °F. In that case, open the bottle's cap and put the bottle into hot water at 110~155 °F until the adhesive will be transparent by dissolving the white material.

Disclaimer:

Please be advised that test results are those which were prepared at Toagosei America's laboratory. The results are not guaranteed because it may vary under actual application conditions.

It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof.

If additional information is required, please contact your Toagosei Technical Department or Customer Service Representative at 614-718-3855 or 1-800-338-5192 or via email at sales@toagosei.net