Jiangyin Jinyu Packaging Materials Co., Ltd.

TECHNICAL DATA SHEET

Solvent Resistant EVA Closed-Cell Foam Sealing Ring / Strip

Supplier	Jiangyin Jinyu Packaging Materials Co., Ltd.
Prepared For	EMIC customer technical evaluation
Product Name	Solvent Resistant EVA Sealing Ring / Solvent Resistant Material
Chemical Name	EVA closed-cell foam sealing material
Typical Item / Grade	JY Solvent Resistant EVA, customer size customized
Original Production Reference	May 2024
Issue Date	June 2026
Application	Metal pail lids, paint cans, solvent-based coatings, chemical cans and aggressive solvent packaging applications

1. Product Description

JY Solvent Resistant EVA Sealing Ring is a pre-formed closed-cell foam sealing solution developed for applications where stronger chemical and solvent resistance is required. The material is based on EVA, LDPE/PE, rubber/elastomer components and selected functional additives. It is designed for paint, coating and chemical pail lid systems, especially for solvent-based products and aggressive filled products.

This grade focuses on chemical resistance first. Compared with the High Elastic EVA grade, the solvent resistant grade provides better resistance to common solvents, including aromatic pure solvent systems, but its rebound and compression recovery are lower than the High Elastic EVA grade. Final selection should be made according to the customer's filled product, lid groove structure and sealing performance requirements.

2. Key Advantages

- Excellent resistance to almost all common products currently used in coating, paint and chemical pail applications.
- Can withstand long-term immersion in MEK, xylene, toluene and benzene-type/aromatic pure solvent systems without obvious chemical reaction or dimensional change under observed conditions.
- Better solvent resistance than normal rubber sealing rings and standard EVA foam rings in many aggressive solvent systems.
- No typical plasticizer migration risk associated with PVC plastisol gasket systems.
- Pre-formed ring structure with stable size and direct installation; no liquid gasket injection, oven baking or foaming process is required at the customer side.
- Suitable for manual insertion or automatic ring-inserting equipment depending on customer production volume and lid design.
- Useful for solvent-based coatings, industrial paints, thinners and chemical products where ordinary EVA or rubber may swell, soften or lose sealing reliability.

3. Typical Technical Data

Property	Method / Description	Typical Value
Density	kg/m³	≥ 150 kg/m³
Hardness	Shore C	50–60°
Tensile Strength	MPa	Approx. 1.7 MPa*
Elongation at Break	%	≥ 180%*
Foam Structure	Visual / material structure	Closed-cell foam
Main Components	Material family	EVA / LDPE or PE / rubber-elastomer system / selected fillers and additives
Chemical Resistance	Immersion observation	Excellent for common coating and chemical products; specially designed for aromatic pure solvent systems
MEK Immersion	Reference observation	No obvious chemical reaction observed
Xylene Immersion	Reference observation	No obvious chemical reaction observed
Aromatic Pure Solvent Immersion	Reference observation	No obvious chemical reaction or dimensional change observed under long-term immersion in market reference tests
Compression Recovery	Compared with High Elastic EVA grade	Moderate; lower than High Elastic EVA grade
Storage Time	Normal storage, no direct sunlight	3 years

Jiangyin Jinyu Packaging Materials Co., Ltd.
* Tensile strength and elongation at break are typical reference values based on the current technical sheet and internal experience. Final values should be confirmed by third-party laboratory testing if required by the customer.

4. Typical Composition / Ingredient Family Reference

The following composition is provided for customer technical evaluation and regulatory communication only. The exact production formulation is proprietary and may be adjusted within the same material family according to customer size, hardness, density and application requirements.

Material Family	Approx. Function	CAS No. / Reference
Ethylene-vinyl acetate copolymer (EVA)	Main foam polymer matrix	24937-78-8
Low-density polyethylene / PE (LDPE / PE)	Polyolefin matrix and processing stability	9002-88-4
Rubber / solvent-resistant elastomer system	Solvent resistance and sealing flexibility	Proprietary polymer blend
Mineral filler, such as $CaCO_3$ / talc	Density, hardness and dimensional stability adjustment	471-34-1 / 14807-96-6 or equivalent
Foaming / crosslinking / processing aids	Closed-cell structure and processing control	Proprietary additive package
Pigment	Color adjustment	Proprietary

5. Chemical Compatibility and Immersion Performance

This grade is designed for applications where ordinary EVA, rubber rings or PVC foam plastisol gaskets may have compatibility risks with solvent-based or aggressive chemical products. Based on current market application feedback and immersion observations, the material shows outstanding resistance to commonly used products in paint, coating and chemical pail applications.

Product / Solvent Type	Observed Compatibility
Water-based coatings and water-based systems	No obvious reaction; generally compatible
Solvent-based coatings and industrial paints	Excellent compatibility in common market products
MEK	No obvious chemical reaction observed
Xylene	No obvious chemical reaction observed
Toluene / aromatic solvent systems	No obvious chemical reaction observed in solvent-resistant grade
Benzene-type / aromatic pure solvent systems	Designed for long-term immersion resistance; no obvious change observed in market reference tests
Thinners and mixed solvent systems	Generally compatible; final filled-product test is recommended
Unknown aggressive chemicals	Customer validation by immersion and leakage test is required before mass production

Note: Chemical resistance may be influenced by filled-product formulation, solvent purity, immersion time, temperature, sealing compression and lid groove structure. For final approval, long-term immersion and actual package leakage tests are recommended.

6. Sealing and Compression Recovery Performance

Item	Performance Description
Solvent resistance priority	This grade is selected when chemical/solvent resistance is more important than maximum rebound.
Compression recovery	Lower than JY High Elastic EVA grade, but suitable for many solvent-resistant sealing applications when the lid groove and compression are properly designed.
Leakage resistance	Stable sealing can be achieved under suitable lid groove, pail body and compression conditions. Final validation should be performed by the customer with actual filled product.
Comparison with normal EVA	Better chemical stability in solvent systems; compression recovery should be evaluated according to the actual pail design.

7. Difference Between Solvent Resistant Grade and High Elastic Grade

Item	Solvent Resistant EVA Grade	High Elastic EVA Grade
Main design target	Maximum solvent and chemical resistance	Maximum rebound and compression recovery
Aromatic pure solvent resistance	Excellent; designed for long-term immersion resistance	Good for most products; slight swelling may occur in some aromatic pure solvents
Rebound / recovery	Moderate	Excellent
Hardness	Higher, Shore C 50–60°	Softer, Shore C 45–50°
Recommended application	Solvent-based paint, thinner and aggressive chemical pails	General paint, coating, chemical and food-contact pails requiring high rebound

8. Comparison with PVC Foam Plastisol Gasket and Rubber Rings

Item	Solvent Resistant EVA Sealing Ring	PVC Foam Plastisol / Rubber Rings
Material system	EVA / LDPE / rubber-elastomer closed-cell foam	PVC resin and plasticizer system, or conventional rubber
Migration risk	No typical plasticizer migration risk of PVC plastisol systems	PVC plastisol migration needs evaluation; rubber may extract or swell in some solvents
Solvent resistance	Excellent for common products and aromatic pure solvent systems	Depends strongly on formula; some rubber/PVC systems may swell or soften
Process	Pre-formed ring, direct installation	PVC requires liquid injection, baking, foaming and curing; rubber requires separate ring handling
Process stability	Stable section and ring size	PVC is affected by injection amount, oven temperature and foaming ratio
Environmental profile	Suitable for customers focusing on lower migration risk and easier compliance communication	PVC/plasticizer and rubber extraction risks may require more testing
Storage	3 years under normal storage	PVC paste stability and rubber aging depend on storage conditions

9. Compliance and Available Documents

- TDS and SDS/MSDS can be provided according to customer document requirements.
- REACH and RoHS related documents can be provided according to actual report versions if available for the corresponding product family.
- Food-contact or migration-related testing can be arranged if required for the final application.
- Batch inspection records and quality control records can be prepared for customer audit.
- Special immersion, compression recovery, hydraulic pressure or leakage tests can be discussed according to the customer's product and lid structure.

10. Storage and Use Recommendations

- Store in a cool, dry and ventilated warehouse.
- Avoid direct sunlight and high-temperature heat sources.
- Recommended storage life is 3 years under normal storage conditions.
- Before mass production, perform sealing validation with the actual lid groove, pail body, compression condition, filled product, filling temperature, transportation and stacking condition.
- For aggressive solvents or pure aromatic solvent systems, long-term immersion and actual package leakage tests are recommended before approval.
- The final ring size, thickness and width should be selected according to the lid groove dimension and compression requirement.

11. Notes and Disclaimer

This document is prepared for preliminary technical evaluation. The data are typical values and should not be regarded as final sales specifications unless otherwise agreed in writing. Final suitability must be confirmed by customer testing under the actual package structure, filled product and storage/transportation conditions.

Prepared by Hui Huang
Company Jiangyin Jinyu Packaging Materials Co., Ltd.
Signature / Stamp