TECHNICAL DATA SHEET

High Elastic EVA Closed-Cell Foam Sealing Ring / Strip

高弹性 EVA 闭孔泡棉密封圈 / 密封条

Item	Description
Supplier	Jiangyin Jinyu Packaging Materials Co., Ltd.
Product Name	High Elastic EVA Sealing Ring / High Elastic EVA Material
Chemical Name	EVA closed-cell foam sealing material
Typical Item / Grade	JY High Elastic EVA, customer size customized
Issue Date	June 2026
Application	Metal pail lids, paint cans, chemical cans, food-contact packaging applications

1. Product Description

JY High Elastic EVA Sealing Ring is a pre-formed closed-cell foam sealing solution developed for replacing conventional rubber rings and PVC foam plastisol gaskets. The product is based on EVA, LDPE/PE, POE/TPE and selected functional additives. It is designed to provide stable sealing, high rebound, low permanent compression deformation, excellent chemical stability and easy installation for paint, chemical and food-contact pail lid systems.

Compared with ordinary EVA foam strips, this material is not easily compressed into a thin paper-like layer. After heavy-load compression, it can recover rapidly and gradually return close to the initial sealing profile, helping to maintain long-term leakage resistance during storage, transportation and stacking.

2. Key Advantages

- Designed as an alternative to PVC foam plastisol, rubber sealing rings and standard EVA foam rings.
- No typical plasticizer migration risk associated with PVC plastisol gasket systems.
- Pre-formed ring structure with stable dimensions; less process variation than liquid gasket injection, baking and foaming.
- Excellent chemical stability for most water-based coatings, solvent-based coatings, resins, additives and common chemical products.
- Easy installation by manual or automatic ring-inserting process; no oven curing, no foaming process and lower on-site energy demand.
- Food-contact applicable material system; REACH, RoHS and bisphenol-related tests can be provided according to actual report versions.

3. Typical Technical Data

Property	Method / Description	Typical Value
Density	kg/m³	≥ 180 kg/m³
Hardness	Shore C	45–50°
Tensile Strength	MPa	Approx. 1.9 MPa*
Elongation at Break	%	Approx. 220%*
Foam Structure	Visual / material structure	Closed-cell foam
Main Components	Material family	EVA / LDPE or PE / POE / TPE / $CaCO_3$ / talc / selected additives
Chemical Resistance	Immersion observation	Excellent for most coating and chemical systems; slight swelling may occur in aromatic pure solvents
MEK Immersion	Reference observation	No obvious chemical reaction observed
Toluene Immersion	Reference observation	Insoluble, no obvious chemical reaction; slight swelling may occur; after air drying, shrinkage is small
Storage Time	Normal storage, no direct sunlight	3–5 years

* Tensile strength and elongation at break are conservative reference values based on internal experience. Final values should be confirmed by third-party laboratory testing if required by the customer.

4. Typical Composition / Ingredients Reference

The following composition is provided for customer technical evaluation and regulatory communication. The exact production formulation may be adjusted within the same material family according to customer size, hardness, density and application requirements. Percentages are approximate and may vary by grade or batch.

Name of Raw Material	Approx. Content	CAS No. / Reference
Ethylene-vinyl acetate copolymer (EVA)	Approx. 30%	24937-78-8
Thermoplastic Elastomer (TPE)	Approx. 10%	9003-55-8 / proprietary mixture
Polyolefin Elastomer (POE)	Approx. 10%	Proprietary polymer
Polyethylene / LDPE / PE	Approx. 10%	9002-88-4
Calcium Carbonate ($CaCO_3$)	Approx. 5%	471-34-1
Talc	Approx. 20%	14807-96-6
DCP / Crosslinking aid	Approx. 2.5%	80-43-3
ST / Processing aid	Approx. 2.5%	627-83-8 / proprietary additive
Zinc Oxide (ZnO)	Approx. 4%	1314-13-2
AC Foaming Agent	Approx. 4%	123-77-3
Pigment	Approx. 2%	Proprietary
Trace controlled substance / nitrite-related item	Trace level / controlled	3129-91-7 / according to report

Controlled chemical indicators: chloride less than 1.5 mg/kg and nitrate less than 1.1 mg/kg according to the available reference test record. Actual values and report wording should be subject to the latest third-party test report.

5. Sealing and Compression Recovery Performance

Item	Performance Description
Hydraulic pressure resistance	Overseas customer feedback: 100 kPa can be held easily under suitable lid structure and compression conditions.
Heavy-load compression recovery	After 200 kg loading for 48 hours, the strip can rebound immediately by approx.30% after unloading and continue slow recovery close to the initial profile.
Leakage resistance after compression	No leakage observed in the customer feedback under the tested condition. Final validation should be made with the customer's lid, groove, pail body and filled product.
Permanent compression deformation	Lower than ordinary EVA foam strips; designed to avoid paper-like flattening after long-term compression.

6. Chemical Compatibility

Based on long-term customer use and immersion observation, this product shows excellent compatibility with most market products, including water-based coatings, solvent-based coatings, resin systems, common additives and many chemical products. It normally has no obvious softening, cracking, bleeding, contamination or chemical reaction after long-term high-concentration immersion in most common systems.

For aromatic pure solvents such as benzene/toluene/xylene-type high-concentration solvent systems, slight swelling may occur. In most cases the material remains insoluble and shows no obvious chemical reaction; after air drying, shrinkage is small. For high-risk pure solvent applications, confirmation by actual filled-product immersion and sealing tests is recommended.

7. Compliance and Available Documents

- Food-contact related test documents / declaration can be provided according to the actual report scope.
- REACH test report can be provided.
- RoHS test report can be provided.
- BPX / bisphenol-related test report can be provided according to customer requirement and actual report wording.
- TDS, SDS/MSDS, quality control records and batch inspection records can be prepared for customer audit.

8. Representative Application References

Customer / Market	Approx. Application Volume	Application History
Jotun	Approx. 300,000–500,000 pails/month	Used for approx. 6 years
Kansai production in Malaysia region	Approx. 600,000 pails/year	Used for approx. 5 years
Other overseas markets	Russia, Korea, Australia and other regions	Large-scale application; end brands may not be fully traceable

The above information is provided as a general application reference. Specific customer names and application details should be used only for technical evaluation and should not be disclosed externally without permission.

9. Comparison with PVC Foam Plastisol Gasket

Item	High Elastic EVA Sealing Ring	PVC Foam Plastisol Gasket
Material system	EVA / LDPE / POE / TPE closed-cell foam	PVC resin, plasticizer and foaming system
Migration risk	No typical plasticizer migration risk	Plasticizer migration needs to be evaluated
Process	Pre-formed ring, direct installation	Liquid injection, leveling, baking, foaming and curing
Process stability	Stable section and ring size	Affected by injection volume, oven temperature and foaming ratio
Chemical stability	Excellent for most coating and chemical systems	Depends strongly on formula and filled product
Compression recovery	High rebound, low permanent deformation	Depends on foaming and curing quality
Environmental profile	More suitable for food-contact and environmental requirements	PVC and plasticizer issues may need more evaluation
Storage	3–5 years under normal storage	Paste stability and storage conditions need control

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 3–5 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 pure aromatic solvent or aggressive solvent systems, conduct long-term immersion and actual package leakage tests before approval.

11. Notes and Disclaimer

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

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Signature / Stamp	