

FKM **R**®
FKM Recycle

AKRON®
Fluoroelastomer Recycle

MAXMOLD®



Collaborative Vision



Enhanced Sustainability:

Our collaboration will contribute significantly to reducing pollution from fluorine products, thus aligning with our shared vision of a cleaner, greener world.



Cost Savings: Through our combined efforts, we can provide clients with more cost-effective solutions, strengthening our market position and attracting environmentally conscious customers.



Industry Leadership: By working together, we can set industry standards for sustainability and innovation, positioning both our organizations as leaders in the field.

How to turn unusable scraps from being discarded into valuable products?"

AKRON's primary business is to collect discarded FKM and waste materials from various manufacturers, then recycle them into reusable raw materials using exclusive technology. This process does not involve grinding, and the resulting products are identical to brand new materials.

FKMR[®]
FKM Recycle



Three Business Model for our FKM recycling program

We collect and recycle



We provide recycled materials



We collect and provide recycled materials





Frequently Asked Questions.

FAQs

Can we directly send all the unusable rubber to you for recycling?



Firstly, we will request the customer to **provide 1 kg sample of scraps for testing**. Our FKMR laboratory will assess whether it can be recycled. Once the evaluation is complete, we can proceed to the next step, which is the bulk recycling process.



FAQs

Do we need to differentiate the rubber hardness for recycling?



Yes, only if the hardness is over 85 Shore-A, strict segregation is necessary in order to control the hardness of recycled materials effectively.



FAQs

How much quantity of the scrap do I need to convert it to recycled FKM?



Basically, our minimum recycling quantity is **1000 kg**. We will recycle the entire amount in a **1:1 ratio**, resulting in **1000 kg of recycled FKM**.



FAQs

Do we need to separate the curing system into bisphenol and peroxide systems?



No, leave it all to FKMR Laboratory! The recycled FKM would be bisphenol cure.



Do we need to differentiate colors?



Yes, Distinction is needed, with each batch primarily consisting of a single color. Currently, **black** and **brown** are the primary colors.

If you wish to recycle a specific color, please provide minimum quantity for that single color. We will then proceed with recycling and provide recycled material in the same color.



FAQs

Can rubber mixed with other rubbers, such as NBR, EPDM, be recycled?



No, we only accept pure FKM fluororubber without any mixture of other rubbers. If the initial assessment in the FKMR laboratory reveals any contamination with other rubbers, we won't be able to proceed with the next recycling steps resulting unproducibile.



What is the difference between FKR-2175, FKR-2275UP and FKR-2275?



Let us explain!!



FAQs

The products manufactured from FKR-2175 materials have the exact same performance as those made from new FKM compounds.

1 means it could be directly use for manufacturing, in no difference from new FKM full compounds.

FK stands for FKM Fluoroelastomer



FKR-2175

R stands for Recycled

2 Stands for second time use, reuse!

75 means the hardness SHORE A DURO is 75 degree

It can be directly used for manufacturing!



FKR-2275UP is optional whether to mix with virgin FKM compound, it could still be use for direct production.

- Low cost.
- Can freely adjust the formula ratio.
- Similar performance as virgin FKM
- To achieve the same product appearance and quality as new FKM raw material, it is recommended to blend virgin FKM compound with 60% to 80% FKR-2275UP.



FK stands for FKM
Fluoroelastomer

2 indicates the need for secondary processing. It requires mixing with virgin FKM compound in a certain proportion, equivalent to a much sufficient FKM polymer filler.

FKR-2275UP

R stands for
Recycled

2 Stands for
second time use,
reuse!

UP Stands for the
upgrade, the formula
is adjusted for better
performance

75 means the hardness
Shore A Duro is 75 ± 5

FAQs

FKR-2275 needs to be mixed with a certain proportion of virgin FKM material before it can be used for manufacturing.

- Low cost.
- Can freely adjust the formula ratio.
- We recommend a formula ratio of 40%~60% with virgin material and FKR-2275 to achieve the same performance as virgin FKM material.



FK stands for FKM
Fluoroelastomer

2 indicates the need for secondary processing. It requires mixing with virgin FKM compound in a certain proportion, equivalent to a much sufficient FKM polymer filler.

FKR-2275

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75 means the
hardness Shore A
Duro is 75 ± 5

Sustainable Environmental Trend:

UL 2809 Recycled Content Validation

- Full Name: UL 2809 Recycled Content Verification
- Certification Item: ECVP 2809 Recycled Content - 5th Edition 2021 Revision
- Purpose: Aiding businesses in showcasing their commitment to environmental sustainability, UL 2809 certifies a specified percentage of post-consumer, pre-consumer/post-industrial recycled material content or a product's overall recycled content.
- By rigorously analyzing and verifying these claims, UL enhances the product's green competitiveness, aligning it with market expectations.
- We are proud to be the first rubber industry-related company in Taiwan to achieve UL-2809 certification.



Environmental

Social

Governance

- Recycled Material
- Regeneration EU Carbon
- Emission Requirements Long-Term Value in Corporate
- Sustainability Exploring
- Innovative Business
- Opportunities Assisting in Carbon Emission Reduction
- Implementation of EU Carbon Tariffs





But I have **other kinds of rubber**, can you recycle them too?

Of course, we do!



Although our primary expertise lies in **FKM** recycling services, but we also extend our recycling services to a wide range of rubber materials, including **CR rubber, EPDM, ACM, Silicone Rubber, HNBR**, and even **FFKM**. Rest assured, the quality of our recycled materials is consistent and of high standard across all these variants.

Product Lot Number

- FK is for Fluoroelastomer, or FKM
- SI is for Silicone Rubber
- PF is for Perfluoroelastomer, or FFKM
- AC is for ACM rubber
- CR is for CR rubber
- EP is for EPDM
- HN is for HNBR

FKR-21&22Series

SIR-22Series

PFR-22Series

ACR-22Series

CRR-22Series

EPR-22Series

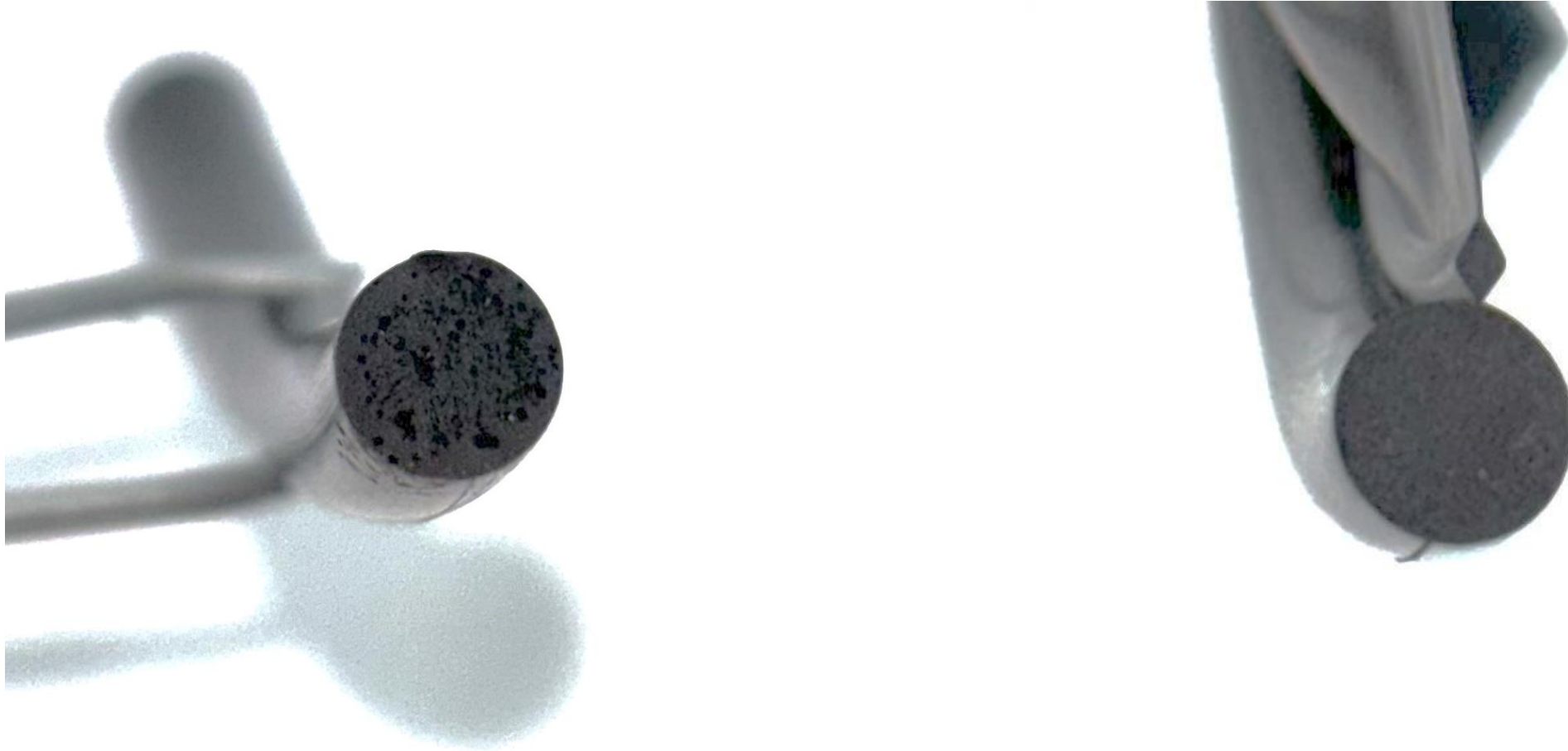
HNBR-22Series

FKR-2275UP made O-ring



As you can see, O-rings made entirely from FKR-2275UP can be molded to standard specifications. The interior of the O-ring is solid with no issues, and its performance is similar with Virgin FKM. However, there is a higher probability of burrs forming on the appearance. If filled with 60% to 80%, the appearance will be indistinguishable from Virgin FKM.

FKM O-ring Comparison



- On the left is the traditional recycling method, where it is ground into powder and then added back 50% as filler.
- On the right is Akron's exclusive recycling technology, where a 1:1 blend of FKR-2275 and virgin FKM compound material is used.

FKM O-ring Comparison



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How to help customers' manufacturing factories reduce production costs?

- Assuming that the current FKM material, priced at \$25 USD/kg, and FKR-2275, priced at \$8 USD/kg.
- 0.5 kg of new FKM compound + 0.5 kg of FKR-2275, the calculation is as follows:
- **\$12.5 for new FKM compound + \$4 for FKR-2275 = \$16.5 per kg.**
- By obtaining the same quality and performance at **only 66% of the original price.**
- With an annual usage of 12 tons which is \$300,000, you can **save up to \$102,000 in costs** each year. This represents a significant **cost reduction of 34%**, and the long-term cost savings are substantial. This not only benefits the environment but also promotes the sustainability of the entire business.

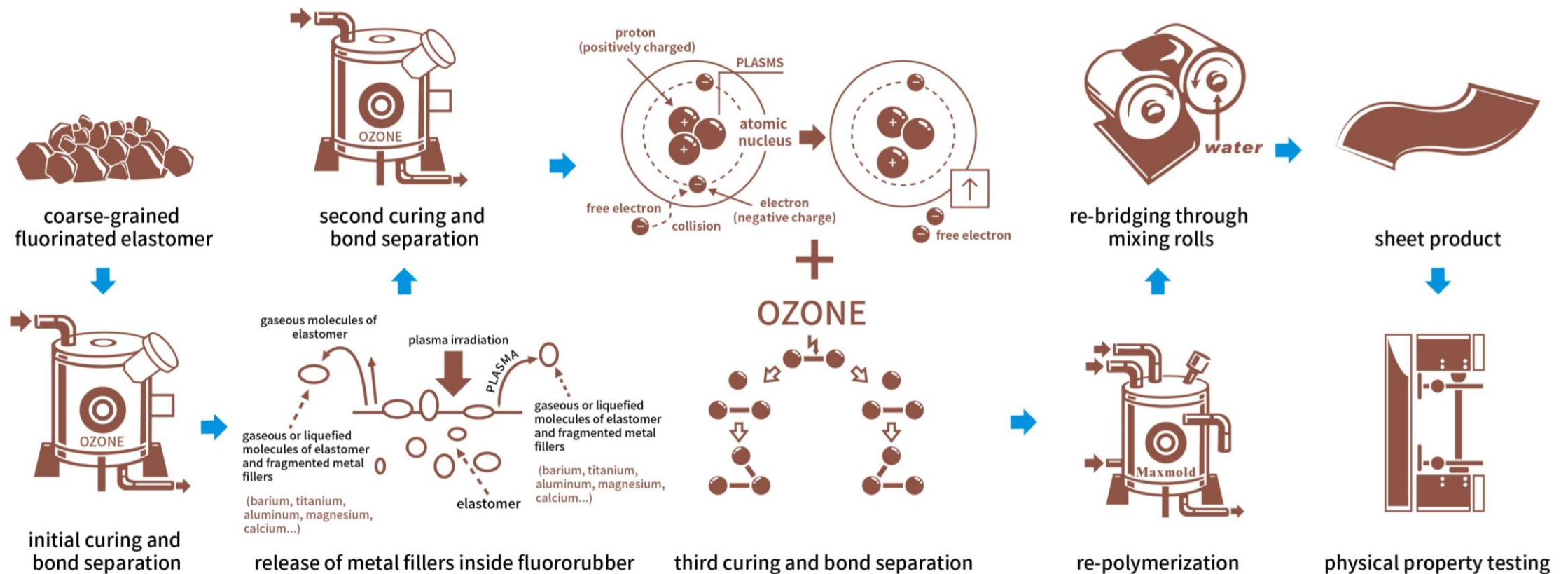


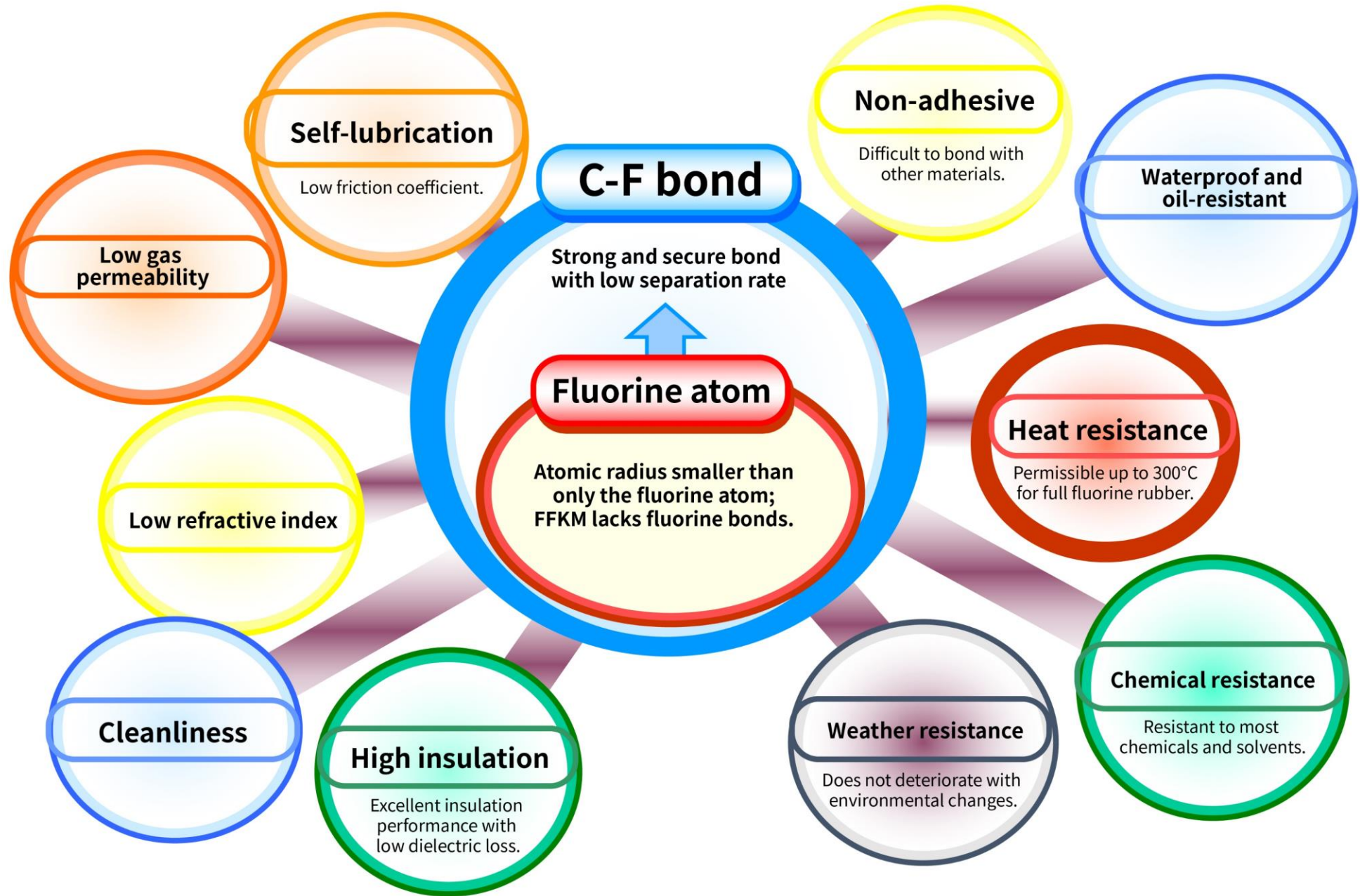
New technology!!

And how to recycle without regrinding?

Fluoroelastomer Recycle Production

The process of recycling fluorinated materials





Thanks for listening

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