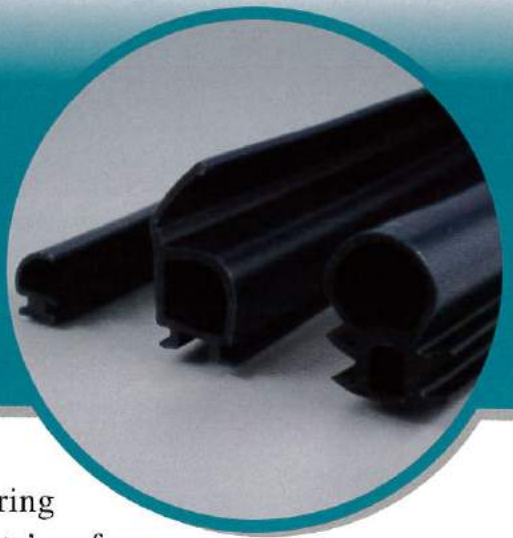


Mushi Tight

(Bug repellent gasket)



Mushi-tight is a high functional gasket with an effect of insect repellent.

Mushi-tight is an extrusion product with the effect of deterring insects infestation. It effects when insects touch the products' surface where insect pesticide is contained.

By co-extruding pesticide-combined plastic in a very thin layer, we enable to reduce the production cost. We use "Etofenprox" which has very low risk of human impact, and its effectiveness is long-lasting comparing to an odiferous pesticide because etfenprox can be released by slow degrees (Effective shelf life is about 5years, yet it depends on the usage environment.)

Base material should be TPO. Please consult us for further details.

Features

Repellent effect



Significant insect repellent effect is proven by our testing.

Safeness



Etofenprox has very low risk of human impact.

Cost



Production cost is low because very small amount of pesticide is needed.

Continuousness



Effect lasts for 5 years under the indoor environment.

Applications

Gaskets, packings, sealing materials and insulators for car parts, construction parts and precision machineries.

Quality specification is determined by separate negotiations because requirements vary according to the conditions under which the products will be used.

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Mushi Tight (Bug repellent gasket)

※Please consult us for detail.

Effect of insect deterring

■ **Test sample** : Correspond to 5-year-used item (Accelerated test condition=60°C × 1800hours)

■ **Performance assessment procedure**

The repellent effects were evaluated by selective repelling tests utilizing the habit that a cockroach prefers dark narrow space.

First, we put the nesting shelters on the Mushi-tight processed sheet area and non-processed sheet area. After leaving for 10 hours, we removed the shelters. Then, we counted the numbers of cockroaches in each area and calculated the repelling rates by the following formula.

Repelling rate = [Number of cockroaches on Mushi-tight processing area] - [Number of cockroaches on Mushi-tight processing area] ÷ [Number of cockroaches on non-Mushi-tight processing area].

■ **Test results**

According to the below contents, Mushi-tight has more than 5 years of effective shelf life.

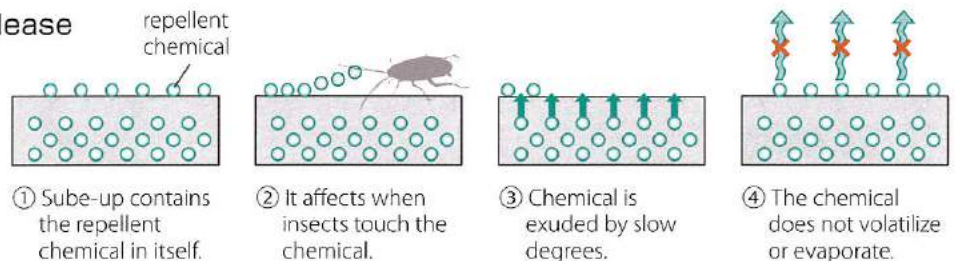


| Test samples | Processing area | Non-processing area | Repelling rate |
|--------------------------------|-----------------|---------------------|----------------|
| Unused item | 0 | 9 | 100% |
| Correspond to 3-year-used item | 0 | 10 | 100% |
| Correspond to 5-year-used item | 0 | 9 | 100% |

Continuousness

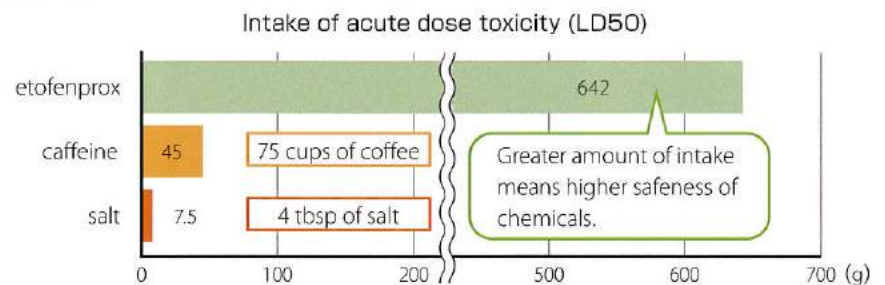
■ **Mechanism of sustained-release**

Chemical is exuded by slow degrees, so that a small amount of pesticide is always on a surface of the products. The effective shelf life of Mushi-tight is evaluated about 5 years.



Safeness

Toxicity of etofenprox is evaluated as very low; therefore this chemical is widely used for many products. About 50% of children weighing 15kg will die when they take about 21million pieces of etfenprox sheets (50mm square, 40μ thickness).



Application

Door s and windows sealing, packing for electronic substrate chassis.



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