

Anti-corrosive film that does not require oil application/removal

# INTERCEPT Technology™



# What is INTERCEPT Technology?

It is a line of innovative, anti-corrosive film products containing plastic and special copper particles that can protect metal, rubber, resin, etc. from corrosion without the use of anti-corrosive oil.

The special copper particles that are mixed into the film, which have a surface area 256 times larger than that of regular copper particles, adsorb and neutralize the corrosive gases present in the atmosphere (nitrogen oxides, ozone, hydrogen sulfide, sulfur dioxide, hydrogen chloride, etc.) and thus protect your products from corrosion.

Regular copper particle copper particles







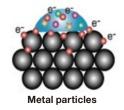
## Copper particle becomes a sacrificial anode.

Special copper particles quickly adhere to corrosive gases by sacrificing themselves to protect other metals.



### **How INTERCEPT Technology works**

### Cause of metal corrosion





Metal electron



Corrosive gas and bacteria



H20

The humidity and condensation that contain corrosive gases form electrical circuits through which metal electrons move around, creating an imbalance and resulting in corrosion.

INTERCEPT Technology and desiccant each perform their functions.



Copper particles of INTERCEPT Technology adsorb corrosive gases.

Desiccant adsorbs the humidity that forms electrical circuits.

# **Features of INTERCEPT Technology**



### 1. Long-term corrosion-free storage

As the corrosion-suppressing special copper particles are mixed into the film itself, corrosion-free long-term storage is possible compared with a conventional film with a generic VCI (volatile corrosion inhibitor) coating. \*Storage duration depends on the environment of use.

### 3. Applicable to large equipment

Because INTERCEPT Technology comes in rolls, it can be cut to any size for wrapping the smallest of items. It can also be used to wrap items as large as helicopters, ships, etc., by using adhesive tape and shrink-wrap it.

### 2. Less workload means lower labor cost

The technology can be applied simply by wrapping the products with the film and removing it, without degreasing or any other additional process. Because there is no need to apply anti-corrosive oil, operators no longer need to worry about uneven oil application and spend far less time on corrosion prevention.

### 4. Ecological technology

As the product does not contain any specified substances such as nitrous acid and is RoHS-and TRGS-615/900-certified, INTERCEPT Technology supports your environmental initiatives. It can also be safely used for international freight transport.



Static Intercept



### Comparison of storage costs over three years

Stored in W2-size (1145×960×750 mm) square-bottom bags

Product name	INTERCEPT Technology (Product model: Static Intercept)	Anti-corrosive oil + anti-corrosive film
Total cost	4,500 yen*	Over 14,000 yen*
Cost of film	4,500 yen	1,000 yen
Units of film used	1	12
Cost of anti-corrosive oil application	0 yen	Extra cost
Cost of anti-corrosive oil removal	0 yen	Extra cost
Cost of liquid waste disposal	0 yen	2,000 yen

\*Desiccant cost is separately required.

### Reduce the cost and environmental impact

	Volatile anti-corrosive film	INTERCEPT Technology	Deoxygenation packaging
Total cost	Expensive	Inexpensive	Expensive
Effective period	Several months	Several years	Several months
Effective temperature	+5°C to +35°C	-40°C to +85°C	Unknown
Applicable materials	It varies depending on the ferrous/ nonferrous metals being used.	Any materials including metal, rubber, etc.	Any materials including metal, rubber, etc.
Pre-process	Application of anti-corrosive oil	None	None
Special packing process	None	None	Deaeration, heat seal
Post-process	Removal of anti-corrosive oil and washing	None	None
Waste disposal	Industrial waste	Recyclable and reusable as PE	Industrial waste
Secondary materials	Desiccant, anti-corrosive oil	Clay-based desiccant	Desiccant, barrier film, deaeration
Manufacturer's testing method	Temperature and humidity cycle test (JIS partially applied)	Brine spray test (MIL SPEC applied)	Temperature and humidity cycle test
Application	Films, bags	Films, bags, shrink films, vacuum-formed trays, corrugated plastic sheets	Bags
Applicable object size	Max. 60 cm (Range of anti-corrosive effect)	Infinite	Unknown
Negative environmental impact	Significant	Insignificant (VW achieved a reduction of 11,200 t/year, CO2 \$11/ton)	Medium

# RCEPT Technology product line-up and sample applications

for nsport



Packing material for long-term storage



Intercept 2 (gusset bag)

Packing material for large-sized equipment



Intercept Shrink Film

Reusable boxes for freight transport





### Process flow from inquiry to product purchase

### 1. Inquiry

Request a consultation



Please send us your inquiry by visiting our INTERCEPT Technology website and clicking "Request a consultation."

### 2. Consultation



Let us know about the product for which you require anti-corrosion protection, such as its shape, dimensions, duration of protection, etc. Our staff will identify the cause of corrosion and suggest a packing solution based on the information you provide.

### 3. Evaluation test



Please try out our INTERCEPT Technology first to check whether it can effectively solve your corrosion issue before full implementation.

### 4. Quotation



Our staff will submit a quotation based on your information and evaluation result.

### 5. Purchase and delivery



Our staff will provide full support until the desired outcome is achieved.

**Trading Company with Planning & Development Capabilities** 



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