Hate Rust
ROVALize it Now!

Roval Cold Galvanizing Compound
ROVAL has a high 96% zinc content in its dry film and its anti-corrosion performance is equivalent to that of hot-dip galvanizing. Whether being used as an alternative to hot-dip galvanizing for the overall coating of steel structures, or being applied to the restoration and renovation of galvanized surfaces, ready-to-use ROVAL cold galvanizing has been widely used for more than half a century for the anti-corrosion protection of steel structure in various fields.

**Renovation of galvanized surfaces**
- Connection corridor between the buildings
- Stereo garage

ROVAL can effectively extend the service life of galvanized sheets.

**An alternative to hot-dip galvanizing**
- Hall facilities
- Weak parts that are easily deformed under high temperature

ROVAL can be used as an alternative to do anti-corrosion protection of large parts that can’t be put into the zinc-plating tank and of weak parts that are easily deformed under high temperature.

**Restoration of galvanized surfaces**
- Cut surfaces
- Welding parts

ROVAL is the best choice to repair the cutting surface, welding parts, and the galvanizing layers without zinc coating or with zinc coating falling off.

**Anti-corrosion protection to steels**
- Steel fence
- Connection components

ROVAL can achieve the same anti-corrosion effect with that of hot-dip galvanizing by being directly coated on the surface of the steel to prevent the steel from rust.
Brushing to gain the same anti-rust effect with that of hot-dip galvanizing

**ROVAL**
Cold Galvanizing Compound

**AQUA ROVAL**
Water-based anti-corrosion paint
Cold Galvanizing Compound
Heavy-duty corrosion-resistant paint applies to daily living environment well with its VOC content reducing 97% compared to that of solvent paints of ROVAL.

Better heat resistance and solvent resistance
Achieve high quality coating system by using together with RV-TOP (Color Customizable)

**EPO ROVAL**
Cold Galvanizing Compound

Anti-bacterial and mildew free compound with strong rust proof performance

**ROVAL α**
Zinc Rich Compound

Suitable for repairing old galvanizing surfaces

**ROVAL SILVER**
Zinc Rich Compound

Choose the right metallic spray according to different application purposes

**COVER SERIES**
ZC Galvanizing Repair Metallic Spray & MC Color Matching Metallic Spray

Verification of Anti-Corrosion Effect

P.10  Comparision between ROVAL and Normal paints
P.11  Test 1 ROVAL vs Other anti-corrosion paints
P.13  Test 2 ROVAL vs Hot-dip galvanizing
P.15  Color weathering of Roval products

User Guides

P.16

Applications

P.17
Ready-to-use single pack type cold galvanizing. Equivalent anti-corrosion performance to hot-dip galvanizing.

ROVAL
Cold Galvanizing Compound

With 96% zinc content in its dry film, ROVAL has the strongest anti-corrosion and the highest cost-effective performance among ROVAL product line.

**Cross-sectional view of the ROVAL film**

Paint film contains a large amount of zinc dusts. (>1000)

**Properties**

- **Single Pack Type**
  - Easy to handle
  - No pot life or mixing required

- **Color Fading**
  - The paint color naturally weathers with exposure like that of hot-dip galvanized surfaces.

- **Film Hardness**
  - Hardness of the film improves with exposure.

- **Electrical Conductivity**
  - ROVAL film conducts static electricity.

**Anti-corrosion Effect**

<Anti-corrosion Effect Sample>

- Hot-dip Galvanizing
- Normal Paints

**Matching**

- **ROVAL Thinner 0.8kg**
  - The special thinner for R, Ra, and RS
  - Match with R, Ra, RS

- **ROVAL MC Color Matching Metal Spray 420ml**
  - Match with R

- **ROVAL ZC Galvanizing Repair Metal Spray 420ml**
  - Match with R

**Table**

<table>
<thead>
<tr>
<th>Type</th>
<th>Aerosol 420ml</th>
<th>2.5kg</th>
<th>10kg</th>
<th>25kg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practical Coverage</strong></td>
<td>0.5m²</td>
<td>5m²</td>
<td>20m²</td>
<td>50m²</td>
</tr>
<tr>
<td><strong>Dry to Touch Time (minute, @ 25°C)</strong></td>
<td>20-30*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recommended Film Thickness</strong></td>
<td>80μm²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Packaging</strong></td>
<td>24 / case</td>
<td>4 / case</td>
<td>1 / case</td>
<td>drum</td>
</tr>
</tbody>
</table>

*1. At 40μm
*2. Two 40μm coats (Total film thickness: 80μm)

**RoHS** Compliance with the EU Regulations on Organic Chemicals
Water-based organic zinc rich compound

AQUA ROVAL

Cold Galvanizing Compound

Aqua Royal Cold Galvanizing Compound is a 2 pack water-based anti-corrosion system based on waterborne synthetic resin liquid. Aqua Royal is easy and safe to use, and has little or no odor. It can be applied not only in serious corrosive environment but also in our daily living environment. Due to its high zinc content (95%) in the dry film, it provides cathodic protection to steel structures and it can be applied either as a single-coat or as primer in a system with other intermediate coating and top coating.

VOC content is 38g/L
Water-based anti-corrosion system greatly reduces VOC content.

Match well with galvanizing surfaces
Aqua Royal can be applied directly on old galvanizing.

No smell
Aqua Royal has little or no odor.

Brushing Aqua Royal directly on old galvanizing surfaces
Aqua Royal can be applied on adhered old galvanized surfaces directly to renew the old hot-dip galvanizing. We suggest brushing the whole surface if the repairing area is large.

Water-based anti-corrosion system does not conduct electrochemical action.

<table>
<thead>
<tr>
<th>Type</th>
<th>1kg Set</th>
<th>5kg Set</th>
<th>20kg Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Coverage</td>
<td>2m²</td>
<td>10m²</td>
<td>40m²</td>
</tr>
<tr>
<td>Dry to Touch Time (minute, @ 25°C)</td>
<td>30*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended Film Thickness</td>
<td>80μm²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging</td>
<td>4 / case</td>
<td>1 / case</td>
<td>drum</td>
</tr>
</tbody>
</table>

Anti-corrosion Effect
Hot-dip Galvanizing ★★★★★
Normal Paints ★

RoHS Compliance with the EU Regulations on Organic Chemicals

[How to apply Aqua Royal]

Point 01
Surface Preparation
Prepare the metal surface by sandblasting or with appropriate power tools to remove all contamination on the surface such as rust, mill scale and old paints.

Point 02
Remove the oil.
Oil may peel or crack the paint film.

Point 03
Making compound
Pour the liquid part into the container and agitate with a powered tool. Put the powder part into the liquid little by little, keeping stirring the mixture at least 3 minutes until the powder blend into the liquid without any lump.
※ The mixture should be used up within 8 hours.

Point 04
Brushing
Use brush, roller to apply two coats. (Each coat: 40μm) Total dry film thickness is 80μm. Do not spread the paint too thin or thick.

Do not dilute. Only when concentration of mixtures is high, it can be diluted by using proper proportion (0-2 wt%) potable water.

The powder and liquid should be mixed according to powder: liquid= 4:1 proportion. The mixture should be used up within 8 hours.

Please use special brush for water-based paint.
Better heat resistance and solvent resistance
Achieve high-quality coating system by using together with RV-TOP

EPO ROVAL
Cold Galvanizing Compound

Anti-corrosion Effect
<Anti-corrosion Effect Sample>
Hot-dip Galvanizing ★★★★★
Normal Paints ★

Color Sample

Heat Resistance
Solvent Resistance

Single Pack Type
Easy to handle
No pot life or mixing required.

Color Fading
The paint color naturally weathers with exposure like that of hot-dip galvanized surfaces.

Film Hardness
Hardness of the film improves with exposure.

Electrical Conductivity
ROVAL film conducts static electricity.

Heat Resistance
24 consecutive hours without abnormal situation at 300°C.
(The highest instantaneous temperature is 450°C)

RoHS
Compliance with the EU Regulations on Organic Chemicals

<table>
<thead>
<tr>
<th>Type</th>
<th>2.5kg</th>
<th>25kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Coverage</td>
<td>5m²</td>
<td>50m²</td>
</tr>
<tr>
<td>Dry to Touch Time (minute, @ 25°C)</td>
<td>20-30</td>
<td></td>
</tr>
<tr>
<td>Recommended Film Thickness</td>
<td>80µm</td>
<td></td>
</tr>
<tr>
<td>Packaging</td>
<td>4 / case</td>
<td>drum</td>
</tr>
</tbody>
</table>

EPO ROVAL can be used together with top-coat from other companies

Coating process of iron surface

<table>
<thead>
<tr>
<th>Process</th>
<th>Paint</th>
<th>Coating Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment</td>
<td>Prepare the metal surface by sandblasting or with appropriate power tools to remove all contamination on the surface</td>
<td></td>
</tr>
<tr>
<td>Primer 1</td>
<td>EPO ROVAL</td>
<td>≥ 30 mins</td>
</tr>
<tr>
<td>Primer 2</td>
<td>EPO ROVAL</td>
<td>≥ 24 hours</td>
</tr>
<tr>
<td>Intermediate coat</td>
<td>Intermediate coat testified by matching experiment #2</td>
<td></td>
</tr>
<tr>
<td>Top coat</td>
<td>Polyurethane and fluorocarbon top coat matching with intermediate coat</td>
<td></td>
</tr>
</tbody>
</table>

#2 Serious blistering may occur after some coatings are applied, please do mist coat treatment.
Note: Do not use phthalate, alkyl and other oil-based paint, because they will cause the film peeling off.
Any color you like!

RV-TOP
(Polyurethane Topcoat)

Color Customizable
The color of RV-TOP can be customized, please consult the technical services department of Royal Company to know detailed information of color customization.
TEL: 021—69156584

Weatherability
Having excellent light maintenance, color maintenance and UV resistance by using pigment with super weatherability.

A complete set of coating system
RV-TOP helps achieve a higher-quality coating system obtaining high anti-rust performance by using in combination with Aqua Royal or EPO Royal.

Impact Resistance
The film shows excellent protective performance with good impact resistance and abrasion resistance.

RV-TOP (solvent-based)

<table>
<thead>
<tr>
<th>Type</th>
<th>5kg Set</th>
<th>20kg Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Coverage</td>
<td>31 ㎡</td>
<td>125 ㎡</td>
</tr>
</tbody>
</table>

*The above data are calculated according to the theoretical value*

Application
- Aqua Royal + RV-TOP (grey)
- EPO Royal + RV-TOP (white)

- Household sunshade
- Pipeline

- Water-based multiple coating system (Aqua Royal + water-based intermediate coating + water-based top coating)
- Solvent tank
- Stereo garage
- Pipeline (right)
- Patterned steel plates

Aqua Royal Cold Galvanizing Compound
EPO Royal Cold Galvanizing Compound
Anti-bacterial and mildew free compound with strong rust proof performance

ROVAL α
Zinc Rich Compound

Anti-corrosion Effect

<Anti-corrosion Effect Sample>
Hot-dip Galvanizing
Normal Paints

Anti-bacterial and mildew free compound
with strong rust proof performance

Type

Practical Coverage
Dry to Touch Time (minute, @ 25℃)
Recommended Film Thickness
Packaging

<table>
<thead>
<tr>
<th>Type</th>
<th>Aerosol 420ml</th>
<th>1.5kg</th>
<th>20kg</th>
<th>Practical Coverage</th>
<th>Dry to Touch Time</th>
<th>Recommended Film Thickness</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.4m²</td>
<td>3m²</td>
<td>40m²</td>
<td>20-30*</td>
<td>80μm²</td>
<td>24 / case</td>
<td>4 / case</td>
</tr>
</tbody>
</table>

*1: At 40μm
*2: Two 40μm coats (Total film thickness: 80μm)

Properties

Single Pack Type
Easy to handle
No pot life or mixing required.

Color Fading
The paint color naturally weathers with exposure like that of hot-dip galvanized surfaces.

Film Hardness
Hardness of the film improves with exposure.

Electrical Conductivity
ROVAL film conducts static electricity.

Antimildew Antibacterial
Activated zinc ions in Ra inhibit mildew and bacterial growth.

RoHS
Compliance with the EU Regulations on Organic Chemicals

Structural Drawing of Ra’s Film

Under the excellent barrier protection of zinc flakes, the pipeline brushed with Ra didn’t mildew and rust.

Ra does not contain any pigment (aluminium). The very beautiful silver metallic luster of Ra comes from using zinc flakes (lamellar zinc powder) as the elemental component of Ra against corrosion to steel structures.
Suitable for repairing old galvanizing surfaces or as a topcoat for ROVAL Cold Galvanizing

ROVAL SILVER
Zinc Rich Compound

Properties

Contains Aluminum
Aluminum pigments provide barrier protection to a metal.

Single Pack Type
Easy to handle
No pot life or mixing required.

Color Fading
The paint color naturally weathers with exposure like that of hot-dip galvanized surfaces.

Film Hardness
Hardness of the film improves with exposure.

Electrical Conductivity
ROVAL film conducts static electricity.

Anti-corrosion Effect
★ ★ ★ ★ ★
Anti-corrosion Effect Sample
Hot-dip Galvanizing ★ ★ ★ ★ ★
Normal Paints ★

Color Sample

420ml  1.5kg  7kg  20kg

<table>
<thead>
<tr>
<th>Type</th>
<th>Aerosol 420ml</th>
<th>1.5kg</th>
<th>7kg</th>
<th>20kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Coverage</td>
<td>0.4m²</td>
<td>3m²</td>
<td>14m²</td>
<td>40m²</td>
</tr>
<tr>
<td>Dry to Touch Time (minute, @ 25°C)</td>
<td></td>
<td></td>
<td>20-30**</td>
<td></td>
</tr>
<tr>
<td>Recommended Film Thickness</td>
<td>80µm**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging</td>
<td>24 / case</td>
<td>4 / case</td>
<td>1 / case</td>
<td>drum</td>
</tr>
</tbody>
</table>

*1: At 40µm
*2: Two 40µm coats (Total film thickness: 80µm)

RoHS Compliance with the EU Regulations on Organic Chemicals

Use ROVAL as primer for better anti-corrosion performance.

To achieve the best anti-rust effect, ROVAL Cold Galvanizing Compound is highly recommended to be used as primer when using ROAL Silver Zinc Rich Compound to do anti-corrosion pretreatment of steel, large-area coating or in severe corrosive environment. If applying ROAL Silver Zinc Rich Compound alone without primer, the thickness of the coating film must be larger than 80µm.
Galvanizing Repair Metallic Spray

ZC

Anti-corrosion Effect ★★★

Color Sample

Theoretical coverage · · · · · · · · 1m²
Dry to Touch Time · · · · · · · · · 20-40 minutes
Recommended Film Thickness · · 40μm
Packaging · · · · · · · · · · · · · · · · · · · · · 24 / case

Properties

Power Up!
Reinforce anti-corrosion performance as a topcoat to ROVAL.

Repairing Spray
Suitable for touch-ups of damaged or thinly galvanized surfaces.

Anti-corrosion protection
Contains 68% zinc as well as aluminum compounds to protect against corrosion.

Temporal Sheen
Silver sheen color weathered with exposure like that of hot-dip galvanized surfaces.

Application

Color Matching Metallic Spray

MC (No Anti-corrosion Effect)

Color Sample

Theoretical coverage · · · · · · · · · · 3m²
Dry to Touch Time · · · · · · · · · · · · 15-30 minutes
Recommended Film Thickness · · · · 10μm
Packaging · · · · · · · · · · · · · · · · · · · · · · · · · · · 24 / case

Application

Gray Coating Touch-Up

Before

After application

MC has a metallic sheen color and the silver sheen color weathered with exposure like that of hot-dip galvanized surfaces, it is the perfect match to color of galvanizing and is particularly suitable for gray coating touch-up.

After 6 months exposure

No anti-corrosion effect.

Spray MC after applying ROVAL R on cut profiles, welds, and non-plated areas for maximum protection.

Weathering is slowed by excessively thick film. Exposure conditions will affect the weathering rate.

Before

Topcoat for ROVAL R

After

Apply ROVAL R

Apply MC for color matching
ROVAL vs Normal paints

Mechanisms of Anti-corrosion

**ROVAL**
(Anti-corrosion by electrochemical reaction)

Water may penetrate through the zinc dusts on the steel surfaces, but the steel is protected by the electrochemical reaction of zinc.

The oxidization of zinc forms corrosion products which act as a protective barrier against air and moisture improving anti-corrosion performance.

If rust should develop on damaged or thinly covered surfaces, electrochemical reaction prevents rust from creeping under the paint film.

**Normal paints**
(Anti-corrosion by barrier protection)

Paint film provides protection to a metal surface by shielding it from water/air.

A protective barrier deteriorates with exposure.

Rust will develop and creep under the paint film.

Maintenance

**Preparation**

- Hand tool
- Power tool

Steel

- Low cost

**Reapplying**

No need to remove old film

Steel

- Easy application

© New ROVAL film
© Old ROVAL film

**Preparation**

Sandblasting
Power tool

Steel

- High cost

**Reapplying**

Top-coating
Secondary layer
Primer
Steel

- Complex application
ROVAL vs Other anti-corrosion paints

ROVAL has the distinctive property to stop rust creeping under the film.

We have proven results from a 36-month atmospheric exposure test concluded at Japan Weathering Test Center in Miyako-jima Island testing ROVAL and other companies' paints for anti-corrosion performance.

These results and pictures prove that ROVAL protects steel surfaces from rust creepage with its electrochemical reaction, whereas other paints allowed the rust to spread from the cross-cut areas.

<Miyakojima Island Testing Ground>
Miyakojima Island is located in the far southern portion of Japan, with roughly the same latitude as Florida, U.S.A. The island is surrounded by a lot of deteriorating factors such as high temperature, high humidity, strong sunshine, and a salt-rich atmosphere. The environment is known to be the best for accelerating film deterioration.
AL vs Other anti-corrosion paints

- Epoxy paint + Urethane topcoat
- Epoxy paint + Fluoropolymer topcoat
- JIS anti-corrosion paint + Phtalic topcoat

Rust from cross-cut.
Rust from cross-cut.
Rust spread over the substrate.

Enlarged photo (cross-cut part)
Enlarged photo (cross-cut part)
Enlarged photo (cross-cut part)

Rust from cross-cut spreads.
Rust from cross-cut spreads.
Rust is found other than cross-cut.
Anti-corrosion performance of ROVAL is equivalent to the highest grade of hot-dip galvanizing available in Japan.

In order to compare the anti-corrosion performance of ROVAL with those from the hot-dip galvanizing process, corrosion accelerating tests were conducted by the Japan Paint Inspection and Testing Association in accordance with Japanese standard “JIS H8502-1999”. The results and pictures from the test show that ROVAL has an equivalent anti-corrosion performance to hot-dip galvanizing. ROVAL has been certified to have equivalent anti-corrosion performance as hot-dip galvanizing by the Council for Construction Technology Review and Certification in Japan.

<Salt Spray Test>
Accelerated corrosion testing by spraying salt water.

<Cyclic Corrosion Test>
Accelerated corrosion testing involving cyclic exposure to salt fog, dry and wet conditions.

<CASS Test>
Copper accelerated acetic salt spray test.

"JIS H8502-1999 is based on ISO standards: 4540, 4541, 8407, 8565, 9227, and 10062."
Results of Comparison Test: ROVAL vs Hot-dip galvanizing

<table>
<thead>
<tr>
<th>Test</th>
<th>ROVAL (80μm)</th>
<th>Hot-dip galvanizing (Zinc 550g/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before testing</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>Salt Spray Test 2256hrs</td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>Cyclic Corrosion Test 3024hrs</td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td>CASS Test 1008hrs</td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>
## Color weathering of Roval products

The film of Roval products weathers the same as galvanized materials by exposure. This characteristic makes repaired unapparent.

<table>
<thead>
<tr>
<th>Material</th>
<th>Before exposure</th>
<th>After 3 months</th>
<th>After 6 months</th>
<th>After 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROVAL</td>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td><img src="image3" alt="Image" /></td>
<td><img src="image4" alt="Image" /></td>
</tr>
<tr>
<td>ROVAL ALPHA</td>
<td><img src="image5" alt="Image" /></td>
<td><img src="image6" alt="Image" /></td>
<td><img src="image7" alt="Image" /></td>
<td><img src="image8" alt="Image" /></td>
</tr>
<tr>
<td>ROVAL SILVER</td>
<td><img src="image9" alt="Image" /></td>
<td><img src="image10" alt="Image" /></td>
<td><img src="image11" alt="Image" /></td>
<td><img src="image12" alt="Image" /></td>
</tr>
<tr>
<td>AQUA ROVAL</td>
<td><img src="image13" alt="Image" /></td>
<td><img src="image14" alt="Image" /></td>
<td><img src="image15" alt="Image" /></td>
<td><img src="image16" alt="Image" /></td>
</tr>
<tr>
<td>Hot-dip galvanizing</td>
<td><img src="image17" alt="Image" /></td>
<td><img src="image18" alt="Image" /></td>
<td><img src="image19" alt="Image" /></td>
<td><img src="image20" alt="Image" /></td>
</tr>
</tbody>
</table>

- Deviations can occur between the samples shown, the delivered products and the standard references due to differences in shooting angle, light, and the surroundings.
User Guides

<Tips>
ROVAL has to be applied DIRECTLY to metal surfaces.
The direct contact between the zinc and the metal surface will result in cathodic reaction.

Never use primers.
Primers will compromise the performance of Roval products.

3 important points

Point 01 Surface Preparation
Prepare the metal surface by sandblasting or with appropriate power tools.
Remove all contamination on the surface such as moisture, oil, mill scale, rust, and old paints.

Point 02 Adequate Agitation of Product
Agitate the products well to obtain uniform density.
Dilution is not required.
*Only when the product thickens, use aromatic thinner such as Xylene.

Point 03 Sufficient Film Thickness
Apply two coats. (Each coat: 40μm)
Total dry film thickness = more than 80μm
Do not spread the paint too thin.
Anti-corrosion performance is proportional to DFT.

Application methods

Brush
E.g. Soft brush

Roller
E.g. Long haired-roller

Conventional/air-less spray

The importance of Surface Preparation
Surface pretreatment directly affect the anti-corrosion performance and service life of coating film.
To get the best anti-corrosion performance, surface pretreatment is very important.
Brushing only after the clean and bare metal surface is exposed out by using sandblasting or power tools to remove the contamination on the metal and galvanizing surfaces.

Results of salt spray experiments under different surface preparation conditions

Wrong Application

Applying product to rusted surfaces
Applying products to painted surfaces
Applications

From ordinary to extreme
Various ways to use the Roval products

- Roads
- Bridges
- Marine equipment
- Power stations
- Pedestrian bridges
- Buildings
- Catwalks
- Lighting towers
- Steel frames
- Pipes
- Ducts
- Pipelines
- Gratings
- Lightning rods
- Steel gates
What if the steel structure becomes old?

**Restore it with ROVAL!**

Applying ROVAL on worn galvanized surfaces prolongs a life of steel structures. This property leads to the sustainability of steel resources. It is time to switch from “Scrap & Build” to “Recycle.”

Let’s kick start with ROVAL!
ROVAL has obtained ISO9001 quality management system and ISO14001 environment management system