

# Eco-one

leaders in eco-friendly metal pre-treatment

 **1** process

 **1** environment

 **1** product

# Benefits

## Eco-one Process

One step, ready to use product for metal surface preparation prior to painting, compatible to both liquid paint and powder paint. A metal degreasing & phosphating process with minimal effects on air, water, soil, ecosystems and human health

- ✓ No heat (cost saving).
- ✓ No water (usage saving).
- ✓ No CO, CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>.
- ✓ No VOC's, CFC's or HCFC's
- ✓ Not toxic or harmful
- ✓ No daily analysis
- ✓ No disposal costs
- ✓ Reduces your carbon footprint
- ✓ No potential for ozone-depletion or global warming.
- ✓ Faster, less expensive process.

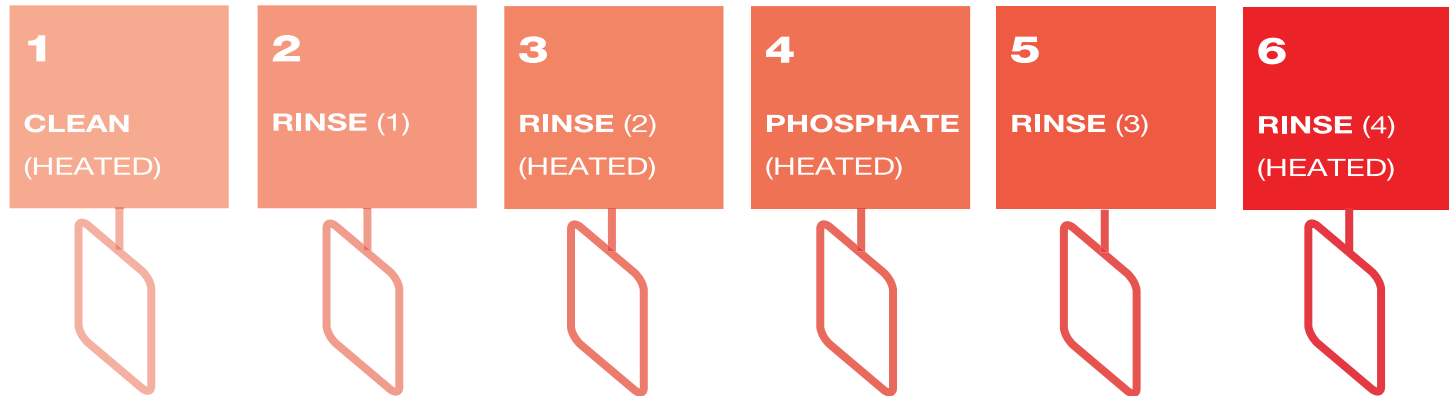
After treatment the parts will have a 1-2 micron thickness organic phosphate coating which increases top coat adhesion and provides protection for months if stored inside.

The special organic polyphosphate will absorb oily contaminants.  
The life of the chemical is theoretically unlimited.

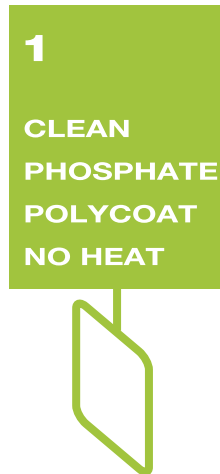
The only analysis necessary is done in the lab every 3 months.

# Typical Degreasing & Phosphating Process

## Iron/Zinc Phosphate Process



## Eco-one Process



one process ► one environment ► one product

A metal degreasing & phosphating process with minimal effects on air, water, soil, ecosystems and human health  
Operates at room temperature and produces no effluent.

# Process Cost Comparison

- ▶ Energy
- ▶ Water
- ▶ Waste
- ▶ Analytical
- ▶ Dead time
- ▶ Capital
- ▶ Space
- ▶ Operating
- ▶ Chemicals

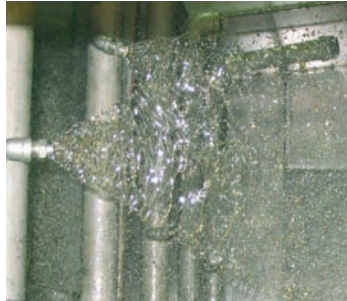
## Eco-one Process

<b>Low</b>	Energy requirements are minimal since there is no heating also smaller number of pumps to operate.
<b>None</b>	The process does not use any water
<b>None</b>	There is no waste water and no sludge is created.
<b>Very Low</b>	No analysis must be carried out on site. Just send us a sample every quarter.
<b>None</b>	There is no waiting time before starting operations.
<b>Low</b>	Our application equipment can be up to 75% of the cost and size of any conventional phosphating system.
<b>Low</b>	With only one stage, plants are compact, less floorspace and simple to install.
<b>Known</b>	Costs can be calculated precisely. The cost per m2 is fixed; it does not matter how many m2 you treat per day.
<b>High</b>	Initially chemicals costs are higher, but you never need to change the solution, only replenish.

## Conventional Phosphating Process

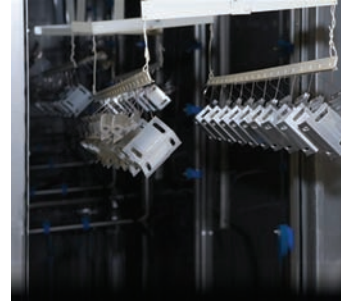
<b>High</b>	With several baths heated and several large motors running, the energy required is much greater.
<b>High</b>	Water is the main ingredient and a large amount of fresh water is used in the rinsing stages.
<b>High</b>	Periodic replacement of chemicals plus purification of rinsing water plus regular de-sludging of phosphating tank.
<b>High</b>	All stages of the process require daily accurate analytical controls.
<b>High</b>	Must wait for baths to heat before starting operations.
<b>High</b>	Several tanks, plus numerous pumps, solution heating, computerised analysis, water treatment & de-sludging equipment and effluent control.
<b>High</b>	With at least 3 stages, the space required is significantly greater.
<b>Uncertain</b>	There are many hidden variables that make it difficult to calculate the actual running cost of the process.
<b>Low</b>	Chemical costs are significantly lower but regular replacement of phosphating baths is required.

# Eco - one Process



## One Stage Only - Eco-one

Because both degreasing and phosphating are carried out simultaneously in one stage. It uses a single product to treat all metal surfaces including galvanised materials. There is no need to process the parts through several stages.



## Superior Performance - Eco-one

No thermal energy is required - There is no waiting for warm-up before work can start - there is no effluent, ever - There is no down-time for cleaning of the tank - There is no cost for effluent/waste disposal - Low capital costs - Less space in the factory - Simple to operate - No daily analytical controls are needed.



## No Heat - Eco-one

It operates at room temperature obviating the need to heat the solution. This is advantageous both in terms of energy consumption in general and in the case of occasional or intermittent production, where heating would be very inefficient.



## Easy Process Management - Eco-one

Plant operation is very simple. Parts are dipped or sprayed, hung to drip or blown off, and either air dried or, for faster processing, oven dried. Nor is there any significant training required for maintenance, as the process requires no daily analytical controls of the treating solution.



## No Effluents - unlimited bath life - Eco-one

There is no effluent because the oil and greases taken off products being treated are chemically changed to become part of the polymer coating and exit the process on the product.



## Business loans available for Eco-one

0% Business Loans are available from the Carbon Trust to help finance and invest in energy saving projects

# Eco-one



Delta Process Systems, a British company leading their field in the design and production of paint finishing systems. In-house manufacturing and equipment are used to build systems suited to each individual clients specification.

Whatever your requirements, be it a new, re-sited or modified plant, we can provide the service you need.

Our capabilities cover an extensive range of product finishing plant and equipment at highly competitive prices, all of our packages can be tailored to meet your budget.

All major plant items are manufactured in our onsite facility, ensuring we have full control of quality and delivery.



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