

Picklex® is environmentally safe, non-hazardous, water based and water soluble **nano Conversion coating** used for **complete surface preparation/pre-treatment** of steel (including **stainless steel**), **galvanized steel & aluminum** (any **ferrous and non-ferrous** metal) before finishing, such as powder coating, liquid painting, e-coating, epoxy coating, ceramic coating, galvanizing, chrome plating etc. **Replaces phosphate processes for steel and chromate conversion coating for aluminum before finishing.** Performs multiple jobs in one step. Also, **replaces Nitric Acid for passivating Stainless Steel.**

Picklex® removes light surface rust (also weld & laser scale) and white rust from the metal surface while providing a composite conversion coating in one application. **Picklex® Process** uses fewer steps, less time & labor and is very cost effective compared to phosphate & chromate systems. It also eliminates the **EPA & OSHA** regulations. Conversion to the **Picklex® Process** usually **does not involve any major equipment change** in the existing process.

Picklex® can also **replace acid pickling** through phosphating or application of rust inhibitor in one step. **Picklex®** removes the **heat treat scale** or **mill scale** from the metal surface, conditions the metal and provides a protective coating (conversion coating), all in one dipping process.

Features/Benefits : **VALUE ADDED PRODUCT**

TESTED/VERIFIED BY US EPA

- ❖ **Environmentally safe**, non-hazardous, water based and water soluble **Conversion coating**
- ❖ Can be applied by spraying or dipping process
- ❖ Simple **maximum 3-step surface preparation & pre-treatment process** (**Picklex®** with de-greaser, rinse and final rinse)
- ❖ Simple **one-step** dipping process for de-scaling/de-rusting/pickling and coating (after de-greasing)
- ❖ Saves space and initial equipment costs (for new set up)
- ❖ **Both Steel & Aluminum** including **galvanized steel** can be processed in same bath
- ❖ **Removes light surface rust, laser scale, weld scale** (replaces blasting or acid etching)
- ❖ **Removes white rust** from non-ferrous metal surface
- ❖ Eliminates phosphate, chromate, chemical sealer, rust inhibitor (for aluminum, galvanized steel) etc.
- ❖ **Eliminates Nitric acid** for **passivating Stainless steel** surface
- ❖ **Removes heat treat scale** (mill scale, heat treated steel), heavy rust etc. and provides better bonding
- ❖ Apply by **dipping or spraying process (manual or automated)**
- ❖ **Coverage** – Very high coverage
- ❖ Used **As Is**, therefore no mixing, no regular monitoring, no regular concentration adjustment, no Down Time
- ❖ Easy modification of conventional process with no major equipment change
- ❖ There is **no waste disposal or waste treatment** from **Picklex®** or the rinse tank
- ❖ **No heavy metal** goes in the rinse tank (**Picklex® does not etch**). **Rinse water is not a Hazardous Waste**
- ❖ **No sludge** is generated and no cleaning of the dip tank or spray booth is necessary. Also **no down time**
- ❖ Easy clean up – Since **Picklex®** is water soluble
- ❖ For small operations, the **final rinse water can be continuously disposed to the drain**
- ❖ **Reduces production cycle time**, labor and overall pre-treatment cost
- ❖ **Eliminates EPA & OSHA** involvement

Typical Applications:

As a Replacement of Acid Pickling: **Picklex®** replaces the complete process of acid pickling through the application of rust inhibitor or phosphate coating in one step. In **one-step dipping process** (any oil on the surface has to be removed separately), **Picklex®** removes rust, mill scale, heat-treat scale, conditions/pickles and provides a conductive **conversion coating** (protective coating). It prepares a **rust/contamination free** surface. **Picklex®** provides a very long term indoor rust protection (in terms of several years depending on the environmental condition of that area). Also, the coating allows welding (with no weld spatter) and finishing.

As a Replacement of chromate conversion coating: Picklex® completely replaces the chromate conversion coating process for preparing **aluminum and galvanized steel** for finishing. In **one-step** dipping or spraying process (any oil on the surface has to be removed separately), **Picklex® removes white rust** from the surface and provides a conversion coating (prepares a **rust/contamination free surface**). Then the part is rinsed with regular water (no chemical sealer) and oven dried before finishing. **Picklex® coating provides years of indoor rust protection**. Also, **Picklex®** provides excellent bonding and corrosion resistance with the top coating.

As a Replacement of phosphate coating: Picklex® completely replaces the phosphate pre-treatment process (**iron and zinc phosphate**) for preparing new cold rolled steel (or sandblasted steel) for finishing. In one-step dipping or spraying process. **Picklex®** removes surface rust, weld scale, laser scale and provides a nano conversion coating, Seals the coating and stops the oxidation process, all in **One Step** (prepares a **rust/contamination free surface**). Then the part is rinsed with regular water (**no chemical sealer**) and oven dried before finishing. **Picklex®** provides excellent bonding and corrosion resistance with the top coating.

Stainless Steel Passivation: Picklex® replaces **Nitric Acid Passivation with Zero waste disposal** by dipping process with two hot rinsing (Tap water). Performs **Pickling & Passivation** at the same time. Rinse water is not a Hazardous waste.

Note: Picklex® works on cold rolled **steel, stainless steel, galvanized steel, aluminum** etc. (any **ferrous and non-ferrous** metal). Therefore, both cold rolled steel, sandblasted steel and aluminum can be processed at the same time in same **Picklex®** bath. Since **Picklex® does not etch** while removing rust & scale, therefore **no heavy metal** goes into subsequent rinse water (rinse water is not a hazardous waste). Also, rust or scale removed as particles by **Picklex® does not contaminate Picklex®** bath. **Picklex®** after complete drying provides a **very long-term rust protection** when shipped under covered area or stored indoors (in terms of years depending on the environmental condition of that location).

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Technical Information:

Properties:

Product Name _____	Picklex®
Color _____	Green
Phosphoric acid _____	Around 5% by volume
Flash point _____	> 200°F
Freezing point _____	< -40°F
PH _____	< 2.0 (still non-hazardous in nature)
VOC _____	< 0.01 lbs./gal (not traceable)
Solubility in water _____	Highly soluble
Storage temperature _____	Ambient
Shelf life _____	> Indefinite (keep indoors in a shaded area)
Shipping _____	No special DOT regulation (Class 55)

