



# Keeping us Healthy

The Nanopaint color line was developed to give customers an intelligent, professional, efficient, and ecological solution for the application of quality protective paints, using unique technology. These paints were developed for a wide variety of surfaces. They are easily applied, nontoxic and do not release toxic vapors, making them suitable for closed rooms, clean rooms, and use in the food industry.



# Exceptional Advantages



- NP** Water based paint... the next generation of paints.
- NP** Nontoxic, environmentally friendly (green), suitable for use in food industry, residential areas, clean rooms, ships' hulls and bilge, doesn't release toxic vapor, eliminating the use of protective masks.
- NP** Can be applied directly on rust. No need for sandblasting beforehand.
- NP** No need for use of thinners or dissolvent before use.
- NP** No need for cleaning with primers or rust removers (the paint includes both)
- NP** It is single - component, making it easy to apply.
- NP** When there is paint left over after completion of job, you just close the can and the paint will remain fresh. (There is no waste as in a two-component paint)
- NP** Because it is water based, you can paint on moist surfaces.
- NP** The paint is nonflammable and flame retardant, therefore is fit for use in electrical and fire sensitive areas.



# Exceptional Advantages



**NP** Paint is very flexible (doesn't crack easily) it is anti-bacterial and UV resistant; fit for application on concrete and wood surfaces (decks) – interior and exterior. Furthermore, it can be used as a primer and can be applied on top of all kinds of paints except for silicon-based paints (Hammerite etc.)

**NP** With proper preparation, it can be applied by spraying, roller, or brush under high humidity conditions and a marine environment.

Only 2-hour drying time between coats.

**NP** Paint can be applied in temperatures ranging from 3°C to 60 °C. After drying, the paint is resistant for temperatures between -59 °C and 250 °C.

**NP** Coverage of surface area - ( square meter per liter) is far more than any other existing alternative.

**NP** In contrast to epoxy based and polyurethane based paint that act like sealed "gloves" on top of rust which prevents exposure to oxygen and other gases (meaning that any scratch, tear or breakage in the paint will cause immediate expansion of the rust under the "glove" and the paint to peel) NANOPAINT COLOR chemically reacts with the rust. This process stops corrosion and creates a neutral protective coat. If the paint is scratched, rusting will only take place along the scratch itself. Due to the paint's special qualities there will be no rusting below the coat of paint.



# Test Results



NP-605 NANO-PAINT technology shows excellent results in adhesion and flexibility compared with similar products from competitors.

For example:

Hammerite (Britain)

Granville (Britain)

Tambour Metal (Israel)

NP-605 technology has been tested in the best research facilities around the world, including: the United States, Europe, and Israel.





# Comparison of Paints Regarding Rust in the German Metal Industry



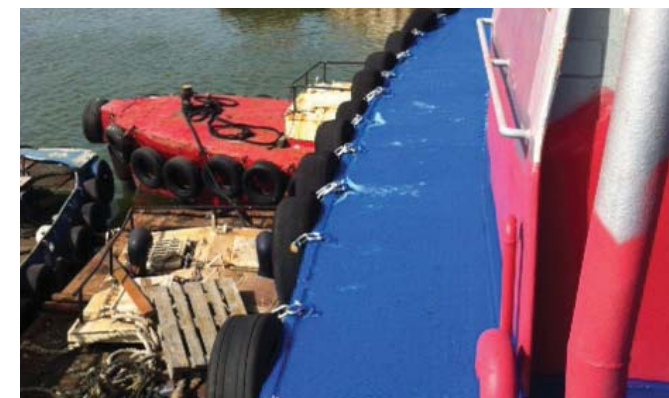
## ISO 12944 (C3 – C4)

Paint	Aquatic color	ZINGA	NANOPAINT NP-605
Company	2k w metallgrund	Belgium	
Manufacturing Country	Germany	Belgium	Israel
Base	Double component- water-based	Single component - solvent	Double component- water-based
Painting purpose/type	Primer	Primer	Primer + top coat
Top coat on top of primer	Needed	Needed	Not needed
Preparation of surface/ removal of rust	Sandblasting	Sandblasting	Water blasting for loose rust removal only
First coat depth (micron)	60	50	50
Drying time between coats (in hours)	12	24	2
Coverage surface area per liter (in m <sup>2</sup> )	4.6	3.6	9
Quantity of paint per 1 m <sup>2</sup> \50 micron (in grams)	218	278	110
Quantity of paint per 1 m <sup>2</sup> \200 micron (in grams)	872	1112	440

# Comparison of U-COR NANOPAINT with competitors



Primer	Consumption [ 1 L/m2]	Working time [days] per 3 layers of coat	Drying time between coats [hours] 20 °c	Coat depth (micron)
NP-605	9	1	2	160
Akzo-Nobel (2GAL)	6	3	24	280
Ameron (amerocat 450)	5	3	24	320
Uritan	9	2	24	180
Unipol	8	2	24	170

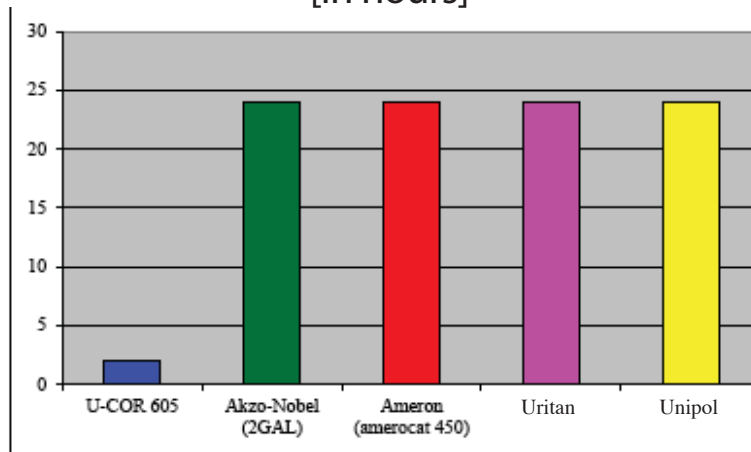




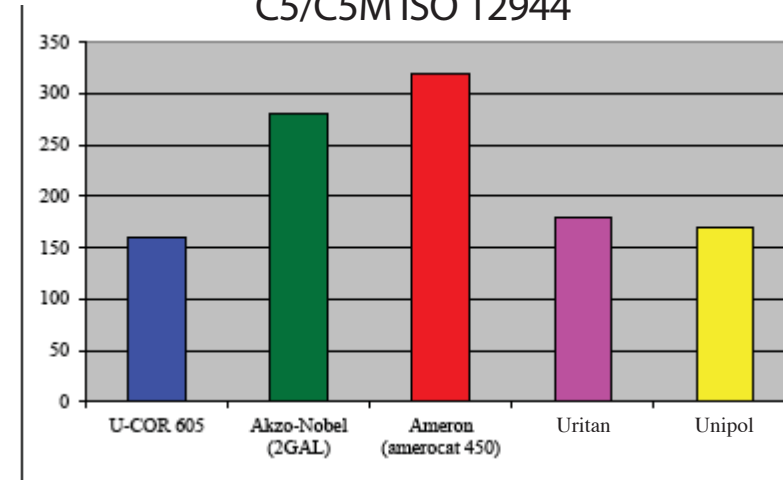
# Comparison of NANOPAINT NP-605 with competitors



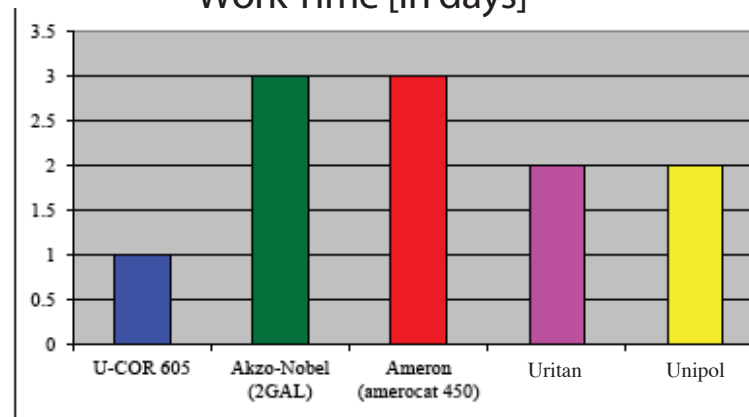
### Drying Time Between Coats [in hours]



### Coat Depth [in microns] C5/C5M ISO 12944



### Work Time [in days]



# Features



## How it works

NP-605 operation based on the chemical conversion of rust (iron oxide) to iron phosphate. This chemical reaction provides great resistance against corrosion. The paint bonds chemically to the metal and therefore provides a full protection system. In tests that were conducted on the paint, it was found that scratches or damage to the paint resulted in rust only on the damaged area and no further corrosion occurred. Furthermore, with time, the paint surrounding the damaged area brought about a process of "self-healing" and stopped the development of more corrosion. A damaged surface area need only to be painted in the affected area. After a long period if other signs of corrosion are evident, they can painted with another coat.

## Preparation of Surface for Paint

Because the paint chemically converts the rust and actually makes it a part of the protection coat, there is no need for clumsy and expensive preparations. Even with surfaces that are severely damaged by rust, you only need to remove rust by a steel brushing or water blasting (150 atm.). Additionally, one can apply the paint immediately after washing the surface even if it is still moist, since the paint is water-based.

## Environmental, Health and Safety Concerns

NP-605 is a water-based paint that does not contain toxins and solvents and therefore is defined as a "green" paint that is completely safe for the environment, and people that come in contact with it. While applying the paint, no special respiratory protective gear is needed. The paint is non-flammable, does not release toxic vapors and because it is water-based, it actually possesses flame retardant qualities. These advantages make it a safe and highly efficient paint especially for care of ships, ballast tanks, closed rooms and for use near flammable materials and sensitive explosives. The US Navy (Hazard Assessment) has given NP-605 its approval . It is safe to store, transport and treat this paint.



## In Conclusion

In many countries around the world, there is much awareness for using "green" substances that help to keep the environment safe and do not harm their users or people who live near them. This trend has taken hold in an increasing number of leading companies and organizations, and they are making efforts to keep their workers and our environment safe.



aspires to develop and market "green" products that supports this worldwide trend.

