NIPPON PAINT

TECHNICAL DATA SHEET

NIPPON PU

Product Description	NIPPON POLYURETHANE is a two-pack Polyurethane Finish based on the chemical reaction of the polyfunctional Acrylic Polyol and the Isocyanate based material with excellent weathering resistance coating. High duty finishes for maximum gloss and color retention. It is specially designed finish coat for exterior and interior use over the appropriate primer for application on ferrous and non-ferrous metal, wood, timber, plastics, masonry and concrete substrates.
Color	Standard colors as per color card. Special colors on request. (Solid and Metallic)
Finish	High Gloss
Specific Gravity	1.24 ± 0.05 (1) (for Mixture of Base & Hardener)
Solid Content	44 ± 2 by volume (1) (for Mixture of Base & Hardener)
Adhesion	Excellent with combination with NIPPON Primer & Undercoats
Corrosion Resistance	Unaffected by salt water or aggressive industrial environments
Chemical Resistance	Good resistance to oils, fats, aqueous solution and most industrial chemicals
Weathering	Recommended for direct exposure to sunlight. It is always used as a finish coat in conjunction with a Nippon Epoxy primer
Temperature	Dry service temperature ranges up to 100°C
Product Features	• Long recoat ability properties • Can be applied to a large number of substrates • Does not chalk easily despite exposure to UV light • Resistant to splash and spillage of large variety of dilute acids, alkalis, detergents, solvents, petroleum products, mineral and vegetable oils
Application Method	
Surface Preparation	**Mild Steel Surfaces** : Abrasive blasted in accordance with Swedish Standard Sa 2.5, preferably Sa 3.0 (SIS 05 59 00 / ISO 8501-1). Shop prime immediately with a suitable shop-primer e.g. NIPPON EA9 RED OXIDE PRIMER, NIPPON ZINC PHOSPHATE BLAST PRIMER or NIPPON ZINC RICH PRIMER HS after abrasive blasting follows up with a compatible barrier coat or intermediate coat. **Galvanized Steel Surface** : New galvanized surface requires to be degreased in accordance to SSPC-SP1. For old galvanized surface, it must be abraded to remove corrosion deposits. Shop-prime with a suitable etching primer e.g. NIPPON VINILEX 120 ACTIVE PRIMER. All surfaces must be dry and fee from oil and grease prior to painting. **Masonry and Cement Concrete Surface** : Moisture Content must be below 6% checked by Sovereign Moisture Meter. Unstable matter such as powder, old paint film, dirt and loose plaster should be removed by high pressure water jet washing or mechanical means such as power brush or scraper whichever is suitable. High pressure water jet may be used for external wall. Contaminants, dust and foreign matter should be removed by cleaning with damped cloth. Oil or grease should be removed by solvent cleaning or mild detergent. Allow surface to dry again. After that prime with 1 coat of 20 to 40% thinned NIPPON EA9 WHITE PRIMER as sealer/priming coat.
Recommended No. of Coats	2 coats
Recommended Film Thickness per coat	35 microns for dry film 80 microns for wet film
Theoretical Coverage	12.5 m^2 / liter (for dry film thickness of 50 microns)
Practical Coverage (20% Loss Factor)	10 m^2 / liter (for dry film thickness of 50 microns)

Note: This theoretical coverage rate has been calculated from the volume solid of the material and is related to the amount of coating applied onto a perfectly smooth surface without wastage. For a practical coverage rate, due allowance should be made for atmospheric conditions, surface roughness, geometry of the article being coated, the skill of applicator, method of application etc. when estimating quantities required for a particular job.

Application Data:

Brush, roller, compressed air spray and airless spray

	Compressed Air	Airless	Brush & roller
Delivery Pressure (Kg/cm^2)	: 3 – 4	140 – 170	
Tip size at 60° angle	: 1.3mm	0.015” – 0.017”	
Thinning	: 25% maximum	5% maximum	10% maximum

Mixing Ratio	9 parts by volume of NIPPON PU (BASE) to 1 part by volume of NIPPON PU HARDENER. Stir the content of the BASE component, continue stirring and gradually add the total content of the HARDENER component, continue stirring until a homogeneous mix is obtained.
Pot Life at 25°C to 30°C	4 - 6 hours after mixing, depending on prevailing temperature
Thinner	NIPPON PU THINNER or NAX SUPERIO 501 SLOW THINNER
Cleaning Solvent	NIPPON PU THINNER or NAX SUPERIO 501 SLOW THINNER
Note: All equipment should be cleaned IMMEDIATELY with Thinner after use. For thinning, substitute thinners other than those approved or supplied by Nippon Paint may adversely affect the product performance and void product warranty whether expressed or implied.	
Dry to touch	30 minutes
Dry to handle	5 hours
Dry to overcoat	Minimum 8 hours
Curing time	5 – 7 days
Standard Packing	5 Liters (4.5 Liters BASE & 0.5 Liter HARDENER) 20 Liters (18 Liters BASE & 2 Liters HARDENER)
Note: Drying time will become remarkable under low temperature. Overcoating the previous coat of NIPPON EA4 should be done within 6 - 7 days but preferably as soon as possible after it has been allowed 16 hours drying or else, it is desirable to roughen it by dry sanding with sandpaper before it is overcoated. This is to ensure proper inter-coat adhesion. Exposure of the paint film to water, chemical and abrasion should be avoided as far as possible before full cure of the coating. When chalking occurs, chalks should be removed by water washing. Allow the surface to dry thoroughly prior to overcoating.	
Environmental Conditions during Application:	1. Do not apply when the relative humidity exceeds 85%. The temperature of the substrate to be painted must be 3 °C higher than the dew point. 2. Do not apply at temperature below 7 °C. If not, drying and overcoating time will be considerably extended. 3. During application of the paint, naked flame, welding operations and smoking should not be allowed and good ventilation is necessary.
Safety, Health and Environmental Information	1. Flammable Liquid. Do not expose to heat, sparks or open flame. 2. Skin Contact: May cause moderate skin irritation. Avoid prolong contact with skin. Use solvent resistant glove. To remove splashes of paint from skin, use soap and water. 3. Inhalation: Respiratory irritation. Only used in well-ventilated areas. Do not breathe vapor or spray paint. Respirator with organic vapor cartridges recommended. 4. Eye Contact: Cause severe eye irritation and blurred vision. Safety glasses / goggles with side shields recommended. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 5. Ingestion: Harmful if swallowed. Keep away from drinks, food and out of reach of children. If swallowed, seek medical advice immediately and show the container or label. 6. In the event of an accident, contain and collect spillage using sand or earth or absorbent. Do not empty into drain or water courses. 7. Wastes and empty containers should be treated and disposed of in accordance with national and local regulations. Empty containers and packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor.
NOTE: The information given applies to the product and its performance under specific test conditions. Due to the varied circumstances beyond our control under which the product may be applied, for specific application, please contact Nippon Paint Sales & Marketing Dept. We reserve the right to modify our product data sheet without further notice.	