

QUASAR SCREEN PRINTING AND DIGITAL INKS

10098 RIVOLI (TO) - ITALY - Via Di Vittorio 61 Tel. +39 (0)11 95.88.274 - Fax + 39 (0)11 95.94.196 www.quasarink.it - info @quasarink.it - didattica @ quasarink.it

TECHNICAL DATA SHEET

262.000 NYLOFLEX

SAFETY DATA

Ink based on selected and top quality vinyl resins. All 262 NYLOFLEX components are in compliance with the REACH regulation (CE) n. 1907/2006 of the European Parliament and of the Council concerning the registration, evaluation, authorization and restriction of chemical substances and related updates and summaries. 262 NYLOFLEX complies with the ISO EN 71/9 standard concerning the presence of hazardous solvents. 2262 NYLOFLEX is exempt from the following substances subject to registration:

- persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative substances (vPvB) according to Annex XIII Reach;
- substances included in the list subject to authorization, defined in accordance with Article 59;
- substances that exceed EEC limits at the workplace;
- substances subject to restrictions on the manufacture, placing on the market and use of substances and preparations as defined in Annex XVII.
- SVHC substances (Substances of Very High Concern) listed in the CANDIDATE LIST of substances of very high concern for Authorization, published in accordance with Article 59 of the REACH Regulation. The precise choice of not having harmful and toxic components allows 262 NYLOFLEX to be used safely in the workplace, extending the intervals of legal visits.

The formulation of any Sample Tint for the reproduction of each color according to the Spectrophotometric method is provided free of charge to the customers.

CHARACTERISTICS AND ADHERENCE

262 NYLOFLEX has a satin look, semi-polished, without flocculations and very opaque. The particular solventi mixture, whith a light odor, make the ink alwais fresh on the printing frame, keeping it open even during breaks. In the event of a long working break, simply print a few test copies to free stitches of the fabric. Base resins give the inks chemical adherence on many thermoplastic supports and syntetic origin: plastic materials and yarns of polyammide origin, nylon, syntetic fabrics of various origins, polyester fabrics, natural leather, k-way, soft thermoplastic supports, PVC, some PVC inflatable (not very plasticized), ABS with specific thinners, polycarbonate (with particular attention to use of specific diluents to previent cracking) objects, slippery decals for elmets (for this application specific products are available), TNT, sweaters and fabrics in polyester, special acetates, overprinting offset and other supports. The addition to 10% of 290.59 ADHESION PROMOTER increases sealing on difficult substrates and siliconed nylon.

Consider that plastics, pure or mixed, are hundreds of thousands. In the case of particular supports on which insuffucient adhesion can non be obtained ask our laboratory for a free consultation.

It can be overprinted and under-molded to 250 FLEXIPRINT UV as well as on other similar series on the market.

RESISTANCE

262 NYLOFLEX is manufactured with quality pigments that reach, in the range of the color chart, the maximum values of the 7/8, 8 wool scale as per UNI 5773-66 regulation which establishes the criteria and the evaluation of the pigment quality values. 262 NYLOFLEX has good external resistance of more than 1 years, always respecting the thickness values of the silk-screen frame and of the deposited thickness that must be higher than 20 microns in thickness. 262 NYLOFLEX has resistance to rubbing with ethyl alcohol higher than 50 rubbings and, in some cases, can withstand thermoforming. It is not resistant to green gasoline.

FOUR COLOUR PROCESS PRINTING (CMYK)

262 NYLOFLEX four colour process uses the European scale according to ISO 2846.

The dilution in the four colour inks must be done with Slow Thinners 290.22 and only rarely with retarders. The Slow Thinner 290.22 gives the ink the properties of perfect passage through the meshes of the fabric with an excellent precision of the point, especially negative. During the four-color printing, it is advisable to re-integrate the ink on the frame with other slightly diluted ink at pre-established times.

In the Color Process selection always use the UCR or better GCR option and stick to the wire diameter /

diameter ratio values. For information on the correction of densitometric selection curves in order to obtain the exact reproduction of the original and reduce the effects of Tint Error, Trapping, Print Contrast, etc., it is advisable you to consult Trattato di Serigrafia (Dealing with Screen printing) by Franco Lo Giudice.

PAD PRINTING

262 NYLOFLEX can also be printed in pad printing, being formulated with specific correspondence to this technology. The special formulation satisfies all the applications of pad printing and is able to offer inks suitable all the supports on the market even with specific treatments or additives for the most difficult cases. For the Tampographic application it is sufficient to add to the 262 NYLOFLEX the specific pad printing Diluent 290.18 in percentage from 5% to 10%

THINNERS

It is always best not to exaggerate with thinners to avoid ink precision loss. It is always a good idea shaking inks before use, not manually but with a motorized rotor for about 4/5 minutes at not less than 1.000 turns a minute. Thinning should then be done after this process. The standard thinners suggested are: Normal 290.15 and Lento 290.23. A wide range of thinners, however, is available for every type of application.

| THINNERS | NOXIOUSNESS | EVAPORATION | TECHNICAL FEATURES |
|--|--------------------------|-----------------|---|
| RAPIDO 290.01 (Fast 290.01) | Non-toxic. Soft odour | Fast | Moderate power of etching substrate. Suitable for background prints and large areas. |
| RAPIDO 290.03 (Rapid 290.01) | harmful strong smell | very rapid | suitable for spray application, high power of attack of the supports; suitable for prints of extended areas, not indicated for polycarbonate; average power of anger |
| NORMALE 290.13 (Normal 290.13) | Noxious strong odour | Medium | Good power of etching substrate, suitable for hard-to- anchor supports. Excellent in four-color printing and definition |
| NORMALE 290.15 (Normal 290.15) | Non-toxic. Soft odour | Medium | Moderate power of etching substrate. Suitable for thermoplastic substrates. For normal printing. |
| NORMALE 290.16 (Normal 290.16) | Irritant soft odour | Medium fast | Reduces substantially the power of etching substrates. Makes inks matt-like. Avoid any form of stickiness. Suggested for embossing. |
| Tampografico 290.18 (Pad Printing 290.18) | Irritant soft odour | medium fast | Added from 5% to 10% allows the perfect detachment of the ink in the use of the Pad |
| LENTO 290.22 (Very Slow 290.22) | non-toxic, soft smell | very slow | Moderate power of etching substrate. Specific in the four-color printing and definition, leaves the ink always fresh on the frame without suffering drying time. Recommended dose 5% |
| LENTO 290.23 (Slow 290.23) | Noxious soft odour | Slow | Good power of etching substrate. Suitable for thermoplastic substrates normal printing. Keeps inks fresh on screen. |
| LENTO 290.26 (Slow 290.26) | irritating soft smell | average slow | discreet power of etching, improves adhesion on polythene and polypropylene. |
| Aggressivo 290.27 (Aggressive 290.27) | Noxious no odour | Slow | Not suitable for Toys sector. Excellent in association with 290.15. Improves ink adhesion on difficult media. Pay attention to the discovery of plasticizers. Add to the ink in max 3% amount |
| RITARDANTE 290.32 (Retarder 290.32) | Non-toxic. No odour. | not evaporate | No power of etching substrate, remains in the ink for a long time even after drying. Tends to delay evaporation of other solvents present. Not suitable for printing on highly plasticized and soft substrates, must be kept for extreme cases and in a maximum percentage of 3%. |

| | | | CAUTION when a retarder is present in the ink its drying becomes slower and high pile of plasticized materials tend to stick together. |
|--|-----------------------|---------------|--|
| LIVELLANTE 291.00 (Leveling 291.00) | non-toxic no smell | not evaporate | eliminates dodges of the ink produced by silicone on the support ink to be printed. Add to the ink max 1% |

PRINTING ADVICE

Always use screens which are well stretched with a slight inclination of the mesh to avoid Closing Effect. Adopt all the techniques connected to reducing the RZ factor. In the case of high definition mesh use flood bar with sharp blades and polyurethane rubbers at high shore. Better still if supported. In the case of full and uniform underbases always take into consideration the fact that the spreading out of the ink works better with fast printing and high pressure made by the squeegee and not the contrary. A large amount of solvent evaporates during printing and so the amount lost must be reintegrated. It would also be advisable to add some more, slightly thinner ink to the screen at established intervals. It is better keep printing speed stable slower, and not to vary speeds. This stabilises as much as possible the thixotropy in the inks. When washing the screen, this must be done globally and not in sections, at least during high definition printing.

When printing on transparent material which must acquire a matt aspect, 262.135 PASTA DA TAGLIO (Cutting Paste) is used. Ink yield exceeds 40 mq with 120.34 PW mesh, with an average emulsion thickness: RZ Factor 10/15 the stencil must be resistant to solvents. The best mesh range from 77.55 PW for full and uniform underbases to 150.31 PW for fine line halftones four colour process printing.

DRYING (curing)

262 NYLOFLEX diluted normally and without using retarding agents, dries in 20 minutes with a manual dryer at a room temperature between 17° and 23°C. In a hot air curing unit and with a temperature set at not more than 50°C, the drying takes 15 seconds each. When using reasonably thick materials, for example with a diameter thread of more than 50 micron, and thicker ink deposit, the drying procedure takes longer. When collecting dry surfaces, carefully check that the support, pressed face-to-face, does not give rise to any tackiness.

PRODUCT LIFESPAN

If kept in its original confection, 262 NYLOFLEX will last a long time. Can be kept in closed tins in rooms with a maximum temperature of between 5° > 40°C, it will last 2 years without any particular damage. If it is kept for longer and once the product has been opened, it would be advisable to dilute the ink using a blade (or blade machine) so that evaporated thinners are reintegrated.

GUARANTEES

QUASAR srl produces inks and silk-screen products with competence and experience and adopts an internal quality control system both on the incoming raw materials and during the various production stages. The components of its products undergo continuous checks and inspections with storage of the test and sample of each individual production, in the interest of both the manufacturer and the user. The use and application of QUASAR srl products are so vast as to escape any type of control, so the only guarantee that is granted is the replacement of the product if it proves to be defective or faulty production. The printer is therefore always responsible for choosing the type of product to be used and must perform appropriate preventive tests, in order to ascertain the suitability for specific requests.

Most screen printing problems result from incorrect application or product selection. The QUASAR srl laboratory is at the complete disposal of customers to advise, make corrections and customizations to production screen printing products. We therefore urge a close technical collaboration so that we can always improve in screen printing. The guarantees of quality and production are recognized by QUASAR srl exclusively for their inks and products packaged in the original containers of kg.1 and 5 and in all other packs of the house sealed at the origin.

COLOURS GUIDE 262 NYLOFLEX

| 100 TRANSPARENT BASE | 372 SOLFERINO | 41 OPAQUE WHITE |
|-----------------------|----------------|--------------------------|
| 130 THIXOTROPIC AGENT | 375 VIOLET | 742 SUPER COVERING WHITE |
| 200 COLD YELLOW | 400 BLUE | 800 BLACK |
| 231 MILD YELLOW | 421 SEA BLUE | 271 EUROPE YELLOW |
| 241 WARM YELLOW | 431 NAVY BLUE | 371 EUROPE MAGENTA |
| 300 ORANGE | 451 NIGHT BLUE | 471 EUROPE CYAN |
| 321 BRIGHT RED | 521 MID GREEN | 871 EUROPE BLACK |
| 331 RUBY RED | 541 FAST GREEN | |
| 341 DARK RED | 551 DEEP GREEN | |

ANY PARTIAL REPRODUCTION IS FORBIDDEN