



QUASAR s.r.l. **FABBRICA INCHIOSTRI PER SERIGRAFIA E DIGITALE**

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TECHNICAL DATA SHEET

225.000 OMNIALUX

SAFETY DATA

Ink based on selected and top quality vinyl resins. All 225 OMNIALUX 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. 225 OMNIALUX complies with the ISO EN 71/9 standard concerning the presence of hazardous solvents. 225 OMNIALUX 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 225 OMNIALUX 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

225 OMNIALUX shows matt aspect, without flocculations and well-covering. The particular mix of solvents, which gives the inks a very slight odour, also maintains the ink fresh on the screen keeping it open even when work is interrupted. In the case of long interruptions to the work process everything you need is printing off a couple of test pieces to free the stitches on the material, due to the extremely good self-solvency of the inks. Base resins give the inks exceptional adherence on many thermoplastic supports: PVC in rigid and soft sheets, inflatable PVC, leatherette, sky, cardboard, ABS, polystyrene paying attention to the choice of thinners, overprinting on offset, polycarbonate and petg for thermoforming, methacrylic. The particular flexibility and stretching of the ink makes it adapt for printing on helmets in PETG which must undergo heavy embossing. Its particular formula guarantees a high coverage level and precision in printing, especially negative and details which must be illuminated from behind. This allows illuminated back printing with just one coverage and without pinholes. The inks lack of aggressivity does not let even the thinnest Polycarbonates warp. This formula also gives 225 OMNIALUX an elevated adherence to pre-varnished aluminium (in cold)-OMNIALUX baked at 140°C for 30' has a high resistance to scratching, cutting and other specifications for household goods. The resistance to the checkered work is optimum. Resistance to alcohol is good and it has a discreet resistance to certain organic solvents.

For special materials, please ask for advice from our laboratory, equipped with a large database. Consider that plastics, pure or mixed, are hundred of thousands. In the case of particular supports on which insufficient adhesion can not be obtained, request free consultation of our laboratory.

225 OMNIALUX is also compatible with many vinyl, acrylic and UV inks. It can be overprinted and under-molded to 250 FLEXIPRINT UV as well as on other similar series on the market.

RESISTENCE

225 OMNIALUX is made with quality pigments that reach, within the colour card range, maximum level of lana scale 7/8, 8. 225 OMNIALUX complies with the regulation UNI 5773-66 which establishes the criteria and the estimation of the levels of pigment quality. OMNIALUX is highly resistant outdoors, over two years for certain thicknesses of the screenprinting stencil and the deposit which should exceed 20 micron. 225 OMNIALUX also resists well to rubbing with ethyl and resists thermoforming. However it is not petrol resistant, especially green ecological petrol. The range of transparent inks has a lana scale slightly inferior when outdoors for a certain length of time and in full sun light. It must therefore be protected with 230.103 PLEXIFORM UV FILTER.

PAD PRINTING

225 OMNIALUX can also be printed in pad printing, having also been formulated with specific correspondence to this technology. The special formulation satisfies all the applications of pad printing and is able to offer inks suitable to 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 225 OMNIALUX the specific pad printing Diluent 290.18 in percentage from 5% to 10%

THINNERS

It is always better not to exaggerate with thinners to avoid ink precision loss. It is always a good idea shaking the ink 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. Standard thinners suggested are: Normal 290.15 and Lento 290.23. A wide range of thinners, however, is available for every type of applications.

THINNERS	harmfulness '	evaporating	TECHNICAL FEATURES
RAPID 290.01	non-toxic, soft smell	rapid	average power of attack of the supports; suitable for printing of funds and extended areas
NORMAL 290.13	harmful strong smell	average	high attack power of the supports, suitable for hard-to-anchor materials. Excellent in four-color printing and definition
NORMAL 290.14	harmful low smell	slow	low power of attack of the supports, acts as a slow diluent on some vinyl and acrylic inks. Specific for 270 Epoxeri
NORMAL 290.15	non-toxic, soft smell	average	medium power of attack of the supports, suitable for thermoplastic supports; suitable for common press
Pad Printing 290.18	irritating low smell	fast average	Added from 5% to 10% allows the perfect separation of the ink from the pad in Pad Printing.
SLOW 290.22	non-toxic low smell	very slow	average power of attack of the supports. Specific in the four-color printing and definition, leaves the ink always fresh on the frame without affecting the drying time. Max 5%
SLOW 290.23	nocivo low smell	slow	good attack power of the supports suitable for common thermoplastic supports, keeps the ink fresh on the frame
AGGRESSIVE 290.27	nocivo fragrance free	very slow	Not suitable for Toys sector. Excellent in association with 290.15. Improves ink retention on difficult media. Pay attention to discovery of the plasticizers. Add to the ink in max 3% amount
RETARDER 290.32	non-toxic fragrance free	no evaporation	minimum power to damage the support, remains in the ink for a long time even after drying. It tends to delay the evaporation of the other solvents present. Not suitable for printing on highly plasticized and soft substrates, it must be used in extreme cases and in a maximum percentage of 3%. CAUTION when a retarder is present in the ink: drying becomes much slower and the high pile plasticized materials tends to stick together.
LEVELLING 291.00	non-toxic fragrance free	no evaporation	eliminates the gaps produced by the silicone on the ink or on the substrate to be printed. Add to vinyl or acrylic based inks max 2%

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 case of full and uniform underbases always consider 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, even if slow, 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.

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.

CURING ON THERMOPLASTIC SUBSTRATES

Diluted normally and without using retarder, 225 OMNIALUX dries in about 20 minutes in a manual dryer at room temperature of 17° to 23°C. In a hot air curing unit and with a temperature set at not more than 50°C, the drying takes 30 seconds each. When using reasonably thick mesh, for example with a diameter thread of more than 50 micron, and depositing thicker ink, the curing procedure takes longer.

CURING ON METALLIC/THERMOHARDENED SUBSTRATES

Printing on prevarnished acrylic, polyurethane and polyester 225 OMNIALUX adheres normally without curing. The best adhesion comes after 1 hour after drying is complete. For adherence on aluminium. Whether raw or anodized, glass, iron, brass, tin-plate curing with hot air at a temperature of 150°C per 30 minutes is necessary. This gives the ink optimum resistance to scratching but not solvents. The final cooling of the substrate allows the cured sheets to be stacked without sticking together.

PRODUCT LIFESPAN

If kept in its original confection, 225 OMNIALUX 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 a longer time, 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.

GUARANTY

QUASAR produces inks and screenprinting products with competence and experience and a quality control system with regards to raw materials used during the various elaboration processes.

Product components undergo a series of controls and continuous check and the results are archived along with the necessary samples of each separate product. This is of course in the interests not only of the manufacturer but also the customer.

The use and application of QUASAR srl products is so vast to escape every type of control, so the only guarantee that is guaranteed is the replacement of the product if it is proved to be defective or erroneous production.

The printer is therefore always responsible for choosing the type of ink used, and must perform appropriate preventive printing tests in order to verify the suitability for specific requests.

However, the major number of printing problems arise from bad application or a bad product choice.

QUASAR laboratory and its technicians are available to give advice, make necessary corrections to, or personalise, their screen printing products.

We do therefore always hope for a tight collaboration with our customers so that we can always improve in the screen printing environment. The guarantees of quality and production are recognized by QUASAR srl exclusively for their inks packed in the original containers of kg.1 and 5 and in all the other packages of mother house sealed at the origin.

COLOURS GUIDE 225 OMNIALUX

100 TRANSPARENT BASE	321 BRIGHT RED	541 FAST GREEN
130 THIXOTROPIC AGENT	372 SOLFERINO	700 WHITE
200 COLD YELLOW	375 VIOLET	800 BLACK
241 WARM YELLOW	421 SEA BLUE	
300 ORANGE	431 NAVY BLUE	

ANY PARTIAL REPRODUCTION IS FORBIDDEN