

KF 1280 ND

Insulating varnish for printed circuit boards. Acrylic based.

Ref. : 20952

1. GENERAL DESCRIPTION

Effective protection for electronic circuits and assemblies, used in aggressive environments.

2. FEATURES

- Ideal to varnish electronic cards.
- Contains a pigment that gives a fluorescent blue glow when exposed to UV light.
- Very resistant acrylic based varnish.
- Perfect protection and insulation in hot/humid environment
- Resist to extreme temperatures (from - 40°C till + 125°C).
- Allows soldering.
- Without silicones.
- Quick drying at ambient temperature, accelerated in oven cabinet.

3. APPLICATIONS

Application areas :

- aeronautics,
- marine,
- aerospace,
- telecommunications,
- electronic material,
- automotive electricity ...

Is used as a durable protection on all electronic assemblies which have to resist extreme climatic conditions.

4. DIRECTIONS

Before application, degrease completely all pieces to be treated and remove all traces of soldering flux by using e.g KOC Cleaner 601 or KOC Kontakt PCC.

Apply a coat weight of 20 to 40 microns on the surface to be treated.

Spray KOC KF 1280 ND in thin, crossed layers at a distance of ± 25 cm from the surface to be treated.

A safety data sheet (MSDS) according to EC Regulation N° 1907/2006 Art.31 and amendments is available for all CRC products.



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5. TYPICAL PRODUCT DATA (without propellant)

Aspect	:	liquid.
Density	:	0.90 - 0.96 g/cm ³
Coat thickness	:	20 to 40 microns
Drying time :		
At ambient temperature (HR 50%)	:	dust-free : 35 to 45 min dry to touch : approx. 3 h.
In cabinet	:	during 2 hours at 80°C or 1h at 100°C.
Electrical characteristics:		
Polymerised during 72 h at ambient temperatures (HR 50%) and 2 h at 80°C.		
Dielectric strength	:	value > 60 kV/mm
Surface resistivity	:	value > 1 x 10 ¹² Ω
Volume resistivity	:	value > 1 x 10 ¹³ Ω cm
Resistance to thermal choc	:	excellent
(7 cycles in 24 h / temperatures from - 40 °C to + 85 °C).		
Resistance to humid heat	:	excellent
(24 h at + 55°C and 95% HR plus 24 h at +25°C and 95% HR).		
Temperature resistance (tested at ambient temperature):		
After exposure at - 40°C during 6h	:	excellent
After exposure at +120°C during 6h	:	excellent

6. PACKAGING

Aerosol : 500 ml

All statements in this publication are based on service experience and/or laboratory testing. Because of the wide variety of equipment and conditions and the unpredictable human factors involved, we recommend that our products be tested on-the-job prior to use. All information is given in good faith but without warranty neither expressed nor implied.

This Technical Data Sheet may already have been revised at this moment for reason such as legislation, availability of components and newly acquired experiences. The latest and only valid version of this Technical Data Sheet will be sent to you upon simple request or can be found on our website: www.crcind.com.

We recommend you to register on this website for this product so you will be able to receive any future updated version automatically.

Version : 20952 03 0708 08
Date : 24 July 2008

1. GENERAL DESCRIPTION

Quick drying, colourless transparent insulating and protective coating based on acrylic resins.

2. FEATURES

- PLASTIK 70 is a low viscosity, solvent drying acrylic based conformal coating with excellent insulating properties. The lacquer is colourless transparent and elastic. It has a durable adhesion in the temperature range from -40°C to $+60^{\circ}\text{C}$ and can be used for a short period of time up to $+100^{\circ}\text{C}$ maximum. It protects printed circuit boards and surfaces from humid anorganic-acid or caustic vapours.
- PLASTIK 70 is colourless-transparent and as such is not visual on the printed circuit board surface.
- For repair works PLASTIK 70 can be soldered through or be totally removed with acetone, THINNER FOR PLASTIK 70.

3. APPLICATIONS

PLASTIK 70 was specially developed to protect printed circuit boards. It overcomes electrical leakages and short circuits.

As a low viscosity fixing and insulating lacquer, PLASTIK 70 can also be used as extra/after insulation of coils and transformers and overcomes disturbing noises.

PLASTIK 70 can also be used as a universal protective coating on any surface like metal, paper, ornaments, paintings, furniture, etc.

4. DIRECTIONS

- For small runs and service applications, the easiest way to apply PLASTIK 70 is from an aerosol can. Spray from a distance of 20 to 30 cm on the dry and degreased surface. As pre-cleaning of PCB's, we do recommend the use of KONTAKT PCC to remove greases, dirt and flux residues. When finished spraying, clean the aerosol valve by turning the can upside down and pressing the button until only propellant escapes.
- For serial production runs, PLASTIK 70 in bulk can be applied by brush or by dipping. For spraying, two parts per volume PLASTIK 70 is diluted with up to one part of THINNER FOR PLASTIK 70. The precise mixing ratio must be determined by trials with the equipment concerned.
- For dip coating it is also necessary to fix the immersion time and the withdrawal speed. The faster the removal from the bulk, then thicker the film will be. Dipping baths have to be carefully protected to ensure no entrapment of conductive stuck-on residues.

- PLASTIK 70 contains solvents like ethyl acetate and butyl acetate. Printed circuit board materials and electronic components generally have a good compatibility with these solvents. In case of plastic surfaces (e.g. housings) a compatibility test is always recommend. It is necessary in particular, to test its suitability for plastics susceptible to stress cracking (e.g. polycarbonate).
- PLASTIK 70 contains flammable solvents and hence when working with the product, make sure there is good ventilation in the workplace. Remove all possible ignition sources.
- A safety data sheet (MSDS) according to EU directive 91/155/EEC and amendments is available for all CRC products.

5. TYPICAL PRODUCT DATA (without propellant)

As delivered

Coverage at 20µm, calculated	: ±0.7m ² /200 ml spray ±9m ² /litre
Viscosity bulk	: 10-20 mPas
Flashpoint	: <0°C
Drying time at 20°C (dry to touch)	: ±20 minutes

Properties dry film

(after 24 hrs drying at ambient temperature, thickness 20-40 µm)

Aspect	: colourless-transparent
Surface resistivity at 20°C	: >10 ¹³ Ω
Volume resistivity at 20°C	: >10 ¹³ Ω.cm
Dielectric strength	: >80kV/mm
Adhesion to copper plates, measured at ambient temperature	
following 6 hrs at -40°C	: Gt 0-1
following 6 hrs at +60°C	: Gt 0-1
following ½ hr at +100°C	: Gt 0-1

PLASTIK 70

Ref. : 20743

6. PACKAGING

aerosol : 12 x 200 ml
 : 12 x 400 ml
Bulk : 1 Liter , 5 Liter

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Date : 25 June 2007



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URETHAN 71

Ref. : 20750

1. GENERAL DESCRIPTION

Air drying one-component polyurethane-alkyd resin coating.

2. FEATURES

- URETHAN 71 is a transparent protective coating for printed circuit board, having excellent insulating properties. The coating has an outstanding adhesion performance in the temperature range from -40°C to +120°C. Due to the chemical cross linking reactions happening after the drying stage, URETHAN 71 based coatings can also be used in humid or aggressive environments.

3. APPLICATIONS

URETHAN 71 is a reliable coating for PCB's, especially when used in hot/humid environments.

Because of its aesthetics and good adhesion on many materials, URETHAN 71 can also be used to provide decorative and transparent protection for every day metal articles. The slightly yellow coloration enhances the aesthetics of non-ferro metal surfaces.

4. DIRECTIONS

- For small runs and service applications, the easiest way to use URETHAN 71 is from an aerosol can. Spray the product from a distance of 20-30 cm on a dry, and degreased surface. We do recommend Kontakt LR to remove greasy layers, dirt and flux remains from PCB's. After usage, purge the valve by spraying the can in an up-side-down position until only propellant escapes.
- For serial production runs, bulk URETHAN 71 can be applied by brush, by dipping or by spraying. If the mixture, as supplied, is too viscous for existing spraying equipment, a little "Thinner for Urethan 71" (acetone) can be added. The exact mixing ratio must be determined by trial.
- The product must be properly sealed when being stored. Because URETHAN 71 is susceptible to cross-linking during drying, a coating once thickened can not be made useable again by dilution.
- At ambient temperature, almost all solvents will be evaporated after 120 minutes. At this stage the coating is sufficiently dry to allow further assemblies to be handled for mounting. The chemical cross linking reactions take several days under ambient conditions. However 90% cross-linking can be achieved after 24 hrs storage at 60°C.
- URETHAN 71 contains flammable solvents and hence all ignition sources should be removed. Make sure there is good ventilation in the work place.
- Further information on safety can be obtained from the Material Safety Data Sheet.

5. TYPICAL PRODUCT DATA (without propellant)

Aerosols

Flash point	:	<0°C
Coverage 20µm dry film (calculated)	:	approx. 0,5m ² /100 ml

Bulk

Viscosity	:	<30mPas
Flashpoint	:	<0°C
Density at 20°C	:	0,80-0,84
Coverage 20µm dry film (calculated)	:	approx. 10 m ² /l
Dry to touch at 20°C	:	approx 120 min.

Cured film properties

(24 hrs at 20°C + 24 hrs at 60°C, thickness 20-40 µm)

Appearances	:	yellowish-transparent
Dielectric Strength at 20°C	:	>40 kV/mm
Surface resistivity	:	>10 ¹² Ω
Volume resistivity	:	>10 ¹² Ω.cm

Adhesion on copper plates, measured at ambient temperature

Following 6 hrs at -40°C	:	Gt 0-1
Following 6 hrs at +120°C	:	Gt 0-1

6. PACKAGING

Aerosol	:	12 x 200 ml, 12 x 400 ml
Bulk	:	1 Lt

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Version : 20750 03 1003 00
Date : 22 June 2004



Anti-corrosive coating for steel surfaces

KONTAKT CHEMIE Zink 62

Description:

Epoxy ester coating with zinc powder

General properties and applications:

KONTAKT CHEMIE Zink 62 forms an active galvanic anti-corrosion film. The metal powdered coating acts as a "sacrificial coating". The Zinc is slowly converted by corrosive media into a water-insoluble zinc oxide coating; this process and the coating which is formed protect the base material from further attack. KONTAKT CHEMIE Zink 62 is still active even when there are cracks in the lacquer coating.

KONTAKT CHEMIE Zink 62 is used as a protective paint for steel constructions, particularly for the improvement of galvanised surfaces. Surfaces treated with KONTAKT CHEMIE Zink 62 can be electrically welded without difficulty. The product is suitable therefore as corrosion protection for parts which become inaccessible after they have been fitted.

Technical data

Density at 20°C	FEA 605	1,45 g/cm ³
Flash point		< 0°C
Coverage for 30 µm coating thickness	calculated	0,5 m ² /200 ml Aerosol
Tack-free time at 20°C	In-house method	15 min
Curing depending on coating thickness	In-house method	24 h to 72 h
Purity of Zinc pigment		> 98 %
Content of zinc in the dry film		Min. 88 %
Properties of the cured lacquer film for 40 µm to 60 µm coating thickness		
Adhesion to steel	ASTM D 3002	Gt = 0
Temperature resistance, 4 h		200°C
Salt spray mist test on cold-rolled steel sheets (film thickness min 30 µm)	ASTM B117	350 h
Hardness after 24 h	PERSOZ	106
Hardness after 1 week	PERSOZ	142

Application instructions:

Shake the aerosol well before use until the mixing balls rattle in the can. Then shake for a further 30 s.

Remove dirt and rust with a wire brush. Apply to dry, grease-free surfaces. Two thin coatings sprayed at an interval of 15 minutes are better than one thick coating. The optimum coating thickness is approx. 40 µm. At the end of work, turn the can on its head and spray until only propellant comes out. During the application process the ambient temperature shall be at least 10°C. The temperature of the surface shall be at least 5°C and at least 3° C above the dew-point temperature.

KONTAKT CHEMIE Zink 62 can be overpainted with many lacquers. Unfortunately, because of the many paint systems on offer today it is not possible to compile compatibility tables. Suitability must be verified by the user. To do this, paint a test surface with KONTAKT CHEMIE Zink 62 and cover it with the desired top coating after a day. After a further day, no bubbles or other changes must be visible. Biggish pieces must not flake off when the coating is scratched with a sharp scalpel. For more accurate testing we recommend a cross-cut test based on ISO 2409.

Available:

aerosol : 200 ml

These values are not intended to be used as specifications. They are based on what we believe reliable. However it is the user's responsibility to determine the suitability.



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Laca protectora para soldadura

KONTAKT CHEMIE Flux SK 10

Descripción:

Solución tipo laca en base a resinas naturales sin aditivos. Tipo F-SW31, DIN 8511 T2

Propiedades generales y aplicaciones:

KONTAKT CHEMIE Flux SK 10 forma una película protectora, transparente. Protege los metales blandos para soldar (ej: cobre, acero, plomo, estaño, latón) contra la corrosión. Mantiene la soldadura, para realizar una soldadura posterior no es necesario eliminar la película protectora. Esta asegura un buen flujo de soldadura.

KONTAKT CHEMIE Flux SK 10 se utiliza, por ej., en el almacenamiento de tarjetas de circuito impreso y material que vaya a ser soldado, como terminales de soldadura o conductores. Se utiliza para mantener la soldabilidad de las piezas de plomo y componentes semiacabados fabricados con metales duros no ferrosos.

Datos técnicos

Aerosol		
Punto de inflamación		< 0 °C
Densidad a 20 °C	FEA 605	0.820 g/cm ³
Cubrición para espesor de 15 µm	calculado	0.7 m ² / 200 ml can
Granel		
Punto de inflamación	DIN 51 755	< 0 °C
Densidad a 20 °C	ASTM D 891	0.81 g/cm ³
Cubrición para espesor de 15 µm	calculado	4.7 m ² / l



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Propiedades de la película seca		
Tipo de fundente	DIN 8511 T2	F-SW31
Color		Transparente, amarillento
Tiempo de secado	Método interno	30 min
Rango de T ^a	Método interno	0 °C to 60 °C

Instrucciones de aplicación:

Para **series cortas de fabricación o aplicaciones de mantenimiento**, es mejor utilizar KONTAKT CHEMIE Flux SK 10 en aerosol. Al contrario que otros barnices, este aerosol va presurizado con Dióxido de Carbono. Con este producto, no es necesario realizar la limpieza de la válvula mediante la pulverización con el aerosol boca abajo!

Para **grandes series de fabricación o aplicaciones**, KONTAKT CHEMIE Flux SK 10 puede aplicarse en granel utilizando una brocha, por inmersión o con pulverizador. En el caso de hacerlo por inmersión, debe determinarse el tiempo de inmersión y la velocidad de extracción. A menor tiempo de inmersión, menor espesor de la película.

KONTAKT CHEMIE Flux SK 10 se utiliza como protector temporal y para mantener la soldabilidad de metales blandos. La resina utilizada, protege contra la corrosión en ambientes secos y previene la acumulación de polvo, suciedad y huellas dactilares. También se suele utilizar el barniz como protector para PCB's que sean utilizados en ambientes secos. En ambientes muy húmedos, sin embargo, el barniz sufre una hidrólisis lenta que como resultado, disminuye las propiedades de protección y propiedades eléctricas. Para estos casos recomendamos utilizar el protector de tarjetas de circuitos impresos KONTAKT CHEMIE Plastik 70, KONTAKT CHEMIE Urethane 71 o KONTAKT CHEMIE Silisol 73.

Si debe aplicarse la protección después de el proceso de soldadura, el barniz soldable debe eliminarse. Lo más adecuado es utilizar limpiadores base alcohol, éteres glycol o hidrocarburos como KONTAKT CHEMIE Label Off 50. Para un pequeño número de piezas, lo más recomendable es utilizar KONTAKT CHEMIE Kontakt PCC.

Cuando se utilice KONTAKT CHEMIE Flux SK 10 debe asegurarse una zona de trabajo bien ventilada. Las instalaciones deben ser apropiadas para la utilización de barnices con disolventes inflamables. Para mayor información, consultar las Hojas de Seguridad e Higiene.

Envasado

Aerosol : 200 ml, 400 ml
Granel : 1 L, 5 L

Estos valores no deben utilizarse como especificaciones. Esta información está basada en experiencias fiables. Es responsabilidad del usuario el determinar la idoneidad del producto.



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