CHEMICALS

THINNERS & SOLVENTS

Polystyrene Q-Dope Thinner

For thinning polystyrene base coil dopes and cements. Can also be used for cementing polystyrene parts.

Part No. 10-4102 2 fl. oz. Bottle
N.S.N. 8010-00-063-1376
N.S.N. 8040-00-902-1159

Radio-TV Cement Solvent

Fast acting solvent formulated for use in speaker repair. Dissolves cement on speaker cones, spiders, frames, voice-coils. May also be used as a thinner for all lacquer type cements.

Part No. 10-312	2 fl. oz. Bottle
Part No. 10-318	8 fl. oz. Bottle
Part No. 10-320	16 fl. oz. Bottle N.S.N. 8010-00-775-5893
Part No. 10-321	1 gal. Can

Paint Thinner

All purpose mineral spirit type thinner and solvent for paint and varnish base products.

Part No. 10-6702 2 fl. oz. Bottle
N.S.N. 8010-00-054-1521

Print Kote Solvent

A solvent to remove silicone and other types of protective coatings from PC boards. Required when modifying PC boards or replacing components where the protective coating interferes with the desoldering and resoldering operation.

Part No. 22-209 2 fl. oz. Bottle
N.S.N. 6810-00-711-2185

COATINGS

Silver Print II
(Conductive Paint)

For PC repair or add-on circuit traces. Pure silver in acrylic lacquer based carrier may be brushed on for either conductors or shielding. Connections have equal or better conductivity than copper (0.1 ohms per square).

Part No. 22-023	1/2 troy oz. Bottle
Part No. 22-024	1 troy oz. Bottle

Red Insulating Varnish

Alkyd-based compound, especially resistant to environmental extremes including oils, water and most acids and alkalis. Retains its high dielectric strength even if wet and is, therefore, especially adaptable to the insulation of electrical and electronic devices or components which may be operated in a very humid climate and up to 250°F (121°C). For general insulation of coils, transformers, motor windings and for all-around protection against oxidation and atmospheric attacks.

Part No. 10-9002 N.S.N. 5970-00-901-5331	2 fl. oz. Bottle w/Brush
Part No. 10-9002-1G	1 gal. can
Part No. 10-9008	8 fl. oz. Bottle

Nickel Print
(Conductive Paint)

A quick drying lacquer-based coating, pigmented with powdered nickel. For repair and modification of printed circuits. Conductivity is 5 to 6 ohms per square.

Part No. 22-207 2 fl. oz. Bottle

Print Kote Conformal Coating

The ultimate coating for PC boards provides a protective shield to resist environmental contaminants. Prevents arcing and shorting. Air dry 15 to 30 minutes. May be baked at 200°C for 30-60 minutes for extreme high temperature applications.

Part No. 22-203 2 fl. oz. Bottle
N.S.N. 8010-00-711-2173

All quantities are single; BU's are packages of 10 Unless otherwise noted.

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MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Type: Thinners/Solvent
Product Name: **Print Kote Solvent**
Part Number(s): **22-209**

Section 1 - Identification of Product

HMIS Ratings:		NFPA Ratings:	Least	0
			Slight	1
Health	2	2	Moderate	2
Flammability	3	3	High	3
Reactivity	0	0	Extreme	4
			Gloves, Safety Glasses	B

WHMIS Class/Description: Class B2 Flammable Liquid
Class D2B Other Toxic effects - Skin irritant

Section 2 - Hazardous Ingredients

					OSHA Z1A	
			ACGIH (skin)	WHMIS	TWA	STEL
Hazardous Component	CAS#	% Range	TLV/TWA	Controlled	100 ppm	150 ppm
Toluene*	108-88-3	100	50 ppm	Yes	375 mg/m3	560 mg/m3

* Regulated under Section 313 of SARA
Warning: This product contains Toluene, a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 3 - Physical Data

Physical Description: Mobile Liquid Aromatic Hydrocarbon
Colorless Aromatic Odor

Physical State: Mobile Liquid Aromatic Hydrocarbon
Appearance: Colorless
Odor: Aromatic Odor
Odor Threshold: 1.74 ppm
Melting/Freezing Point: Typical -95°C/-139°F
Boiling Point: Typical 110 - 111°C/230 – 232°F

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Explosion/Flammability Limits in Air	1.2 – 8% (V)
Volatile Organic Carbon Content:	100%
Surface Tension:	Typical 28.5 mN/m at 20°C/68°F (ASTM D-971)
Density:	Typical 871 kg/m3 @ 15°C/59°F
Vapor Density (air = 1):	3.1 mg/m3
Vapor Pressure:	Typical 1 kPa at 0°C/32°F Typical 3 – 3.5 kPa at 20°C/68°F Typical 12 kPa at 50°C/122°F
Kinematic Viscosity:	0.63 mm2/s at 25°C/77°F
Evaporation Rate (nBuAc=1):	6.1 (DIN 53170, di-ethyl ether=1)/2 (ASTM D-3539, nBuAc=1)
n-octanol/Water Partition Coefficient (log Pow):	2.65
Water Solubility:	0.515 Kg/m3
Molecular Weight:	92 g/mol
Electrical Conductivity:	Typical 8pS/m at 20°C/68°F (ASTM D-971)
Dielectric Constant:	Typical 2.4
Auto-Ignition Temperature:	480 - 536°C/896 - 997°F (ASTM E-659)

Section 4 - Fire & Explosion Hazard Data

Clear fire area of all non-emergency personnel.

Flash Point Deg C:	Method Tag Closed Cup 4°C/39°F (Abel)
Lower Flammability Limit:	1.2% (V)
Upper Flammability Limit:	8% (V)
Auto-ignition Temperature:	480°C - 536°C/896 - 997°F (ASTM E-659)
Extinguishing Media:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media:	Do not use water in a jet. The vapor is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water. Carbon monoxide may be evolved if incomplete combustion occurs.
Specific Hazards:	
Protective Equipment for Firefighters:	Wear full protective clothing and self-contained breathing apparatus.
Additional Advice:	Keep adjacent containers cool by spraying with water.
Hazardous Combustion Products:	Carbon monoxide and carbon dioxide are produced on combustion.

Section 5 - Health Hazard Data

Emergency Overview:	
Routes of Exposure:	Inhalation is the primary route of exposure although absorption may occur through skin contact or following accidental ingestion.
Health Hazards:	Vapors may cause drowsiness and dizziness. Irritating to eyes. Harmful: may cause lung damage if swallowed.

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Handling:	Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<=1 m/sec until fill pipe submerged to twice its diameter, then <=7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Handle and open container with care in a well-ventilated area.
Storage:	Vapors from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapor treatment system. Bulk storage tanks should be diked (bunded). Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. The vapor is heavier than air. Beware of accumulation in pits and confined spaces.
Product Transfer:	Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.
Recommended Materials:	For containers, or container linings use mild steel, stainless steel.
Unsuitable Materials:	Natural, butyl, neoprene or nitrile rubbers.
Container Advice:	Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.
Additional Information:	Ensure that all local regulations regarding handling and storage facilities are followed.

Section 10 - Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

AICS	Listed
DSL	Listed
INV (CN)	Listed
ENCS (JP)	Listed (3)-2
TSCA	Listed

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