



A NEW FORCE IN CHEMICAL MANUFACTURING

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SAFETY DATA SHEET

ISSUED SEPTEMBER 2014 (VALID 5 YEARS FROM DATE OF ISSUE)

LQR PRINTED CIRCUIT BOARD LACQUER

SECTION 1 - IDENTIFICATION OF THE MATERIAL

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PRODUCT NAME Printed Circuit Board Lacquer
PRODUCT TYPE Protective Lacquer for Industrial Use
PART NUMBER CT-LQR
AVAILABLE SIZES 1L (CT-LQR-1L)
5L (CT-LQR-5L)
20L (CT-LQR-20L)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	%	HSIS TWA	HSIS STEL
Toluene	108-88-3	10-30	50ppm (191mg/m ³)	150ppm (574mg/m ³)
Acetone	67-64-1	10-30	500ppm (1185mg/m ³)	1000ppm (2375mg/m ³)

SECTION 3 - HAZARDS IDENTIFICATION

Hazard Classification: Hazardous Substance, Dangerous Goods. According to the criteria of SafeWork Australia
F, Xi, Xn

Risk Phrases: R11 – Highly flammable
R20/22 - Harmful by inhalation and if swallowed.
R36/38 – Irritating to eyes and skin.
R65 – Harmful: may cause lung damage if swallowed.
R67 – Vapours may cause drowsiness and dizziness.

Safety Phrases: S2 – Keep out of reach of children
S7/9 – Keep container tightly closed and in a well ventilated place
S21 – When using do not smoke
S23 – Do not breathe vapour.
S51 – Use only in well ventilated areas.
S24/25 – Avoid contact with skin and eyes.
S36/37 – Wear suitable protective clothing and gloves

S62 - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Overview: POISON! DANGER! HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. VAPOR HARMFUL. FLAMMABLE LIQUID AND VAPOR. MAY AFFECT LIVER, KIDNEYS, BLOOD SYSTEM, OR CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation. High concentrations of vapours may cause headache, fatigue, drowsiness and dizziness.

Skin contact: May cause allergic skin reaction. May cause skin irritation. Product has a defatting effect on skin. Prolonged contact may cause dryness of skin.

Eye contact: Contact with eyes will cause irritation.

SECTION 4 - FIRST AID MEASURES

Inhalation: Remove to fresh air. If symptoms develop and persist, get medical attention.

Skin contact: Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse.

Get medical attention if symptoms occur.

Eye contact: Check for and remove any contact lenses. Immediately flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.

Ingestion: Do not induce vomiting. Give large quantities of water. Rinse mouth thoroughly. Loosen any tight clothing. Keep individual calm. Obtain medical attention. If there are signs of intoxication (drunkenness) then serious health effects may follow (depending on the amount swallowed or inhaled). Treat unconsciousness by placing the person in the coma position. Apply artificial respiration if breathing stops. Immediate medical attention should be sought and the affected person transferred and accompanied to the care of a doctor or hospital.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point: -20°C (Closed Cup)

Autoignition temperature: 422°C (ASTM D-2155)

Flammable/Explosive limits-lower %: 1.1%

Flammable/Explosive limits-upper %: 7.1%

Extinguishing media: Alcohol resistant foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Use water to cool exposed containers. Heating can cause expansion or decomposition leading to violent ruptures of containers. If safe to do so, remove containers from path of fire. Spills and leaks may be washed away with copious volumes of water, fog, or spray. For major fires or where the atmosphere is oxygen deficient or contains unacceptable levels of combustion products, fire-fighters must wear self contained breathing apparatus with full face mask and protective clothing.

Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of carbon. Keep run-off water out of sewers and water sources.

Hazchem Code: 3[Y]E

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Environmental precautions: Extinguish all ignition sources. Ventilate well. Use approved respirator if air contamination is above accepted level. Prevent product from entering drains or open waters.

Clean-up methods: Soak up with inert absorbent. Store in a partly filled, closed container until disposal.

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapour and mist. Wash thoroughly after handling.

Storage: For safe storage, store at or below 38°C (100°F). Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

Incompatible products: Refer to Section 10.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves.

Eye/face protection: Safety goggles or safety glasses with side shields. Eye wash facilities should be provided in all areas where the product is handled.

See Section 2 for exposure limits.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Colour: Clear, colourless.

Odour: Organic, Aromatic.

pH: Not available

Boiling point/range: 56-110°C.

Melting point/range: -95°C

Specific gravity: 0.8 at 20°C.

Vapour density: 3.14 at 20°C (air=1)

Evaporation rate: 2.24 (ASTM D-3539, nBuAc=1)

Solubility in water: Partially soluble.

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use.

Hazardous polymerization: Will not occur.

Hazardous decomposition products: Oxides of carbon.

Incompatibility: Strong oxidizers. Strong acids. Chlorine, Nitrogen tetroxide

Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

SECTION 11 - TOXICOLOGICAL INFORMATION

Product toxicity data:

toluene	Oral: LD ₅₀ 636 mg/Kg (rat). Skin: LD ₅₀ 14,100mg/Kg (rabbit) Inhalation LC ₅₀ :49g/m ³ /4hr (rat) Irritation Data: 500mg (skin rabbit), Moderate. 2mg/24hr (eye rabbit) Severe. Has shown some evidence of reproductive effects in laboratory animals IARC Category 3
acetone	Oral: LD ₅₀ 5800 mg/Kg (rat). Inhalation LC ₅₀ : 50,100mg/Kg (rat) Irritation: 20mg severe (eye rabbit Standard Draize). Investigated as a tumorigen, mutagen, reproductive effector

SECTION 12 - ECOLOGICAL INFORMATION

Acute Toxicity	Fish: LC ₅₀ 10-100mg/l/96hr
Mobility:	Partly dissolves in water If product enters soil, it will be highly mobile and may contaminate groundwater
Persistence/degradability:	Biodegradable and volatile.
Environmental Fate:	When released into the soil, this material may evaporate to a moderate extent. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day. This material is not expected to significantly bioaccumulate. This material has a log octanol-water partition coefficient of less than 3.0. Bioconcentration factor = 13.2 (eels)

SECTION 13 - DISPOSAL CONSIDERATIONS

Recommended method of disposal:	Recover or recycle if possible. Dispose of according to Federal, State and local governmental regulations.
Container disposal:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Recycle if possible.

SECTION 14 - TRANSPORT INFORMATION

ADG:	
Proper shipping name:	Flammable Liquid, NOS (contains acetone)
UN No.:	1993
Class:	3
Hazchem code:	3[Y]E
Packing group:	II



IMDG:	
Proper shipping name:	Flammable Liquid, NOS (contains acetone)
Identification No.:	UN 1993
Class:	3

Packing group: II
Marine pollutant: No

IATA (country variations may occur):

Proper shipping name: Flammable Liquid, NOS (contains acetone)
Identification No.: UN 1993
Class: 3
Packing group: II

SECTION 15 - REGULATORY INFORMATION

Poisons Schedule (SUSDP): Schedule S6 Poison

SECTION 16 – OTHER INFORMATION

Abbreviations/Acronyms: ACGIH – American Conference of Government Industrial Hygienists.
ADG – Australian Dangerous Goods.
HSIS - Hazardous Substances Information System.
IARC – International Agency for Research on Cancer.
NIOSH – National Institute of Occupational Health and Safety.
PEL – Permissible Exposure Limit.
STEL – Short Term Exposure Limit.
SUSDP – Standard for the Uniform Scheduling of Drugs and Poisons.
TLV – Threshold Limit Value.
TWA – Time Weighted Average.

DISCLAIMER

The information contained within this MSDS applies only to the Chemtools product to which the sheet relates.

The information provided is based on our best knowledge at the time of issue.

The information contained within this MSDS is believed to be accurate and is given in good faith. However, no warranty is made, either expressed or implied, regarding its accuracy or any liability arising out of the use of the information herein or the product supplied.

When used in other preparations, formulations, or in mixtures, it is necessary to ascertain whether the classifications of the hazards have changed. The attention of the user is drawn to the possibility of creating other hazards when the product is used for purposes other than that for which it was recommended. In such cases, a reassessment may be necessary and should be made by the user.

This safety data sheet should only be used and reproduced in order that the necessary measures are taken relating to the protection of health and safety at work.

It is the responsibility of the handlers to pass on the totality of the information contained within this document to any subsequent person(s) who will come in to contact with, handle or use this product in any way.

They should check the adequacy of the information provided within this MSDS before passing it on to their customers/staff.