

TECHNICAL DATA SHEET

Product No. 2044 & 2049



ACN 000 725 833

CRC Industries (Aust) Pty. Limited

PO Box 199, Castle Hill, NSW 1765.

I. Product Description

CRC Urethane Seal Coats are an excellent adhering one-component polyurethane coatings. Its abrasive resistant insulation acts as a protective film, for electrical and electronic applications. **CRC Urethane Seal Coats** are stable single component polyurethane coating that dries fast, adheres well and forms a hard, durable, flexible and non-conductive film.

II. Applications

Recommended for:

- Protecting components from condensation and moisture
- Protecting printed circuit boards.
- Insulates cables and wires
- Coating terminal strips, screw connections, and switch boxes that are exposed to atmospheric effects.
- Coating for Electric motor windings, armature coils, commutator ends, transformer ends.
- Coating for housings and bus bars.
- Protective coating for tools.

III. Features & Benefits

- Clear or Red.** Available in two conformal colours.
- Humidity and Salt Spray Resistant.** Provides heavy corrosion protection to preserve and lengthen useful life of equipment.
- Protection.** Offers protective resistance to shocks, abrasion and aggressive chemicals atmospheres.
- High Dielectric Strength,** and a high surface and volume resistivity which, when combined with a low dielectric constant and dissipation factor, are necessary for successful electrical and electronic applications.

IV. Physical Properties without propellant

Flash Point	43°C Open Cup	Boiling Point	800C Initial
Odour	Of organic solvent	% Volatile	86%
Appearance	Colourless or Red film	Specific Gravity	0.86 ± 0.02
Dielectric Constant	4.04 at 60Hz	Volume Resistance	8.4 @ 10 ohms/cm
Surface Resistance	1.2 @ 10 ohms/cm		
Viscosity	13s (Ford Cup)	Propellant	Hydrocarbon

V. Specification and Approvals

VI. Performance Characteristics

Type of Film	Drying time = approx 1 hour
A Thickness of Three Coats	Dielectric resistance of 16kV
Breakdown Voltage	20 kV/mm
Creep Resistance	600V (DIN IEC112/VDE 0303 Part 1)
Endurance Thermal Stability	100 ⁰ C
Temporary Thermal Stability	120 ⁰ C
Low Temperature Stability	Minus 70 ⁰ C
Corrosion resistance	Up to 2 years outdoors

VII. Directions

- Shake well before and during use.
- De-energise; DO NOT use on energised equipment
- Mask area not to be sprayed.
- Best results are obtained when sprayed above 15⁰C. Spray from a distance of 30 to 45cm in light, even coats.
- Additional coats for additional protection may be applied after each coat dries.
- Allow 30 minutes drying between coats to facilitate build up.
- When finished spraying, clean valve by turning can upside down and pressing actuator until only propellant escapes.

VIII. Disposal

Disposal requirements vary by state and local regulations. All used and unused product should be disposed of in conformance with local, state and commonwealth laws and regulations.

IX. Special Use Warnings

Aerosol Cans

Do not puncture, incinerate or store above 50⁰C. Exposure to high temperatures may cause can to burst. Do not place in direct sunlight or near any heat source. Aerosol cans will conduct electricity. Keep away from all live electrical sources including battery terminals, solenoids, electrical panels and other electronic components. Failure to observe this warning may result in serious injury from flash fire and/or electrical shock.

General

Use only in well ventilated area. Ventilation may be improved by opening a window or door or providing mechanical assistance. Avoid continuous breathing of vapour and spray mist. Avoid contact with the skin and eyes. If ventilation is not adequate, respiratory protection should be worn. For more information regarding short term and long term exposure, review this product's Material Safety Data Sheet.

PRODUCT WARRANTY: CRC offers a conditional warranty on this product for the period of 2 years from the date of manufacture.

DISCLAIMER: All information on this data sheet is based on testing by CRC Industries (Aust.) Pty. Ltd. All products should be tested for suitability on a particular application prior to actual use. CRC Industries (Aust.) Pty. Ltd. makes no representations or warranties of any kind concerning this data.



SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name CRC CLEAR URETHANE
Synonym(s) 2049 - PRODUCT CODE • CLEAR URETHANE SEAL COAT • CRC CLEAR URETHANE SEAL COAT (FORMERLY)

1.2 Uses and uses advised against

Use(s) INSULATION • PROTECTOR

1.3 Details of the supplier of the product

Supplier name CRC INDUSTRIES (AUST) PTY LIMITED
Address 9 Gladstone Road, Castle Hill, NSW, 2154, AUSTRALIA
Telephone (02) 9849 6700
Fax (02) 9680 4914
Email info@crcind.com.au
Website www.crcindustries.com.au

1.4 Emergency telephone number(s)

Emergency 13 11 26 (PIC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS classification(s) Aerosols: Category 1
Serious Eye Damage / Eye Irritation: Category 2A
Specific Target Organ Systemic Toxicity (Single Exposure): Category 3

2.2 Label elements

Signal word DANGER

Pictogram(s)



Hazard statement(s)

H222 Extremely flammable aerosol.
H229 Pressurized container: may burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
AUH066 Repeated exposure may cause skin dryness or cracking

Prevention statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

PRODUCT NAME CRC CLEAR URETHANE

Response statement(s)

P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage statement(s)

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C.

Disposal statement(s)

P501	Dispose of contents/container in accordance with relevant regulations.
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2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
ACETONE	67-64-1	200-662-2	10 to 30%
PETROLEUM GASES, LIQUEFIED	68476-85-7	270-704-2	10 to 30%
ISOHEXANES	-	-	10 to 30%
PETROLEUM DISTILLATE(S)	-	-	10 to 30%
URETHANE ALKYD RESIN	-	-	10 to 30%
METHOXYPROPYL ACETATE	84540-57-8	283-152-2	<10%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. Ingestion is considered unlikely due to product form.
First aid facilities	No information provided.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture

Highly flammable. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition. Vapour may form explosive mixtures with air. Eliminate all ignition sources, including cigarettes, open flames, spark producing switches/tools, heaters, pilot lights, mobile phones, etc when handling. Aerosol cans may explode above 50°C.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

2Y
 2 Fine Water Spray.
 Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool (< 50°C), dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure aerosol containers/ cans are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for damaged/ leaking containers. Large storage areas should have appropriate fire protection systems.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Acetone	SWA (AUS)	500	1185	1000	2375
Hexane, other isomers	SWA (AUS)	500	1760	1000	3500
Liquefied petroleum gas (LPG)	SWA (AUS)	1000	1800	1000	1800
Oil mists	SWA (AUS)	--	5	--	--

Biological limits

Ingredient	Determinant	Sampling Time	BEI
ACETONE	Acetone in urine	End of shift	-
	Aniline released from haemoglobin in blood	End of shift	-
	p-Aminophenol in urine	End of shift	50 mg/L

Reference: ACGIH Biological Exposure Indices

PRODUCT NAME CRC CLEAR URETHANE

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable vapours may accumulate in poorly ventilated or confined areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear nitrile or neoprene gloves.
Body	Not required under normal conditions of use.
Respiratory	At high vapour levels, wear a Type A-Class P1 (Organic gases/vapours and Particulate) respirator. Where the boiling point is < 65°C, use an AX filter type.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	CLEAR LIQUID (AEROSOL DISPENSED)
Odour	SOLVENT ODOUR
Flammability	HIGHLY FLAMMABLE
Flash point	20°C
Boiling point	35°C (Initial)
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	> 1 (Air = 1)
Specific gravity	1.03
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	10 %
Lower explosion limit	1.4 %
Partition coefficient	NOT AVAILABLE
Autoignition temperature	500°C
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

9.2 Other information

% Volatiles	85 %
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10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources.

10.6 Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary May be harmful - irritant. This product may only have the potential to cause adverse health effects if intentionally misused (e.g. deliberately inhaling contents). Use safe work practices to avoid eye or skin contact and vapour generation - inhalation. Over exposure may result in central nervous system (CNS) effects.

Eye Irritant. Contact may result in irritation, lacrimation, pain and redness.

Inhalation Irritant. Over exposure may result in irritation of the nose and throat, coughing and headache. High level exposure may result in nausea, dizziness and drowsiness.

Skin Irritant. Contact may result in drying and defatting of the skin, rash and dermatitis.

Ingestion May be harmful. Ingestion may result in nausea, vomiting, abdominal pain and drowsiness with large quantities. Aspiration or inhalation may cause chemical pneumonitis and pulmonary oedema. Ingestion is considered unlikely due to product form.

Toxicity data	ACETONE (67-64-1)	
	LC50 (inhalation)	44000 mg/m ³ /4 hours (mouse)
	LCLo (inhalation)	1600 ppm/4 hours (rat)
	LD50 (ingestion)	3000 mg/kg (mouse)
	LD50 (intraperitoneal)	1297 mg/kg (mouse)
	LD50 (intravenous)	5500 mg/kg (rat)
	LD50 (skin)	> 9400 uL/kg (guinea pig)
	LDLo (ingestion)	8000 mg/kg (dog)
	LDLo (intraperitoneal)	500 mg/kg (rat)
	LDLo (intravenous)	1576 mg/kg (rabbit)
	LDLo (skin)	20 mL/kg (rabbit)
	LDLo (subcutaneous)	5000 mg/kg (guinea pig/dog)
	TCLo (inhalation)	500 ppm (human)
	TDLo (ingestion)	2857 mg/kg (man)
	URETHANE ALKYD RESIN	
	LD50 (ingestion)	1809 mg/kg for Urethane (rat)
	LDLo (ingestion)	800 mg/kg for Urethane (pigeon)
	TCLo (inhalation)	138ppm/130 days for Urethane (mouse - tumours)
	TDLo (ingestion)	1600 mg/kg Urethane (4-7 days pregnant mouse - reprod.)
	TDLo (skin)	1000 mg/kg/W-I (mouse - tumors)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

PRODUCT NAME CRC CLEAR URETHANE**13.1 Waste treatment methods**

Waste disposal For small amounts, absorb contents with sand or similar and dispose of to an approved landfill site. Do not puncture or incinerate aerosol cans. Contact the manufacturer/supplier for additional information (if required).

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1950	1950	1950
14.2 Proper Shipping Name	AEROSOLS	AEROSOLS	AEROSOLS
14.3 Transport hazard class	2.1	2.1	2.1
14.4 Packing Group	None Allocated	None Allocated	None Allocated

14.5 Environmental hazards No information provided

14.6 Special precautions for user

Hazchem code 2Y
GTEPG 2D1
EMS F-D, S-U

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule Classified as a Schedule 5 (S5) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes F+ Extremely flammable
Xi Irritant
Xn Harmful

Risk phrases R12 Extremely Flammable.
R36 Irritating to eyes.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

Safety phrases S9 Keep container in a well ventilated place.
S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S35 This material and its container must be disposed of in a safe way.

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information AEROSOL CANS may explode at temperatures approaching 50°C.

PRODUCT NAME CRC CLEAR URETHANE

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Revision history

Revision	Description
2.0	GHS classifications provided.
1.0	Initial SDS creation

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

Prepared by

Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au

PRODUCT NAME CRC CLEAR URETHANE

Revision: 2
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[End of SDS]