MATERIAL SAFETY DATA SHEET

Product Name **NF CONTACT CLEANER 2017**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	**CRC INDUSTRIES (AUST) PTY LIMITED**
Address	9 Gladstone Road, Castle Hill, NSW, AUSTRALIA, 2154
Telephone	(02) 9634 2088
Fax	(02) 9680 4914
Emergency	(02) 9634 2088
Email	info@crcind.com.au
Web Site	http://www.crcind.com.au/
Synonym(s)	2017 - MANUFACTURER'S CODE • CRC NF CONTACT CLEANER • NF CONTACT CLEANER (AEROSOL) • NF CONTACT CLEANER (FORMERLY)
Use(s)	CLEANING AGENT • CONTACT CLEANER • ELECTRICAL CLEANER
SDS Date	01 Apr 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

RISK PHRASES

R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R59	Dangerous for the ozone layer.

SAFETY PHRASES

S59	Refer to manufacturer / supplier for information on recovery / recycling.
S61	Avoid release to the environment. Refer to special instructions / safety data sheets.

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

UN No.	1950	**DG Class**	2.2	**Subsidiary Risk(s)**	None Allocated
Packing Group	None Allocated	**Hazchem Code**	2Y	**EPG**	2D1

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
1,1-DICHLORO-1-FLUOROETHANE (HCFC 141B)	C2-H3-Cl2-F	1717-00-6	>60%
CARBON DIOXIDE (PROPELLANT)	Not Available	124-38-9	<10%

4. FIRST AID MEASURES

Eye	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained Breathing Apparatus (SCBA). Be aware of possible explosive atmospheres. Apply artificial respiration if not breathing. Give oxygen if available.
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 on 13 11 26 (Australia Wide) or a doctor.
Ingestion	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

Advice to Doctor CHLOROFLUOROCARBONS: If inhalation occurs, epinephrine or other sympathomimetic amines and adrenergic activators should not be administered since they will further sensitise the heart to development of arrhythmias [Clayton, G&F). In persons who are intoxicated with fluorocarbons, steps can be taken to lessen the risk of arrhythmias. Before evaluation at the hospital, patients should be advised to avoid strenuous exercise. In the hospital, patients can be placed in a quiet, non threatening environment and sedated if necessary.

5. FIRE FIGHTING MEASURES

Flammability Non flammable. May evolve toxic gases (chlorides, fluorides, phosgene, carbon oxides, hydrocarbons) when heated to decomposition. Vapour may form explosive mixtures with air.

Fire and Explosion 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.

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

Hazchem Code 2Y

6. ACCIDENTAL RELEASE MEASURES

Spillage If cans/containers are punctured (bulk), use personal protective equipment. Clear area of all unprotected personnel. Ventilate area where possible. Collect and allow to discharge outdoors. Contain spillage, then cover / absorb spill with non-combustible absorbant material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

7. STORAGE AND HANDLING

Storage Store in a cool, dry, well ventilated area, removed from oxidising agents, alkalis, alkali earth metals, metal powders, heat or ignition sources and foodstuffs. Aerosol containers may explode if exposed to excessive heat (> 50°C). Ensure containers are adequately labelled and protected from physical damage when not in use.

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.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds

Ingredient	Reference	TWA		STEL	
		ppm	mg/m3	ppm	mg/m3
Carbon dioxide	ASCC (AUS)	5000	--	9000	--
Carbon dioxide in coal mines	ASCC (AUS)	12500	--	30000	--

Biological Limits No biological limit allocated.

Engineering Controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE Wear splash-proof goggles. When using large quantities or where heavy contamination is likely, wear: viton (R) or PVA gloves and coveralls. Where an inhalation risk exists, wear: a Type A (Organic vapour) respirator. At high vapour levels, wear: an Air-line respirator or self Contained Breathing Apparatus (SCBA).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	COLOURLESS LIQUID (AEROSOL DISPENSED)	**Solubility (Water)**	INSOLUBLE
Odour	ETHEREAL ODOUR	**Specific Gravity**	1.21
pH	NOT RELEVANT	**% Volatiles**	100 %
Vapour Pressure	69.5 kPa @ 20°C	**Flammability**	NON FLAMMABLE
Vapour Density	4 (Air = 1)	**Flash Point**	NOT RELEVANT

Boiling Point	30°C	**Upper Explosion Limit**	19.2 %
Melting Point	NOT AVAILABLE	**Lower Explosion Limit**	7.5 %
Evaporation Rate	NOT AVAILABLE		
Decomposition Temperature	> 250°C		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage.
Conditions to Avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to Avoid	Incompatible with oxidising agents (eg. hypochlorites), alkalis/ alkali earth metals.
Decomposition	May evolve toxic gases (chlorides, fluorides, phosgene, carbon oxides, hydrocarbons) when heated to decomposition.
Hazardous Reactions	Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Asphyxiant - narcotic. This product may present a hazard with direct eye contact, prolonged skin contact or with vapour inhalation at high levels. Individuals with impaired cardiovascular function, especially those with a history of cardiac arrhythmias, are advised to avoid exposure.
Eye	Low irritant. Contact may result in irritation, lacrimation and redness.
Inhalation	Irritant - asphyxiant. Over exposure may result in respiratory irritation, coughing, nausea, dizziness and headache. High level exposure may result in dizziness, breathing difficulties and anaesthesia, cardiac arrhythmias, pulmonary oedema and unconsciousness at very high levels.
Skin	Low irritant. Prolonged or repeated contact may result in mild irritation.
Ingestion	Ingestion is considered unlikely due to product form.
Toxicity Data	1,1-DICHLORO-1-FLUOROETHANE (HCFC 141B) (1717-00-6) LC50 (Inhalation): 151 g/m3/2 hours (mouse) LD50 (Ingestion): > 5 g/kg (rat) LD50 (Skin): > 2 g/kg (rat) CARBON DIOXIDE (PROPELLANT) (124-38-9) LCLo (Inhalation): 9 pph/5M (human)

12. ECOLOGICAL INFORMATION

Environment	Dangerous for the ozone layer. Hydrogenated chlorofluorocarbon compounds (HCFC's) do not persist in the stratosphere to the same degree as chlorofluorocarbons (CFC's). Although ozone depleting, they have a lower ozone depleting effect than CFC's. Release of HCFCs into the environment should be minimised and where possible, recycling of HCFCs is recommended.

13. DISPOSAL CONSIDERATIONS

Waste Disposal	OZONE DEPLETING SUBSTANCE. Do not send to landfill. Do not puncture or incinerate aerosol cans. Contact your state EPA or the manufacturer for additional information. Prevent contamination of drains and waterways as environmental damage may result.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

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

Shipping Name	AEROSOLS				
UN No.	1950	**DG Class**	2.2	**Subsidiary Risk(s)**	None Allocated
Packing Group	None Allocated	**Hazchem Code**	2Y	**EPG**	2D1

15. REGULATORY INFORMATION

Poison Schedule Classified as a Schedule 5 (S5) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information

OZONE DEPLETING SUBSTANCES: It is an offence (EPA) to distribute and manufacture the following identified ozone depleting substances unless authorised to do so: 1,1,1-trichloroethane, carbon tetrachloride, CFCs - 11,12,13, 111, 112, 113, 114, 115, 211, 212, 213, 214, 215, 216 & 217. HCFC's-21, 22, 31, 122, 123, ,124, 131, 133, 141b, 142, 142b, 151, 221, 222, 223, 224, 225, 225ca, 225cb, 226, 231, 232, 233, 234, 235, 241, 242, 243, 244, 251, 252, 253, 261, 262 & 271. HALONS- 1211, 1311, 114 & 115.

ABBREVIATIONS:
ADB - Air-Dry Basis.
BEI - Biological Exposure Indice(s)
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
CNS - Central Nervous System.
EINECS - European INventory of Existing Commercial chemical Substances.
IARC - International Agency for Research on Cancer.
M - moles per litre, a unit of concentration.
mg/m3 - Milligrams per cubic metre.
NOS - Not Otherwise Specified.
NTP - National Toxicology Program.
OSHA - Occupational Safety and Health Administration.
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm - Parts Per Million.
RTECS - Registry of Toxic Effects of Chemical Substances.
TWA/ES - Time Weighted Average or Exposure Standard.

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 Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this Chem Alert 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.

Report Status

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

It is based on information concerning the product which has been provided to RMT by the manufacturer 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.

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.

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SDS Date: 01 Apr 2010

End of Report