

# CRG BIOSHIELD 75 SPRAY PACK

Chemwatch Independent Material Safety Data Sheet

Issue Date: 2-Jul-2010

NC317ECP

CHEMWATCH 23-9818

Version No:2.0

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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### PRODUCT NAME

CRG BIOSHIELD 75 SPRAY PACK

### PROPER SHIPPING NAME

AEROSOLS

### PRODUCT USE

■ Application is by spray atomisation from a hand held aerosol pack.  
Biostatic surface protectant, antimicrobial agent, microbiostatic agent for bacteria and mould.

### SUPPLIER

Company: Clean Room Garments Pty Ltd

Address:

4 Clarendon Street

Artarmon

NSW, 2064

Australia

Telephone: +61 2 8437 4600

Fax: +61 2 9437 4351

Email: Sales@cleanroom.com.au

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## Section 2 - HAZARDS IDENTIFICATION

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### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. DANGEROUS GOODS.** According to NOHSC Criteria, and ADG Code.

### POISONS SCHEDULE

None

### RISK

Risk Codes

R12

R36

R44

R67

Risk Phrases

- Extremely flammable.
- Irritating to eyes.
- Risk of explosion if heated under confinement.
- Vapours may cause drowsiness and dizziness.

### SAFETY

Safety Codes

S16

S23

S24

S39

S40

S26

S46

S60

Safety Phrases

- Keep away from sources of ignition. No smoking.
- Do not breathe gas/ fumes/ vapour/ spray.
- Avoid contact with skin.
- Wear eye/ face protection.
- To clean the floor and all objects contaminated by this material use water.
- In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.
- If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre (show this container or label).
- This material and its container must be disposed of as hazardous waste.

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Section 2 - HAZARDS IDENTIFICATION

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS RN	%
ethanol	64-17-5	30-60
stabilisers non- hazardous proprietary		<10
organosilane quaternary ammonium compound		<1
water	7732-18-5	10-30
dimethyl ether	115-10-6	10-30

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## Section 4 - FIRST AID MEASURES

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### SWALLOWED

- Not considered a normal route of entry.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

### EYE

- If aerosols come in contact with the eyes:
- Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

### INHALED

- If aerosols, fumes or combustion products are inhaled:
- Remove to fresh air.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

### NOTES TO PHYSICIAN

- Treat symptomatically.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

#### ■ SMALL FIRE:

- Water spray, dry chemical or CO<sub>2</sub>

#### LARGE FIRE:

- Water spray or fog.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

### FIRE/EXPLOSION HAZARD

- Liquid and vapour are highly flammable.
  - Severe fire hazard when exposed to heat or flame.
  - Vapour forms an explosive mixture with air.
  - Severe explosion hazard, in the form of vapour, when exposed to flame or spark.
  - Vapour may travel a considerable distance to source of ignition.
  - Heating may cause expansion or decomposition with violent container rupture.
  - Aerosol cans may explode on exposure to naked flames.
  - Rupturing containers may rocket and scatter burning materials.
  - Hazards may not be restricted to pressure effects.
  - May emit acrid, poisonous or corrosive fumes.
  - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

### FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

### HAZCHEM

2YE

### Personal Protective Equipment

Gas tight chemical resistant suit.

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.
- Wipe up.
- If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until

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Section 6 - ACCIDENTAL RELEASE MEASURES

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pressure has dissipated.

- Undamaged cans should be gathered and stowed safely.

## MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse / absorb vapour.
- Absorb or cover spill with sand, earth, inert materials or vermiculite.
- If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.
- Collect residues and seal in labelled drums for disposal.

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- DO NOT incinerate or puncture aerosol cans.
- DO NOT spray directly on humans, exposed food or food utensils.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

### SUITABLE CONTAINER

- Aerosol dispenser.
- Check that containers are clearly labelled.

### STORAGE INCOMPATIBILITY

- Avoid storage with oxidisers.

### STORAGE REQUIREMENTS

- Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can.
- Store in original containers in approved flammable liquid storage area.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- No smoking, naked lights, heat or ignition sources.
- Keep containers securely sealed. Contents under pressure.

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Section 7 - HANDLING AND STORAGE

- Store away from incompatible materials.
- Store in a cool, dry, well ventilated area.
- Avoid storage at temperatures higher than 40 deg C.
- Store in an upright position.
- Protect containers against physical damage.
- Check regularly for spills and leaks.
- Observe manufacturer's storing and handling recommendations. Do not store below 5 deg C.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>
Australia Exposure Standards	ethanol (Ethyl alcohol)	1000	1880		
Australia Exposure Standards	dimethyl ether (Dimethyl ether)	400	760	500	950

The following materials had no OELs on our records

- water: CAS:7732- 18- 5

### EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m <sup>3</sup> )	Revised IDLH Value (ppm)
ethanol		3, 300 [LEL]

### NOTES

Values marked LEL indicate that the IDLH was based on 10% of the lower explosive limit for safety considerations even though the relevant toxicological data indicated that irreversible health effects or impairment of escape existed only at higher concentrations.

### MATERIAL DATA

DIMETHYL ETHER:

ETHANOL:

■ Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- None assigned. Refer to individual constituents.

### ETHANOL:

- For ethanol:

Odour Threshold Value: 49-716 ppm (detection), 101 ppm (recognition)

Eye and respiratory tract irritation do not appear to occur at exposure levels of less than 5000 ppm and the TLV-TWA is thought to provide an adequate margin of safety against such effects. Experiments in man show that inhalation of 1000 ppm caused slight symptoms of poisoning and 5000 ppm caused strong stupor and morbid sleepiness. Subjects exposed to 5000 ppm to 10000 ppm experienced smarting of the eyes and nose and coughing. Symptoms disappeared within minutes. Inhalation also causes local irritating effects to the eyes and upper respiratory tract, headaches, sensation of heat intraocular tension, stupor, fatigue and a need to sleep. At 15000 ppm there was continuous lachrymation and coughing.

### WATER:

- No exposure limits set by NOHSC or ACGIH.

### DIMETHYL ETHER:

- for dimethyl ether:

The no-effect-level for dimethyl ether is somewhere between 2000 ppm (rabbits) and 50,000 ppm (humans) with possible cardiac sensitisation occurring around 200,000 ppm (dogs). The AIHA has adopted a safety factor of 100 in respect to the 50,000 ppm level in its recommendation for a workplace environmental exposure level (WEEL) which is thought to protect against both narcotic and sensitising effects. This level is consistent with the TLV-TWA of 400 ppm for diethyl ether and should be easily achievable using current technologies. The use of the traditionally allowable excursion of 1.25 to the level of 6.25 ppm is felt to be more than adequate as an upper safe limit of exposure.

Human data:

50,000 ppm (12 mins): Feelings of mild intoxication.

75,000 ppm (12 mins): As above plus slight lack of attenuation.

82,000 ppm (12 mins): Some incoordination, slight blurring of vision

(30 mins): As above plus analgesia of the face and rushing of blood to the face.

100,000 ppm (10-20 mins): Narcotic symptoms; (64 mins): Sickness (assumed to be nausea)

144,000 ppm (36 mins): Unconsciousness.

May act as a simple asphyxiants; these are gases which, when present in high concentrations, reduce the oxygen content in air below that required to support breathing, consciousness and life; loss of consciousness, with death by suffocation may rapidly occur in an oxygen deficient atmosphere.

CARE: Most simple asphyxiants are odourless or possess low odour and there is no warning on entry into an oxygen deficient atmosphere. If there is any doubt, oxygen content can be checked simply and quickly. It may not be appropriate to only recommend an exposure standard for simple asphyxiants rather it is essential that sufficient oxygen be maintained. Air normally has 21 percent oxygen by volume, with 18 percent regarded as minimum under normal atmospheric pressure to maintain consciousness / life. At pressures significantly higher or lower than normal atmospheric pressure, expert guidance should be sought.

## PERSONAL PROTECTION

### EYE

- No special equipment for minor exposure i.e. when handling small quantities.

OTHERWISE: For potentially moderate or heavy exposures:

- Safety glasses with side shields.
- NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them.

### HANDS/FEET

- No special equipment needed when handling small quantities.
- OTHERWISE:
- For potentially moderate exposures:
- Wear general protective gloves, eg. light weight rubber gloves.
- For potentially heavy exposures:
- Wear chemical protective gloves, eg. PVC. and safety footwear.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

## OTHER

■ No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Skin cleansing cream.
- Eyewash unit.
- Do not spray on hot surfaces.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

## ENGINEERING CONTROLS

■ General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.

Provide adequate ventilation in warehouse or closed storage areas.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

■ Supplied as an aerosol pack. Contents under PRESSURE. Contains highly flammable ether propellant. Clear, colourless liquid; mixes with water.

### PHYSICAL PROPERTIES

Liquid.

Gas.

Mixes with water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Miscible
Flash Point (°C)	- 41 (propellant)	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Available
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not available.	Specific Gravity (water=1)	~0.9
Lower Explosive Limit (%)	Not available.	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Not Available	Evaporation Rate	Fast

ethanol

■ log Kow (Sangster 1997):

dimethyl ether

- 0.3

log Kow (Sangster 1997): 0.1

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Elevated temperatures.
- Presence of open flame.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

- Not normally a hazard due to physical form of product. Ingestion may result in nausea, abdominal irritation, pain and vomiting.

##### EYE

- The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

##### SKIN

- The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

##### INHALED

- Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.

#### CHRONIC HEALTH EFFECTS

- There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

#### TOXICITY AND IRRITATION

DIMETHYL ETHER:

ETHANOL:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

- Not available. Refer to individual constituents.

ETHANOL:

##### TOXICITY

Oral (rat) LD50: 7060 mg/kg  
Oral (human) LDLo: 1400 mg/kg  
Oral (man) TDLo: 50 mg/kg  
Oral (man) TDLo: 1.40 mg/kg  
Oral (woman) TDLo: 256 mg/kg/12 wks  
Inhalation (rat) LC50: 20, 000 ppm/10h  
Inhalation (rat) LC50: 64000 ppm/4h

- The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

WATER:

- No significant acute toxicological data identified in literature search.

DIMETHYL ETHER:

##### TOXICITY

Inhalation (rat) LC50: 308000 mg/m<sup>3</sup>

##### IRRITATION

Skin (rabbit):20 mg/24hr- Moderate  
Skin (rabbit):400 mg (open)- Mild  
Eye (rabbit):100mg/24hr- Moderate  
Eye (rabbit): 500 mg SEVERE

##### IRRITATION

Nil Reported

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Section 11 - TOXICOLOGICAL INFORMATION

## CARCINOGEN

Ethanol in alcoholic beverages	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	1
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## Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

ETHANOL:

DIMETHYL ETHER:

CRG BIOSHIELD 75 SPRAY PACK:

- DO NOT discharge into sewer or waterways.

DIMETHYL ETHER:

ETHANOL:

■ When ethanol is released into the soil it readily and quickly biodegrades but may leach into ground water; most is lost by evaporation. When released into water the material readily evaporates and is biodegradable. Ethanol does not bioaccumulate to an appreciable extent.

The material is readily degraded by reaction with photochemically produced hydroxy radicals; release into air will result in photodegradation and wet deposition.

Environmental Fate:

TERRESTRIAL FATE: An estimated Koc value of 1 indicates that ethanol is expected to have very high mobility in soil. Volatilisation of ethanol from moist soil surfaces is expected to be an important fate process given a Henry's Law constant of  $5 \times 10^{-6}$  atm-m<sup>3</sup>/mole. The potential for volatilization of ethanol from dry soil surfaces may exist based upon an extrapolated vapor pressure of 59.3 mm Hg. Biodegradation is expected to be an important fate process for ethanol based on half-lives on the order of a few days for ethanol in sandy soil/groundwater microcosms.

AQUATIC FATE: An estimated Koc value of 1 indicates that ethanol is not expected to adsorb to suspended solids and sediment. Volatilisation from water surfaces is expected based upon a Henry's Law constant of  $5 \times 10^{-6}$  atm-m<sup>3</sup>/mole. Using this Henry's Law constant and an estimation method, volatilisation half-lives for a model river and model lake are 3 and 39 days, respectively. An estimated BCF= 3, from a log Kow of -0.31 suggests bioconcentration in aquatic organisms is low. Hydrolysis and photolysis in sunlit surface waters is not expected to be an important environmental fate process for ethanol since this compound lacks functional groups that hydrolyse or absorb light under environmentally relevant conditions. Ethanol was degraded with half-lives on the order of a few days in aquatic studies conducted using microcosms constructed with a low organic sandy soil and groundwater, indicating it is unlikely to be persistent in aquatic environments(8).

ATMOSPHERIC FATE: Ethanol, which has an extrapolated vapor pressure of 59.3 mm Hg at 25 deg C, is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase ethanol is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 5 days, calculated from its rate constant of  $3.3 \times 10^{-12}$  m<sup>3</sup>/molecule-sec at 25 deg C.

Ecotoxicity:

log Kow : -0.31 - -0.32

Half-life (hr) air : 144

Half-life (hr) H<sub>2</sub>O surface water : 144

Henry's atm m<sup>3</sup> /mol: 6.29E-06

BOD 5 if unstated: 0.93-1.67,63%

COD : 1.99-2.11,97%

ThOD : 2.1.

ETHANOL:

- |                              |       |
|------------------------------|-------|
| ■ Fish LC50 (96hr.) (mg/l):  | 13480 |
| ■ Algae IC50 (72hr.) (mg/l): | 1450  |
| ■ log Kow (Sangster 1997):   | - 0.3 |
| ■ BOD5:                      | 63%   |

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### Section 12 - ECOLOGICAL INFORMATION

■ ThOD:	2.1
■ Half- life Soil - High (hours):	24
■ Half- life Soil - Low (hours):	2.6
■ Half- life Air - High (hours):	122
■ Half- life Air - Low (hours):	12.2
■ Half- life Surface water - High (hours):	26
■ Half- life Surface water - Low (hours):	6.5
■ Half- life Ground water - High (hours):	52
■ Half- life Ground water - Low (hours):	13
■ Aqueous biodegradation - Aerobic - High (hours):	26
■ Aqueous biodegradation - Aerobic - Low (hours):	6.5
■ Aqueous biodegradation - Anaerobic - High (hours):	104
■ Aqueous biodegradation - Anaerobic - Low (hours):	26
■ Aqueous biodegradation - Removal secondary treatment - High (hours):	67%
■ Photooxidation half- life water - High (hours):	3.20E+05
■ Photooxidation half- life water - Low (hours):	8020
■ Photooxidation half- life air - High (hours):	122
■ Photooxidation half- life air - Low (hours):	12.2

#### DIMETHYL ETHER:

■ Water solubility (g/l):	35300
■ log Kow (Sangster 1997):	0.1

er

log Kow: 0.1-0.12

Koc: 14

Half-life (hr) air: 528

Half-life (hr) H<sub>2</sub>O surface water: 2.6-30

Henry's atm m<sup>3</sup> /mol: 9.78E-04

BCF: 1.7

Bioaccumulation: not sig

processes Abiotic: RxnOH\*

#### Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
ethanol	LOW	MED	LOW	HIGH
water	LOW		LOW	HIGH
dimethyl ether	LOW		LOW	HIGH

### Section 13 - DISPOSAL CONSIDERATIONS

- Consult State Land Waste Management Authority for disposal.
- Discharge contents of damaged aerosol cans at an approved site.
- Allow small quantities to evaporate.
- DO NOT incinerate or puncture aerosol cans.
- Bury residues and emptied aerosol cans at an approved site.

### Section 14 - TRANSPORTATION INFORMATION

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Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE GAS

## HAZCHEM:

2YE (ADG7)

### ADG7:

Class or division:	2	Subsidiary risk:	None
UN No.:	1950	UN packing group:	None
Special provisions:	63; 190; 277; 327; 344	Packing Instructions:	None
Limited quantities:	See SP 277	Portable tanks and bulk containers - Instructions:	None
Portable tanks and bulk containers - Special provisions:	None	Packagings and IBCs - Packing instruction:	P003; LP02
Packagings and IBCs - Special packing provisions:	PP17, PP87, L2		
Shipping Name:	AEROSOLS		

### Land Transport UNDG:

Class or division:	2	Subsidiary risk:	None
UN No.:	1950	UN packing group:	None
Shipping Name:	AEROSOLS		

### Air Transport IATA:

ICAO/IATA Class:	2.1	ICAO/IATA Subrisk:	None
UN/ID Number:	1950	Packing Group:	-
Special provisions:	A145		

Shipping Name: AEROSOLS, FLAMMABLE

### Maritime Transport IMDG:

IMDG Class:	2	IMDG Subrisk:	SP63
UN Number:	1950	Packing Group:	None
EMS Number:	F- D , S- U	Special provisions:	63 190 277 327 959
Limited Quantities:	See SP277		
Shipping Name:	AEROSOLS		

## Section 15 - REGULATORY INFORMATION

### POISONS SCHEDULE

None

### REGULATIONS

Regulations for ingredients

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Section 15 - REGULATORY INFORMATION

## ethanol (CAS: 64-17-5) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Illicit Drug Reagents/Essential Chemicals - Category III", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

## water (CAS: 7732-18-5) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "OECD Representative List of High Production Volume (HPV) Chemicals"

## dimethyl ether (CAS: 115-10-6) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

**No data for CRG BioShield 75 Spray Pack (CW: 23-9818)**

## Section 16 - OTHER INFORMATION

### REPRODUCTIVE HEALTH GUIDELINES

Ingredient	ORG	UF	Endpoint	CR	Adeq TLV
ethanol	1880 mg/m3	NA	NA	NA	Yes

■ These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified otherwise.

CR = Cancer Risk/10000; UF = Uncertainty factor:

TLV believed to be adequate to protect reproductive health:

LOD: Limit of detection

Toxic endpoints have also been identified as:

D = Developmental; R = Reproductive; TC = Transplacental carcinogen

Jankovic J., Drake F.: A Screening Method for Occupational Reproductive

American Industrial Hygiene Association Journal 57: 641-649 (1996).

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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*This is the end of the MSDS.*