

# SAFETY DATA SHEET

**ACTROL R402A (HP80)**

Infosafe No.: LQ5Q4  
ISSUED Date: 28/06/2016  
Issued by: ARP

## 1. IDENTIFICATION

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**GHS Product Identifier**

ACTROL R402A (HP80)

**Company Name**

ARP (ABN 93 142 654 564)

**Address**

1-3 Annick Crescent Laverton North  
Vic 3026 Australia

**Telephone/Fax Number**

Tel: +613 8348 9200

Fax: +613 8353 2083

**Emergency phone number**

1800 638 556 (24hrs)

**Emergency Contact Name**

www.actrol.com.au

**Recommended use of the chemical and restrictions on use**

Refrigerant gas

## 2. HAZARD IDENTIFICATION

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**GHS classification of the substance/mixture**

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Gases under Pressure: Liquefied Gas

**Signal Word (s)**

WARNING

**Hazard Statement (s)**

H280 Contains gas under pressure; may explode if heated.

**Pictogram (s)**

Gas cylinder



**Precautionary statement – Storage**

P410+P403 Protect from sunlight. Store in a well-ventilated place.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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#### Ingredients

Name	CAS	Proportion
Pentafluoroethane	354-33-6	>60 %
Chlorodifluoromethane	75-45-6	30-60 %
Propane	74-98-6	1-10 %
Ingredients determined not to be hazardous	Not required	Balance

### 4. FIRST-AID MEASURES

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#### Inhalation

Avoid becoming a casualty - to protect rescuer, use air-viva, oxy-viva or one-way mask. Remove affected person from contaminated area - Apply artificial respiration if not breathing. Do not give direct mouth to mouth resuscitation. Resuscitate in a well ventilated area. Seek IMMEDIATE medical attention. Note: in confined space - DO NOT ATTEMPT RESCUE WITHOUT ADEQUATE RESPIRATORY PROTECTION.

#### Ingestion

Not considered a potential route of exposure.

#### Skin

Remove all contaminated clothing immediately. Clothing frozen to the skin should be thawed before being removed. Wash affected area thoroughly with soap and water. For freeze burns, immediately flood burnt area with plenty of warm water (40 - 44 °C) and cover with a clean, dry dressing. Treat as thermal burns. Seek IMMEDIATE medical attention.

#### Eye contact

If eye tissue is frozen, seek IMMEDIATE medical attention. If tissue is not frozen, immediately irrigate with copious amounts of water for at least 15 minutes. Remove contact lenses. For freeze burns, immediately irrigate with copious quantities of warm (40 - 44 °C) water for at least 15 minutes. Eyelids to be held open. Seek medical attention.

#### First Aid Facilities

Eyewash and normal washroom facilities.

#### Advice to Doctor

Treat symptomatically.

#### Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

### 5. FIRE-FIGHTING MEASURES

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#### Suitable Extinguishing Media

Use carbon dioxide, dry chemical, and foam or water mist.

#### Hazards from Combustion Products

Non combustible material.

#### Specific Hazards Arising From The Chemical

This product is non combustible. Contents under pressure - cans can explode in a fire.

#### Hazchem Code

2TE

#### Decomposition Temperature

Not available

#### Precautions in connection with Fire

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

## 6. ACCIDENTAL RELEASE MEASURES

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### Emergency Procedures

Remove all sources of ignition. Increase ventilation. Evacuate all unprotected personnel. Use self-contained breathing apparatus (S.C.B.A) and full protective clothing to minimise exposure. Allow gas to vent safely to atmosphere, preferably in well ventilated, remote location. Monitor oxygen concentration in confined spaces. Check for leaks using pressure drop test or soapy water on joints and outlets. Shut cylinder valve to stop leak if possible and safe to do so. Check gas concentration to ensure area is safe before removing protective equipment. Damaged gas cylinders should be returned to the supplier.

## 7. HANDLING AND STORAGE

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### Precautions for Safe Handling

Use in a well ventilated area. Wear appropriate personal protective equipment and clothing to prevent exposure. Use smallest possible amounts in designated areas with adequate ventilation. Maintain high standards of personal hygiene ie. washing hands prior to eating, drinking, smoking or using toilet facilities. DO NOT enter confined spaces where gas may have collected. Suck back of water into the container must be prevented. Do not allow back feed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Refer to supplier's container handling instructions.

### Conditions for safe storage, including any incompatibilities

Protect containers against physical damage. Store in a cool, dry, well-ventilated place, low fire risk area. Protect from extremes of temperature and weather. Do not allow any part of a cylinder to be exposed above 50°C. Storage areas should be kept clean and free from flammable materials. Ensure that containers are properly vented to prevent build up of pressure. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard AS 4332-2004 The storage and handling of gases in cylinders.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Occupational exposure limit values

Methane, chlorodifluoro-:

TWA: 1000 ppm, 3540 mg/m<sup>3</sup>

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

### Biological Limit Values

No biological limits allocated.

### Appropriate Engineering Controls

Before entering a confined space where propane is present, check to make sure sufficient Oxygen (19.5%) exists. Refer to relevant regulations for further information concerning ventilation requirements.

Refer to AS 2865 Australian Standard Safe working in a confined space, for further information concerning ventilation requirements.

### Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

### Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.

Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

### Hand Protection

Wear gloves of impervious material such as PVC. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.

Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

**Body Protection**

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

**Other Information**

Propane is an asphyxiant gas which when present in an atmosphere in high concentration, lead to reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for each simple asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Form**

Gas

**Appearance**

Clear liquefied gas.

**Colour**

Not available

**Odour**

Not available

**Decomposition Temperature**

Not available

**Melting Point**

Not available

**Boiling Point**

-49.2

**Solubility in Water**

Slightly soluble in water

**Specific Gravity**

Not available

**pH**

7

**Vapour Pressure**

11,928 hPa

**Vapour Density (Air=1)**

3.5

**Evaporation Rate**

Not available

**Odour Threshold**

Not available

**Volatile Component**

Not available

**Flash Point**

Not available

**Flammability**

Non flammable

**Auto-Ignition Temperature**

Not available

**Flammable Limits - Lower**

Not available

**Flammable Limits - Upper**

Not available

## 10. STABILITY AND REACTIVITY

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### **Chemical Stability**

Stable under normal conditions of storage and handling.

### **Reactivity and Stability**

Reacts with incompatible materials.

### **Conditions to Avoid**

Extremes of temperature and direct sunlight

### **Incompatible materials**

Strong oxidising agents.

### **Hazardous Decomposition Products**

Thermal decomposition may result in the release of toxic and/or irritating fumes, smoke and gases including: oxides of nitrogen, carbon dioxide and carbon monoxide.

### **Possibility of hazardous reactions**

Not available

### **Hazardous Polymerization**

Not available

## 11. TOXICOLOGICAL INFORMATION

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### **Toxicology Information**

No toxicity data available for this material.

### **Ingestion**

Ingestion unlikely due to form of product.

### **Inhalation**

Propane is an asphyxiant gas which when present in an atmosphere in high concentration, leads to reduction of oxygen concentration by displacement or dilution. Symptoms include decreased visual acuity, decreased coordination and judgment, headache, dizziness, confusion, drowsiness, fatigue, shortness of breath, muscular weakness, convulsions, unconsciousness, coma and eventually death.

### **Skin**

May be irritating to skin. The symptoms may include redness, itching and swelling.

May cause frostbite injuries to skin due to uncontrolled release of compressed gas resulting in redness, tissue destruction.

### **Eye**

May be irritating to eyes. The symptoms may include redness, itching and tearing.

May cause frostbite injuries to eyes due to uncontrolled release of compressed gas resulting in stinging, tearing, blurred vision and possibly permanent damage to eyes.

### **Respiratory sensitisation**

Not expected to be a respiratory sensitiser.

### **Skin Sensitisation**

Not expected to be a skin sensitiser.

### **Germ cell mutagenicity**

Not considered to be a mutagenic hazard.

### **Carcinogenicity**

Not considered to be a carcinogenic hazard.

### **Reproductive Toxicity**

Not considered to be toxic to reproduction.

### **STOT-single exposure**

Not expected to cause toxicity to a specific target organ.

### **STOT-repeated exposure**

Not expected to cause toxicity to a specific target organ.

**Aspiration Hazard**

Not expected to be an aspiration hazard.

**Other Information**

This material contains asphyxiant gas, which when present in an atmosphere in high concentrations, lead to a reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for each simple asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained. The minimum oxygen content in air should be 19.5 per cent by volume under normal atmospheric pressure. Unconsciousness and death can rapidly ensue in an environment, which is deficient in oxygen.

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**12. ECOLOGICAL INFORMATION**

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**Ecotoxicity**

No ecological data available for this material.

**Persistence and degradability**

Not available

**Mobility**

Not available

**Bioaccumulative Potential**

Not available

**Other Adverse Effects**

Not available

**Environmental Protection**

Prevent this material entering waterways, drains and sewers.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal considerations**

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

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**14. TRANSPORT INFORMATION**

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**Transport Information**

This material is classified as Dangerous Goods Division 2.2 Non-flammable Non-toxic Gases.

Dangerous Goods are incompatible in a placard load with any of the following:

- Class 1: Explosives
- Division 2.1 Flammable Gas when the Division 2.2 gas has a subsidiary risk 5.1 except when all are packed in cylinders or pressure drums not exceeding 500L capacity.
- Division 2.3 Toxic Gas when the Division 2.2 gas has a subsidiary risk 5.1 except when all are packed in cylinders or pressure drums not exceeding 500L capacity.
- Division 4.2: Spontaneously combustible substances
- Division 5.2: Organic peroxides

**Marine Transport (IMO/IMDG):**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Class/Division: 2.2

UN No: 3163

Proper Shipping Name: LIQUEFIED GAS, N.O.S.(CONTAINS: PENTAFLUOROETHANE, CHLORODIFLUOROMETHANE)

Packing Group: -

EMS : F-C, S-V

Special Provisions: 274

**Air Transport (ICAO/IATA):**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Class/Division: 2.2  
UN No: 3163  
Proper Shipping Name: liquefied gas, n.o.s.(Contains: pentafluoroethane, chlorodifluoromethane)  
Packing Group: -  
Packaging Instructions (passenger & cargo): 200  
Packaging Instructions (cargo only): 200  
Hazard Label: Non-flammable Gas  
Special Provisions: -

**U.N. Number**

3163

**UN proper shipping name**

LIQUEFIED GAS, N.O.S.(Contains: Pentafluoroethane, Chlorodifluoromethane)

**Transport hazard class(es)**

2.2

**Hazchem Code**

2TE

**Special Precautions for User**

Not available

**IERG Number**

06

**IMDG Marine pollutant**

No

**Transport in Bulk**

Not available

## 15. REGULATORY INFORMATION

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**Regulatory information**

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety regulations, Australia

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poisons Schedule**

Not Scheduled

## 16. OTHER INFORMATION

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**Date of preparation or last revision of SDS**

SDS created: June 2016

**References**

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of classification and labelling of chemicals.

## END OF SDS

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