



## Circuitworks Rubber Keypad Repair Part A #388-8673

### RS Components

Chemwatch: 5333-41  
Version No: 2.1.1.1  
Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 2

Issue Date: 12/11/2018  
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L.GHS.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

|                               |  |
|-------------------------------|--|
| Product name                  | Circuitworks Rubber Keypad Repair Part A #388-8673 |
| Synonyms                      | Not Available                                      |
| Other means of identification | Not Available                                      |

### Relevant identified uses of the substance or mixture and uses advised against

|                          |           |
|--------------------------|-----------|
| Relevant identified uses | Adhesive. |
|--------------------------|-----------|

### Details of the supplier of the safety data sheet

| Registered company name | RS Components                                  | RS Components  |
|-------------------------|--|--|
| Address                 | 25 Pavese Street Smithfield NSW 2164 Australia | Level 6, Agility CIS Tower, 56 Cawley Street Ellerslie Auckland 1051 New Zealand |
| Telephone               | +1 300 656 636                                 | +64 27 4747122   |
| Fax                     | +1 300 656 696                                 | +64 9 579 1700   |
| Website                 | Not Available                                  | www.nz.rs-online.com   |
| Email                   | Not Available                                  | Not Available  |

### Emergency telephone number

|                                   |  |               |
|-----------------------------------|--|---------------|
| Association / Organisation        | Not Available                            | Not Available |
| Emergency telephone numbers       | 1800 039 008 (24 hours), +61 3 9573 3112 | Not Available |
| Other emergency telephone numbers | Not Available                            | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS.** According to the WHS Regulations and the ADG Code.

COMBUSTIBLE LIQUID, regulated for storage purposes only

### CHEMWATCH HAZARD RATINGS

|              | Min | Max |              |
|--------------|-----|-----|--------------|
| Flammability | 0   |     |              |
| Toxicity     | 1   |     | 0 = Minimum  |
| Body Contact | 2   |     | 1 = Low      |
| Reactivity   | 2   |     | 2 = Moderate |
| Chronic      | 2   |     | 3 = High     |
|              |     |     | 4 = Extreme  |

|                               |   |
|-------------------------------|---|
| Poisons Schedule              | S6  |
| Classification <sup>[1]</sup> | Flammable Liquid Category 4, Eye Irritation Category 2A, Carcinogenicity Category 2, Chronic Aquatic Hazard Category 1              |
| Legend:                       | 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

### Label elements

|                     |  |
|---------------------|--|
| Hazard pictogram(s) |  |
|---------------------|--|

## SIGNAL WORD

**WARNING**

## Hazard statement(s)

|      |   |
|------|---|
| H227 | Combustible liquid.                                   |
| H319 | Causes serious eye irritation.                        |
| H351 | Suspected of causing cancer.                          |
| H410 | Very toxic to aquatic life with long lasting effects. |

## Precautionary statement(s) Prevention

|      |  |
|------|--|
| P201 | Obtain special instructions before use.                            |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P281 | Use personal protective equipment as required.                     |
| P273 | Avoid release to the environment.                                  |

## Precautionary statement(s) Response

|                |  |
|----------------|--|
| P308+P313      | IF exposed or concerned: Get medical advice/attention.   |
| P370+P378      | In case of fire: Use dry agent for extinction.   |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337+P313      | If eye irritation persists: Get medical advice/attention.  |

## Precautionary statement(s) Storage

|           |  |
|-----------|--|
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405      | Store locked up.                             |

## Precautionary statement(s) Disposal

|      |   |
|------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
|------|---|

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

## Substances

See section below for composition of Mixtures

## Mixtures

| CAS No    | %[weight] | Name   |
|-----------|-----------|--|
| 7440-22-4 | 50-75     | <u>silver</u>                                    |
| 112-07-2  | 10-21     | <u>ethylene glycol monobutyl ether acetate</u>   |
| 112-15-2  | 10-25     | <u>diethylene glycol monoethyl ether acetate</u> |
| 1333-86-4 | 1-10      | <u>carbon black</u>                              |

## SECTION 4 FIRST AID MEASURES

## Description of first aid measures

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ 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.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>  |
| <b>Skin Contact</b> | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>  |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>  |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Transport to hospital or doctor without delay.</li> </ul> |

## Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

Treat symptomatically.

Followed acute or short term repeated exposures to ethylene glycol monoalkyl ethers and their acetates:

- ▶ Hepatic metabolism produces ethylene glycol as a metabolite.

Continued...

- ▶ Clinical presentation, following severe intoxication, resembles that of ethylene glycol exposures.
- ▶ Monitoring the urinary excretion of the alkoxyacetic acid metabolites may be a useful indication of exposure.  
[Ellenhorn and Barceloux: Medical Toxicology]

For acute or short term repeated exposures to ethylene glycol:

- ▶ Early treatment of ingestion is important. Ensure emesis is satisfactory.
- ▶ Test and correct for metabolic acidosis and hypocalcaemia.
- ▶ Apply sustained diuresis when possible with hypertonic mannitol.
- ▶ Evaluate renal status and begin haemodialysis if indicated. [I.L.O.]
- ▶ Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective.
- ▶ Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution.
- ▶ Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites.
- ▶ Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days.
- ▶ Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis.

[Ellenhorn and Barceloux: Medical Toxicology]

It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures.

Laitinen J., et al: *Occupational & Environmental Medicine* 1996; 53, 595-600

53ag

Copper, magnesium, aluminium, antimony, iron, manganese, nickel, zinc (and their compounds) in welding, brazing, galvanising or smelting operations all give rise to thermally produced particulates of smaller dimension than may be produced if the metals are divided mechanically. Where insufficient ventilation or respiratory protection is available these particulates may produce "metal fume fever" in workers from an acute or long term exposure.

- ▶ Onset occurs in 4-6 hours generally on the evening following exposure. Tolerance develops in workers but may be lost over the weekend. (Monday Morning Fever)
- ▶ Pulmonary function tests may indicate reduced lung volumes, small airway obstruction and decreased carbon monoxide diffusing capacity but these abnormalities resolve after several months.
- ▶ Although mildly elevated urinary levels of heavy metal may occur they do not correlate with clinical effects.
- ▶ The general approach to treatment is recognition of the disease, supportive care and prevention of exposure.
- ▶ Seriously symptomatic patients should receive chest x-rays, have arterial blood gases determined and be observed for the development of tracheobronchitis and pulmonary edema.

[Ellenhorn and Barceloux: Medical Toxicology]

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ **DO NOT** use halogenated fire extinguishing agents.
- ▶ Metal dust fires need to be smothered with sand, inert dry powders.

**DO NOT USE WATER, CO2 or FOAM.**

- ▶ Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met L-X to smother fire.
- ▶ Confining or smothering material is preferable to applying water as chemical reaction may produce flammable and explosive hydrogen gas.

### Special hazards arising from the substrate or mixture

|                             |   |
|-----------------------------|---|
| <b>Fire Incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Reacts with acids producing flammable / explosive hydrogen (H2) gas</li> <li>▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result</li> </ul> |
|-----------------------------|---|

### Advice for firefighters

|                              |  |
|------------------------------|--|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>  |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ <b>DO NOT</b> disturb burning dust. Explosion may result if dust is stirred into a cloud, by providing oxygen to a large surface of hot metal.</li> <li>▶ <b>DO NOT</b> use water or foam as generation of explosive hydrogen may result.</li> </ul> <p>With the exception of the metals that burn in contact with air or water (for example, sodium), masses of combustible metals do not represent unusual fire risks because they have the ability to conduct heat away from hot spots so efficiently that the heat of combustion cannot be maintained - this means that it will require a lot of heat to ignite a mass of combustible metal.</p> <p>Combustion products include:<br/>carbon dioxide (CO2)<br/>other pyrolysis products typical of burning organic material.<br/>May emit poisonous fumes.<br/>May emit corrosive fumes.</p> |
| <b>HAZCHEM</b>               | Not Applicable   |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

|                     |  |
|---------------------|--|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Remove all ignition sources.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> </ul> |
| <b>Major Spills</b> | <p>Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>                            |

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

|                          |   |
|--------------------------|---|
| <b>Safe handling</b>     | <ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> </ul> <p>The tendency of many ethers to form explosive peroxides is well documented. Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT concentrate by evaporation, or evaporate extracts to dryness, as residues may contain explosive peroxides with DETONATION potential.</b></li> <li>▶ Any static discharge is also a source of hazard.</li> <li>▶ Before any distillation process remove trace peroxides by shaking with excess 5% aqueous ferrous sulfate solution or by percolation through a column of activated alumina.</li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> </ul> |
| <b>Other information</b> | <p>Store in the dark.</p> <ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> </ul>   |

### Conditions for safe storage, including any incompatibilities

|                                |   |
|--------------------------------|---|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <li>▶ <b>CARE:</b> Packing of high density product in light weight metal or plastic packages may result in container collapse with product release</li> <li>▶ Glass container is suitable for laboratory quantities</li> <li>▶ Heavy gauge metal packages / Heavy gauge metal drums</li> <li>▶ Metal can or drum</li> <li>▶ Packaging as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>   |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid strong acids, bases.</li> <li>▶ Avoid reaction with oxidising agents</li> </ul> <p>amines<br/>water</p> <ul style="list-style-type: none"> <li>▶ Avoid cross contamination between the two liquid parts of product (kit).</li> <li>▶ If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur.</li> <li>▶ This excess heat may generate toxic vapour</li> </ul> |

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

| Source                       | Ingredient                              | Material name         | TWA                | STEL               | Peak          | Notes         |
|------------------------------|---|-----------------------|--------------------|--------------------|---------------|---------------|
| Australia Exposure Standards | silver                                  | Silver, metal         | 0.1 mg/m3          | Not Available      | Not Available | Not Available |
| Australia Exposure Standards | ethylene glycol monobutyl ether acetate | 2-Butoxyethyl acetate | 20 ppm / 133 mg/m3 | 333 mg/m3 / 50 ppm | Not Available | Not Available |
| Australia Exposure Standards | carbon black                            | Carbon black          | 3 mg/m3            | Not Available      | Not Available | Not Available |

#### EMERGENCY LIMITS

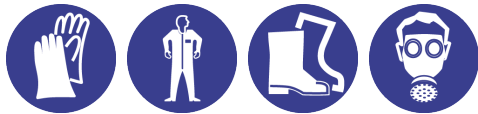
| Ingredient                                | Material name  | TEEL-1    | TEEL-2    | TEEL-3      |
|---|--|-----------|-----------|-------------|
| silver                                    | Silver   | 0.3 mg/m3 | 170 mg/m3 | 990 mg/m3   |
| ethylene glycol monobutyl ether acetate   | Butoxyethanol acetate, 2-; (Ethylene glycol monobutyl ether acetate) | 15 ppm    | 35 ppm    | 210 ppm     |
| diethylene glycol monoethyl ether acetate | Diglycol monoethyl ether acetate; (Carbitol acetate)                 | 6.1 mg/m3 | 67 mg/m3  | 2,200 mg/m3 |
| carbon black                              | Carbon black   | 9 mg/m3   | 99 mg/m3  | 590 mg/m3   |

| Ingredient                                | Original IDLH | Revised IDLH  |
|---|---------------|---------------|
| silver                                    | 10 mg/m3      | Not Available |
| ethylene glycol monobutyl ether acetate   | Not Available | Not Available |
| diethylene glycol monoethyl ether acetate | Not Available | Not Available |
| carbon black                              | 1,750 mg/m3   | Not Available |

#### MATERIAL DATA

### Exposure controls

|   |  |
|---|--|
| <b>Appropriate engineering controls</b> | <p>Metal dusts must be collected at the source of generation as they are potentially explosive.</p> <ul style="list-style-type: none"> <li>▶ Avoid ignition sources.</li> <li>▶ Good housekeeping practices must be maintained.</li> <li>▶ Dust accumulation on the floor, ledges and beams can present a risk of ignition, flame propagation and secondary explosions.</li> </ul> |
|---|--|

|                                |  |
|--------------------------------|--|
| <b>Personal protection</b>     |   |
| <b>Eye and face protection</b> | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>  |
| <b>Skin protection</b>         | See Hand protection below  |
| <b>Hands/feet protection</b>   | <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> <ul style="list-style-type: none"> <li>▶ Protective gloves eg. Leather gloves or gloves with Leather facing</li> </ul> |
| <b>Body protection</b>         | See Other protection below   |
| <b>Other protection</b>        | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>   |

## Recommended material(s)

### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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| Material          | CPI |
|-------------------|-----|
| NAT+NEOPR+NITRILE | C   |

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

## Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES                      | A-AUS                | -                    | A-PAPR-AUS / Class 1   |
| up to 50 x ES                      | -                    | A-AUS / Class 1      | -                      |
| up to 100 x ES                     | -                    | A-2                  | A-PAPR-2 ^             |

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

| Appearance  | Dark grey coloured liquid with fruity odour, does not mix with water. |  |                |
|---|---|--|----------------|
| <b>Physical state</b>                               | Liquid  | <b>Relative density (Water = 1)</b>            | 2.6            |
| <b>Odour</b>  | Not Available   | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available   | <b>Auto-ignition temperature (°C)</b>          | Not Available  |
| <b>pH (as supplied)</b>                             | Not Applicable  | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available   | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | >204  | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | 61-93.3 (CC)  | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | <1 BuAC = 1   | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Combustible.  | <b>Oxidising properties</b>                    | Not Available  |

## Circuitworks Rubber Keypad Repair Part A #388-8673

|                           |            |                                  |                |
|---------------------------|------------|----------------------------------|----------------|
| Upper Explosive Limit (%) | 19.4       | Surface Tension (dyn/cm or mN/m) | Not Available  |
| Lower Explosive Limit (%) | 0.5        | Volatile Component (%vol)        | Not Available  |
| Vapour pressure (kPa)     | 0.13 @25C  | Gas group                        | Not Available  |
| Solubility in water (g/L) | Immiscible | pH as a solution (1%)            | Not Applicable |
| Vapour density (Air = 1)  | >1         | VOC g/L                          | Not Available  |

### SECTION 10 STABILITY AND REACTIVITY

|                                    |  |
|------------------------------------|--|
| Reactivity                         | See section 7  |
| Chemical stability                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| Possibility of hazardous reactions | See section 7  |
| Conditions to avoid                | See section 7  |
| Incompatible materials             | See section 7  |
| Hazardous decomposition products   | See section 5  |

### SECTION 11 TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

|              |  |
|--------------|--|
| Inhaled      | <p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.</p> <p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.</p>  |
| Ingestion    | <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result.</p> <p>Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis).</p>   |
| Skin Contact | <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> <p>The material may produce mild skin irritation; limited evidence or practical experience suggests, that the material either:</p> <ul style="list-style-type: none"> <li>▶ produces mild inflammation of the skin in a substantial number of individuals following direct contact, and/or</li> <li>▶ produces significant, but mild, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.</li> </ul> <p>Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (non allergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p>   |
| Eye          | <p>Limited evidence or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.</p>   |
| Chronic      | <p>On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Exposure to the material may cause concerns for human fertility, on the basis that similar materials provide some evidence of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects.</p> <p>Silver is one of the most physically and physiologically cumulative of the elements. Chronic exposure to silver salts may cause argyria, a permanent ashen-grey discolouration of the skin, conjunctiva and internal organs (due to the deposit of an insoluble albuminate of silver).</p> <p>The respiratory tract may also be a site of local argyria (following chronic inhalation exposures) with a mild chronic bronchitis being the only obvious symptom.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p> <p>Metallic dusts generated by the industrial process give rise to a number of potential health problems. The larger particles, above 5 micron, are nose and throat irritants. Smaller particles however, may cause lung deterioration. Particles of less than 1.5 micron can be trapped in the lungs and, dependent on the nature of the particle, may give rise to further serious health consequences.</p> <p>Studies with some ethylene glycol ethers and their esters indicate reproductive changes, testicular atrophy, infertility and kidney function changes. The metabolic acetic acid derivatives of the glycol ethers (alkoxyacetic acids), not the ether itself, have been found to be the proximal reproductive toxin in animals. The potency of these metabolites decrease significantly as the chain length of the ether increases. Consequently glycol ethers with longer substituents (e.g diethylene glycols, triethylene glycols) have not generally been associated with reproductive effects.</p> |

|  |   |                   |
|--|---|-------------------|
| Circuitworks Rubber Keypad Repair Part A #388-8673 | <b>TOXICITY</b>   | <b>IRRITATION</b> |
|  | Dermal (None) LD50: 3950 mg/kg <sup>[2]</sup>               | Not Available     |
|  | Inhalation (None) LC50: 28.97 mg/l(vapours)* <sup>[2]</sup> |                   |

|   |   |                                  |
|---|---|----------------------------------|
| silver                                    | <b>TOXICITY</b>   | <b>IRRITATION</b>                |
|   | Not Available   | Not Available                    |
| ethylene glycol monobutyl ether acetate   | <b>TOXICITY</b>   | <b>IRRITATION</b>                |
|   | Dermal (rabbit) LD50: ~1480 mg/kg <sup>[2]</sup>  | Eye (rabbit): 500 mg/24hr - mild |
|   | Oral (rat) LD50: =1600 mg/kg <sup>[2]</sup>   | Skin (rabbit): 500 mg - mild     |
| diethylene glycol monoethyl ether acetate | <b>TOXICITY</b>   | <b>IRRITATION</b>                |
|   | Dermal (rabbit) LD50: 15266.1 mg/kg <sup>[2]</sup>  | Eyes (rabbit) 500 mg MODERATE    |
|   | Oral (rat) LD50: 11,000 mg/kg <sup>[2]</sup>  | Skin (rabbit) 500mg/open MILD    |
| carbon black                              | <b>TOXICITY</b>   | <b>IRRITATION</b>                |
|   | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>   | Not Available                    |
|   | Oral (rat) LD50: >15400 mg/kg <sup>[2]</sup>  |                                  |
| <b>Legend:</b>                            | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances |                                  |

|   |  |
|---|--|
| ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE   | The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.<br>The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.<br>For ethylene glycol:<br>Ethylene glycol is quickly and extensively absorbed through the gastrointestinal tract. Limited information suggests that it is also absorbed through the respiratory tract; dermal absorption is apparently slow. Following absorption, ethylene glycol is distributed throughout the body according to total body water. In most mammalian species, including humans, ethylene glycol is initially metabolised by alcohol.<br>For ethylene glycol monoalkyl ethers and their acetates (EGMAEs):<br>Typical members of this category are ethylene glycol propylene ether (EGPE), ethylene glycol butyl ether (EGBE) and ethylene glycol hexyl ether (EGHE) and their acetates.<br>EGMAEs are substrates for alcohol dehydrogenase isozyme ADH-3, which catalyzes the conversion of their terminal alcohols to aldehydes (which are transient metabolites). Further, rapid conversion of the aldehydes by aldehyde dehydrogenase produces alkoxyacetic acids, which are the predominant urinary metabolites of mono substituted glycol ethers.<br><b>Acute Toxicity:</b> Oral LD50 values in rats for all category members range from 739 (EGHE) to 3089 mg/kg bw (EGPE), with values increasing with decreasing molecular weight.<br>mae |
|   | For diethylene glycol monoalkyl ethers and their acetates:<br>This category includes diethylene glycol ethyl ether (DGEE), diethylene glycol propyl ether (DGPE) diethylene glycol butyl ether (DGBE) and diethylene glycol hexyl ether (DGHE) and their acetates.<br><b>Acute toxicity:</b> There are adequate oral, inhalation and/or dermal toxicity studies on the category members. Oral LD50 values in rats for all category members are all > 3000 mg/kg bw, with values generally decreasing with increasing molecular weight. Four to eight hour acute inhalation toxicity studies were conducted for all category members except DGPE in rats at the highest vapour concentrations achievable.<br>Laboratory studies with diethylene glycol monoethyl ether acetate in test animals have shown birth defects, foetotoxicity, embryoletality, anaemia, bone marrow damage, haemolysis, immunosuppression and damage to male reproductive tissue.  |
| DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE | No significant acute toxicological data identified in literature search.   |
| CARBON BLACK                              | <b>WARNING:</b> This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.<br>Inhalation (rat) TCLo: 50 mg/m <sup>3</sup> /6h/90D-I Nil reported   |

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ✘ | Carcinogenicity          | ✔ |
| Skin Irritation/Corrosion         | ⊖ | Reproductivity           | ⊖ |
| Serious Eye Damage/Irritation     | ✔ | STOT - Single Exposure   | ⊖ |
| Respiratory or Skin sensitisation | ⊖ | STOT - Repeated Exposure | ⊖ |
| Mutagenicity                      | ⊖ | Aspiration Hazard        | ⊖ |

**Legend:** ✘ – Data available but does not fill the criteria for classification  
✔ – Data available to make classification  
⊖ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

| Circuitworks Rubber Keypad Repair Part A #388-8673 | ENDPOINT | TEST DURATION (HR) | SPECIES                       | VALUE         | SOURCE        |
|--|----------|--------------------|-------------------------------|---------------|---------------|
|  |          | Not Available      | Not Available                 | Not Available | Not Available |
| silver   | ENDPOINT | TEST DURATION (HR) | SPECIES                       | VALUE         | SOURCE        |
|  | LC50     | 96                 | Fish                          | 0.00148mg/L   | 2             |
|  | EC50     | 48                 | Crustacea                     | 0.00024mg/L   | 4             |
|  | EC50     | 72                 | Algae or other aquatic plants | 0.000016mg/L  | 2             |

Continued...



### Circuitworks Rubber Keypad Repair Part A #388-8673

|   |          |                    |                               |              |        |
|---|----------|--------------------|-------------------------------|--------------|--------|
|   | BCF      | 336                | Crustacea                     | 0.02mg/L     | 4      |
|   | NOEC     | 72                 | Algae or other aquatic plants | 0.000003mg/L | 2      |
| ethylene glycol monobutyl ether acetate   | ENDPOINT | TEST DURATION (HR) | SPECIES                       | VALUE        | SOURCE |
|   | LC50     | 96                 | Fish                          | 41.186mg/L   | 3      |
|   | EC50     | 48                 | Crustacea                     | =37mg/L      | 1      |
|   | EC50     | 96                 | Algae or other aquatic plants | 3.228mg/L    | 3      |
|   | EC0      | 48                 | Crustacea                     | =10mg/L      | 1      |
| diethylene glycol monoethyl ether acetate | ENDPOINT | TEST DURATION (HR) | SPECIES                       | VALUE        | SOURCE |
|   | LC50     | 96                 | Fish                          | 110mg/L      | 2      |
|   | EC50     | 96                 | Algae or other aquatic plants | 15.811mg/L   | 3      |
|   | NOEC     | 72                 | Algae or other aquatic plants | >=22mg/L     | 2      |
| carbon black                              | ENDPOINT | TEST DURATION (HR) | SPECIES                       | VALUE        | SOURCE |
|   | LC50     | 96                 | Fish                          | =1000mg/L    | 1      |
|   | NOEC     | 96                 | Fish                          | =1000mg/L    | 1      |

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**DO NOT** discharge into sewer or waterways.

#### Persistence and degradability

| Ingredient                                | Persistence: Water/Soil | Persistence: Air |
|---|-------------------------|------------------|
| ethylene glycol monobutyl ether acetate   | LOW                     | LOW              |
| diethylene glycol monoethyl ether acetate | LOW                     | LOW              |

#### Bioaccumulative potential

| Ingredient                                | Bioaccumulation       |
|---|-----------------------|
| ethylene glycol monobutyl ether acetate   | LOW (BCF = 3.2)       |
| diethylene glycol monoethyl ether acetate | LOW (LogKOW = 0.3154) |

#### Mobility in soil

| Ingredient                                | Mobility       |
|---|----------------|
| ethylene glycol monobutyl ether acetate   | LOW (KOC = 10) |
| diethylene glycol monoethyl ether acetate | LOW (KOC = 10) |

## SECTION 13 DISPOSAL CONSIDERATIONS

#### Waste treatment methods

|                              |  |
|------------------------------|--|
| Product / Packaging disposal | <ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Authority for disposal.</li> <li>▶ Bury or incinerate residue at an approved site.</li> <li>▶ Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul> |
|------------------------------|--|

## SECTION 14 TRANSPORT INFORMATION

#### Labels Required

**COMBUSTIBLE LIQUID**

COMBUSTIBLE LIQUID, regulated for storage purposes only

Continued...



Marine Pollutant



HAZCHEM

Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

## SILVER(7440-22-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2

## ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE(112-07-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Part 2, Section Seven - Appendix I

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

## DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE(112-15-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

## CARBON BLACK(1333-86-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

## National Inventory Status

| National Inventory            | Status   |
|-------------------------------|--|
| Australia - AICS              | Y  |
| Canada - DSL                  | Y  |
| Canada - NDSL                 | N (diethylene glycol monoethyl ether acetate; ethylene glycol monobutyl ether acetate; carbon black; silver)   |
| China - IECSC                 | Y  |
| Europe - EINEC / ELINCS / NLP | Y  |
| Japan - ENCS                  | N (silver)   |
| Korea - KECI                  | Y  |
| New Zealand - NZIoC           | Y  |
| Philippines - PICCS           | Y  |
| USA - TSCA                    | Y  |
| <b>Legend:</b>                | Y = All ingredients are on the inventory<br>N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

## SECTION 16 OTHER INFORMATION

|               |            |
|---------------|------------|
| Revision Date | 12/11/2018 |
| Initial Date  | 12/11/2018 |

## SDS Version Summary

| Version | Issue Date | Sections Updated                                      |
|---------|------------|---|
| 2.1.1.1 | 12/11/2018 | Disposal, First Aid (swallowed), Supplier Information |

## Other information

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.

The 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.

#### Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average  
PC – STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit,  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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TEL (+61 3) 9572 4700.



## Circuitworks Rubber Keypad Repair Part B #388-8673

### RS Components

Chemwatch: 5174-03  
Version No: 4.1.1.1  
Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 2

Issue Date: 09/11/2018  
Print Date: 20/11/2018  
L.GHS.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

|                               |  |
|-------------------------------|--|
| Product name                  | Circuitworks Rubber Keypad Repair Part B #388-8673 |
| Synonyms                      | Not Available                                      |
| Other means of identification | Not Available                                      |

### Relevant identified uses of the substance or mixture and uses advised against

|                          |           |
|--------------------------|-----------|
| Relevant identified uses | Adhesive. |
|--------------------------|-----------|

### Details of the supplier of the safety data sheet

| Registered company name | RS Components                                  | RS Components  |
|-------------------------|--|--|
| Address                 | 25 Pavési Street Smithfield NSW 2164 Australia | Level 6, Agility CIS Tower, 56 Cawley Street Ellerslie Auckland 1051 New Zealand |
| Telephone               | +1 300 656 636                                 | +64 27 4747122   |
| Fax                     | +1 300 656 696                                 | +64 9 579 1700   |
| Website                 | Not Available                                  | www.nz.rs-online.com   |
| Email                   | Not Available                                  | Not Available  |

### Emergency telephone number

|                                   |  |               |
|-----------------------------------|--|---------------|
| Association / Organisation        | Not Available                            | Not Available |
| Emergency telephone numbers       | 1800 039 008 (24 hours), +61 3 9573 3112 | Not Available |
| Other emergency telephone numbers | Not Available                            | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS.** According to the WHS Regulations and the ADG Code.

### CHEMWATCH HAZARD RATINGS

|              | Min | Max |  |
|--------------|-----|-----|--|
| Flammability | 1   | 1   |  |
| Toxicity     | 1   | 1   |  |
| Body Contact | 2   | 2   |  |
| Reactivity   | 1   | 1   |  |
| Chronic      | 0   | 0   |  |

0 = Minimum  
1 = Low  
2 = Moderate  
3 = High  
4 = Extreme

|                    |   |
|--------------------|---|
| Poisons Schedule   | S5  |
| Classification [1] | Eye Irritation Category 2A, Chronic Aquatic Hazard Category 3   |
| Legend:            | 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

### Label elements

|                     |  |
|---------------------|--|
| Hazard pictogram(s) |  |
|---------------------|--|

SIGNAL WORD **WARNING**

Continued...

**Hazard statement(s)**

|             |  |
|-------------|--|
| <b>H319</b> | Causes serious eye irritation.                     |
| <b>H412</b> | Harmful to aquatic life with long lasting effects. |

**Precautionary statement(s) Prevention**

|             |  |
|-------------|--|
| <b>P273</b> | Avoid release to the environment.  |
| <b>P280</b> | Wear protective gloves/protective clothing/eye protection/face protection. |

**Precautionary statement(s) Response**

|                       |  |
|-----------------------|--|
| <b>P305+P351+P338</b> | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| <b>P337+P313</b>      | If eye irritation persists: Get medical advice/attention.  |

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

|             |   |
|-------------|---|
| <b>P501</b> | Dispose of contents/container in accordance with local regulations. |
|-------------|---|

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No   | %[weight] | Name   |
|----------|-----------|--|
| 112-15-2 | 50-<75    | <u>diethylene glycol monoethyl ether acetate</u> |
| 67-56-1  | <3        | <u>methanol</u>                                  |
|          | balance   | Ingredients determined not to be hazardous       |

**SECTION 4 FIRST AID MEASURES****Description of first aid measures**

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ 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.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>  |
| <b>Skin Contact</b> | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>  |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>  |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Transport to hospital or doctor without delay.</li> </ul> |

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

For acute and short term repeated exposures to methanol:

- ▶ Toxicity results from accumulation of formaldehyde/formic acid.
- ▶ Clinical signs are usually limited to CNS, eyes and GI tract. Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- ▶ Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- ▶ Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- ▶ Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 meq/L).
- ▶ Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal.
- ▶ Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment. 8-Phenytoin may be preferable to diazepam for controlling seizure.

[Ellenhorn Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

Determinant

Index

Sampling Time

Comment

Continued...

|                         |                     |                                     |       |
|-------------------------|---------------------|-------------------------------------|-------|
| 1. Methanol in urine    | 15 mg/l             | End of shift                        | B, NS |
| 2. Formic acid in urine | 80 mg/gm creatinine | Before the shift at end of workweek | B, NS |

B: Background levels occur in specimens collected from subjects **NOT** exposed.

NS: Non-specific determinant - observed following exposure to other materials.

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

|                             |  |
|-----------------------------|--|
| <b>Fire Incompatibility</b> | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

### Advice for firefighters

|                              |  |
|------------------------------|--|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>  |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Combustible.</li> <li>▶ Slight fire hazard when exposed to heat or flame.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▶ On combustion, may emit toxic fumes of carbon monoxide (CO).</li> </ul> Combustion products include:<br>carbon dioxide (CO <sub>2</sub> )<br>other pyrolysis products typical of burning organic material.<br>May emit poisonous fumes.<br>May emit corrosive fumes. |
| <b>HAZCHEM</b>               | Not Applicable   |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

|                     |  |
|---------------------|--|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Remove all ignition sources.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> </ul> |
| <b>Major Spills</b> | Moderate hazard. <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>                                   |

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

|                          |  |
|--------------------------|--|
| <b>Safe handling</b>     | <ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> </ul> The tendency of many ethers to form explosive peroxides is well documented. Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe <ul style="list-style-type: none"> <li>▶ <b>DO NOT concentrate by evaporation, or evaporate extracts to dryness, as residues may contain explosive peroxides with DETONATION potential.</b></li> <li>▶ Any static discharge is also a source of hazard.</li> <li>▶ Before any distillation process remove trace peroxides by shaking with excess 5% aqueous ferrous sulfate solution or by percolation through a column of activated alumina.</li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> </ul> |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> </ul>  |

### Conditions for safe storage, including any incompatibilities

|                           |  |
|---------------------------|--|
| <b>Suitable container</b> | <ul style="list-style-type: none"> <li>▶ Metal can or drum</li> <li>▶ Packaging as recommended by manufacturer.</li> </ul> |
|---------------------------|--|

|                                |  |
|--------------------------------|--|
|                                | <ul style="list-style-type: none"> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>                                     |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> <li>▶ Avoid strong acids, bases, amines</li> <li>▶ water</li> </ul> |

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

| Source                       | Ingredient | Material name  | TWA                 | STEL                | Peak          | Notes         |
|------------------------------|------------|----------------|---------------------|---------------------|---------------|---------------|
| Australia Exposure Standards | methanol   | Methyl alcohol | 200 ppm / 262 mg/m3 | 328 mg/m3 / 250 ppm | Not Available | Not Available |


#### EMERGENCY LIMITS

| Ingredient                                | Material name  | TEEL-1        | TEEL-2        | TEEL-3        |
|---|--|---------------|---------------|---------------|
| diethylene glycol monoethyl ether acetate | Diglycol monoethyl ether acetate; (Carbitol acetate) | 6.1 mg/m3     | 67 mg/m3      | 2,200 mg/m3   |
| methanol                                  | Methyl alcohol; (Methanol)                           | Not Available | Not Available | Not Available |

| Ingredient                                | Original IDLH | Revised IDLH  |
|---|---------------|---------------|
| diethylene glycol monoethyl ether acetate | Not Available | Not Available |
| methanol                                  | 6,000 ppm     | Not Available |

#### MATERIAL DATA

### Exposure controls

|   |   |
|---|---|
| <b>Appropriate engineering controls</b> | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>  |
| <b>Personal protection</b>              |    |
| <b>Eye and face protection</b>          | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>   |
| <b>Skin protection</b>                  | See Hand protection below   |
| <b>Hands/feet protection</b>            | <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> |
| <b>Body protection</b>                  | See Other protection below  |
| <b>Other protection</b>                 | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>  |

### Recommended material(s)

#### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

Circuitworks Rubber Keypad Repair Part B #388-8673

| Material         | CPI |
|------------------|-----|
| BUTYL            | A   |
| BUTYL/NEOPRENE   | A   |
| PE/EVAL/PE       | A   |
| PVDC/PE/PVDC     | A   |
| SARANEX-23       | A   |
| SARANEX-23 2-PLY | A   |

### Respiratory protection

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 5 x ES                       | AX-AUS / Class 1     | -                    | AX-PAPR-AUS / Class 1  |
| up to 25 x ES                      | Air-line*            | AX-2                 | AX-PAPR-2              |
| up to 50 x ES                      | -                    | AX-3                 | -                      |
| 50+ x ES                           | -                    | Air-line**           | -                      |

|                   |   |
|-------------------|---|
| TEFLON            | A |
| VITON/NEOPRENE    | A |
| NEOPRENE          | B |
| NAT+NEOPR+NITRILE | C |
| NATURAL RUBBER    | C |
| NATURAL+NEOPRENE  | C |
| NEOPRENE/NATURAL  | C |
| NITRILE           | C |
| PVA               | C |
| PVC               | C |

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

\* - Continuous-flow; \*\* - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|   |   |  |                |
|---|---|--|----------------|
| <b>Appearance</b>                                   | Amber coloured liquid with an ethereal odour. |  |                |
| <b>Physical state</b>                               | Liquid  | <b>Relative density (Water = 1)</b>            | 1              |
| <b>Odour</b>  | Not Available                                 | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available                                 | <b>Auto-ignition temperature (°C)</b>          | Not Available  |
| <b>pH (as supplied)</b>                             | Not Available                                 | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available                                 | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | 64  | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | 100 (CC)                                      | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | <1 BuAC = 1                                   | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Not Applicable                                | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Available                                 | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | Not Available                                 | <b>Volatile Component (%vol)</b>               | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | 12.8 @25C                                     | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Not Available                                 | <b>pH as a solution (1%)</b>                   | Not Available  |
| <b>Vapour density (Air = 1)</b>                     | Not Available                                 | <b>VOC g/L</b>                                 | Not Available  |

## SECTION 10 STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity</b>                         | See section 7  |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7  |
| <b>Conditions to avoid</b>                | See section 7  |
| <b>Incompatible materials</b>             | See section 7  |
| <b>Hazardous decomposition products</b>   | See section 5  |

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

|                |   |
|----------------|---|
| <b>Inhaled</b> | <p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.</p> <p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.</p> |
|----------------|---|



|                     |  |
|---------------------|--|
|                     | Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.  |
| <b>Ingestion</b>    | Accidental ingestion of the material may be damaging to the health of the individual.  |
| <b>Skin Contact</b> | Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.   |
| <b>Eye</b>          | Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.<br>Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.  |
| <b>Chronic</b>      | Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.<br>Exposure to the material may cause concerns for human fertility, on the basis that similar materials provide some evidence of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects.<br>.<br>Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision. Liver and/or kidney injury may also result. Some individuals show severe eye damage following prolonged exposure to 800 ppm of the vapour.<br><br>Studies with some glycol ethers (principally the monoethylene glycols) and their esters indicate reproductive changes, testicular atrophy, infertility and kidney function changes. The metabolic acetic acid derivatives of glycol ethers (alkoxyacetic acids), not the ether itself, have been found to be the proximal reproductive toxin in animals. The potency of these metabolites decreases significantly as the chain length of the ether increases. Consequently glycol ethers with longer substituents (e.g diethylene glycols, triethylene glycols) have not generally been associated with reproductive effects. |

|   |  |                                    |
|---|--|------------------------------------|
| <b>Circuitworks Rubber Keypad Repair Part B #388-8673</b> | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|   | Dermal (None) LD50: 15000 mg/kg <sup>[2]</sup>           | Not Available                      |
|   | Inhalation (None) LC50: 150 mg/l(vapours) <sup>[2]</sup> |                                    |
|   | Oral (None) LD50: 5000 mg/kg <sup>[2]</sup>              |                                    |
| <b>diethylene glycol monoethyl ether acetate</b>          | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|   | Dermal (rabbit) LD50: 15266.1 mg/kg <sup>[2]</sup>       | Eyes (rabbit) 500 mg MODERATE      |
|   | Oral (rat) LD50: 11,000 mg/kg <sup>[2]</sup>             | Skin (rabbit) 500mg/open MILD      |
| <b>methanol</b>   | <b>TOXICITY</b>  | <b>IRRITATION</b>                  |
|   | Not Available  | Eye (rabbit): 100 mg/24h-moderate  |
|   |  | Eye (rabbit): 40 mg-moderate       |
|   |  | Skin (rabbit): 20 mg/24 h-moderate |

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

|  |   |
|--|---|
| <b>DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE</b> | For diethylene glycol monoalkyl ethers and their acetates:<br>This category includes diethylene glycol ethyl ether (DGEE), diethylene glycol propyl ether (DGPE) diethylene glycol butyl ether (DGBE) and diethylene glycol hexyl ether (DGHE) and their acetates.<br><b>Acute toxicity:</b> There are adequate oral, inhalation and/or dermal toxicity studies on the category members. Oral LD50 values in rats for all category members are all > 3000 mg/kg bw, with values generally decreasing with increasing molecular weight. Four to eight hour acute inhalation toxicity studies were conducted for all category members except DGPE in rats at the highest vapour concentrations achievable.<br>Laboratory studies with diethylene glycol monoethyl ether acetate in test animals have shown birth defects, foetotoxicity, embryoletality, anaemia, bone marrow damage, haemolysis, immunosuppression and damage to male reproductive tissue. |
| <b>METHANOL</b>                                  | The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.  |

|  |   |                                 |   |
|--|---|---------------------------------|---|
| <b>Acute Toxicity</b>                    | ✘ | <b>Carcinogenicity</b>          | ⊖ |
| <b>Skin Irritation/Corrosion</b>         | ⊖ | <b>Reproductivity</b>           | ⊖ |
| <b>Serious Eye Damage/Irritation</b>     | ✔ | <b>STOT - Single Exposure</b>   | ⊖ |
| <b>Respiratory or Skin sensitisation</b> | ⊖ | <b>STOT - Repeated Exposure</b> | ⊖ |
| <b>Mutagenicity</b>                      | ⊖ | <b>Aspiration Hazard</b>        | ⊖ |

**Legend:** ✘ – Data available but does not fill the criteria for classification  
✔ – Data available to make classification  
⊖ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

| Circuitworks Rubber Keypad Repair Part B #388-8673 | ENDPOINT      | TEST DURATION (HR) | SPECIES       | VALUE         | SOURCE        |
|--|---------------|--------------------|---------------|---------------|---------------|
|  | Not Available | Not Available      | Not Available | Not Available | Not Available |

| diethylene glycol monoethyl ether acetate | ENDPOINT | TEST DURATION (HR) | SPECIES                       | VALUE      | SOURCE |
|---|----------|--------------------|-------------------------------|------------|--------|
|   | LC50     | 96                 | Fish                          | 110mg/L    | 2      |
|   | EC50     | 96                 | Algae or other aquatic plants | 15.811mg/L | 3      |
|   | NOEC     | 72                 | Algae or other aquatic plants | >=22mg/L   | 2      |

| methanol | ENDPOINT | TEST DURATION (HR) | SPECIES                       | VALUE        | SOURCE |
|----------|----------|--------------------|-------------------------------|--------------|--------|
|          | LC50     | 96                 | Fish                          | 15-400mg/L   | 2      |
|          | EC50     | 48                 | Crustacea                     | >10000mg/L   | 4      |
|          | EC50     | 96                 | Algae or other aquatic plants | 3382.800mg/L | 3      |
|          | BCF      | 24                 | Algae or other aquatic plants | 0.05mg/L     | 4      |
|          | EC0      | 168                | Algae or other aquatic plants | =530mg/L     | 1      |
|          | NOEC     | 72                 | Crustacea                     | 0.1mg/L      | 4      |

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**DO NOT discharge into sewer or waterways.**

## Persistence and degradability

| Ingredient                                | Persistence: Water/Soil | Persistence: Air |
|---|-------------------------|------------------|
| diethylene glycol monoethyl ether acetate | LOW                     | LOW              |
| methanol                                  | LOW                     | LOW              |

## Bioaccumulative potential

| Ingredient                                | Bioaccumulation       |
|---|-----------------------|
| diethylene glycol monoethyl ether acetate | LOW (LogKOW = 0.3154) |
| methanol                                  | LOW (BCF = 10)        |

## Mobility in soil

| Ingredient                                | Mobility       |
|---|----------------|
| diethylene glycol monoethyl ether acetate | LOW (KOC = 10) |
| methanol                                  | HIGH (KOC = 1) |

## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

|                              |  |
|------------------------------|--|
| Product / Packaging disposal | <ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Authority for disposal.</li> <li>▶ Bury or incinerate residue at an approved site.</li> <li>▶ Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul> |
|------------------------------|--|

## SECTION 14 TRANSPORT INFORMATION

## Labels Required

|                  |                      |
|------------------|----------------------|
| Marine Pollutant | NO<br>Not Applicable |
|------------------|----------------------|

HAZCHEM | Not Applicable

**Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS****Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**SECTION 15 REGULATORY INFORMATION****Safety, health and environmental regulations / legislation specific for the substance or mixture****DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE(112-15-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Inventory of Chemical Substances (AICS)

**METHANOL(67-56-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

**National Inventory Status**

| National Inventory            | Status   |
|-------------------------------|--|
| Australia - AICS              | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| Canada - DSL                  | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| Canada - NDSL                 | N (methanol; diethylene glycol monoethyl ether acetate; Ingredients determined not to be hazardous) Non-disclosed ingredients  |
| China - IECSC                 | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| Europe - EINEC / ELINCS / NLP | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| Japan - ENCS                  | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| Korea - KECI                  | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| New Zealand - NZIoC           | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| Philippines - PICCS           | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| USA - TSCA                    | N (Ingredients determined not to be hazardous) Non-disclosed ingredients   |
| <b>Legend:</b>                | Y = All ingredients are on the inventory<br>N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

**SECTION 16 OTHER INFORMATION**

|                      |            |
|----------------------|------------|
| <b>Revision Date</b> | 09/11/2018 |
| <b>Initial Date</b>  | 20/04/2015 |

**SDS Version Summary**

| Version | Issue Date | Sections Updated   |
|---------|------------|--|
| 3.1.1.1 | 20/07/2015 | Exposure Standard, Toxicity and Irritation (Other)   |
| 4.1.1.1 | 09/11/2018 | Acute Health (inhaled), Acute Health (skin), Appearance, Disposal, Environmental, Fire Fighter (fire/explosion hazard), First Aid (swallowed), Handling Procedure, Physical Properties, Storage (storage incompatibility), Supplier Information, Toxicity and Irritation (Toxicity Figure) |

**Other information**

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.

The 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.

**Definitions and abbreviations**

PC—TWA: Permissible Concentration-Time Weighted Average  
 PC—STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit,  
 IDLH: Immediately Dangerous to Life or Health Concentrations  
 OSF: Odour Safety Factor  
 NOAEL :No Observed Adverse Effect Level  
 LOAEL: Lowest Observed Adverse Effect Level

Continued...

TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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TEL (+61 3) 9572 4700.