SAFETY DATA SHEET

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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product Identifier

Product Name BIG RED
Synonym(s) BIGR1L, BIG5L, BIG10L, BIG20L, BIG200L, BIG1000L

1.2 Uses and uses advised against

Use(s) Multipurpose Cleaner & Degreaser.

1.3 Details of the supplier of the product

Supplier Name	Northern Chemicals Pty Ltd
Address	157 Hartley St, Cairns, QLD, 4870, Australia
Telephone	(07) 4035 4622
Fax	(07) 4035 4932
Email	enquiries@northernchemicals.com.au
Website	www.northernchemicals.com.au

1.4 Emergency telephone number(s)

Emergency (07) 4035 4622

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

GHS classification(s) Skin Corrosion/Irritation: Category 2
Skin Sensitiser: Category 1
Serious Eye Damage: Category 1

2.2 Label elements

Signal word DANGER

Pictogram(s)

Hazard statement(s)

H315	Causes skin irritation.
H317	May cause an allergic skin reactions
H318	Causes serious eye damage.

Prevention statement(s)

P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P261	Avoid breathing mist/vapours/spray.

Response statement(s)

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER or doctor/physician.
P362 Take off contaminated clothing and wash before reuse.

Storage statement(s)
P405 N/A

Disposal statement(s)
P501 Dispose of goods in accordance to local/state regulations.

2.3 Other hazards
N/A

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

INGREDIENT	CAS NUMBER	CONTENT %
WATER	7732-18-5	>60
SURFACTANTS	Secret	<10
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	<10
NON HAZARDOUS INGREDIENTS	Not Available	<10

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye: If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.

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

Ingestion: Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

First aid facilities: Eye wash facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed

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. 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.

4.3 Immediate medical attention and special treatment needed
Treat symptomatically

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Dry agent, carbon dioxide or foam.

5.2 Special hazards arising from the substance or mixture
N/A

5.3 Advice for firefighters
Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use fire fighting procedures suitable for surrounding area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.

5.4 Hazchem code
N/A

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
See section 8

6.2 Environmental precautions
See section 12

6.3 Methods of cleaning up
MINOR SPILLS
Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS
Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue (see Section 13 for specific agent). Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. If contamination of drains or waterways occurs, advise emergency services.

6.4 Reference to other sections
Personal Protective Equipment advice is contained in Section 8 of the SDS.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to contact humans, exposed food or food utensils. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. DO NOT allow clothing wet with material to stay in contact with skin

7.2 Conditions for safe storage, including any incompatibilities
N/A

7.3 Specific end use(s)
N/A

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

Ingredient Data

Source	Ingredient	TWA	STEL	Peak	Notes
SWA (AUS)	ethylene glycol monobutyl ether	96.9 mg/m3 / 20 ppm	242 mg/m3 / 50 ppm	N/A	Sk

Emergency Limits

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
ethylene glycol monobutyl ether	Butoxyethanol, 2-; (Glycol ether EB)	60 ppm	120 ppm	700 ppm

Ingredient	Original IDLH	Revised IDLH
water	N/A	N/A
ethylene glycol monobutyl ether	700 ppm	700 [Unch] ppm

8.2 Exposure controls

Engineering Controls

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. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. 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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee

Personal Protective Equipment

Eye / Face

Safety glasses with side shields. Chemical goggles. 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Hands / Feet

Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber.

Body

Overalls. P.V.C. apron. Barrier cream. Skin cleansing cream. Eye wash unit.

Respiratory

N/A

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Red Liquid	Relative density	N/A
Physical state	Liquid	pH	7.5 - 8.5
Odour	N/A	Flammability	Non-flammable

10. STABILITY AND REACTIVITY

10.1 Reactivity
See section 7

10.2 Chemical stability
Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not

10.3 Possibility of hazardous reactions
See section 7

10.4 Conditions to avoid
See section 7

10.5 Incompatible materials
See section 7

10.6 Hazardous decomposition products
See section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Inhaled

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product

Ingestion

The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

Skin Contact

This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions 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.

Eye

If applied to the eyes, this material causes severe eye damage.

Chronic

Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

BIG RED	**TOXICITY**	**IRRITATION**
	N/A	N/A

Ethylene Glycol Monobutyl Ether	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg	Eye (rabbit): 100 mg SEVERE
	Inhalation (rat) LC50: 450 ppm/4hr	Eye (rabbit): 100 mg/24h-moderate
	Oral (rat) LD50: 250 mg/kg	Skin (rabbit): 500 mg, open; mild

Acute Toxicity	NO	**Carcinogenicity**	NO
Skin Irritation/Corrosion	YES	**Reproductivity**	NO
Serious Eye Damage/Irritation	YES	**STOT - Single Exposure**	NO

Respiratory or Skin sensitisation	NO	**STOT - Repeated Exposure**	NO
Mutagenicity	NO	**Aspiration Hazard**	NO

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value
Ethylene glycol monobutyl ether	LC50	96	Fish	222.042mg/L
Ethylene glycol monobutyl ether	EC50	48	Crustacea	>1000mg/L
Ethylene glycol monobutyl ether	EC50	96	Algae or other aquatic plants	1081.644mg/L
Ethylene glycol monobutyl ether	EC50	384	Crustacea	51.539mg/L
Ethylene glycol monobutyl ether	NOEC	96	Crustacea	1000mg/L

DO NOT discharge into sewer or waterways.

12.2 Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethylene glycol monobutyl ether	LOW (Half-life = 56 days)	LOW (Half-life = 1.37 days)
water	LOW	LOW

12.3 Bioaccumulative potential

Ingredient	Bioaccumulation
ethylene glycol monobutyl ether	LOW (BCF = 2.51)
water	LOW (LogKOW = -1.38)

12.4 Mobility in soil

Ingredient	Mobility
ethylene glycol monobutyl ether	HIGH (KOC = 1)
water	LOW (KOC = 14.3)

12.5 Other adverse effects

N/A

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Containers may still present a chemical hazard/ danger when empty.
Return to supplier for reuse/ recycling if possible.
Otherwise: If container cannot 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. Where possible retain label warnings and SDS and observe all notices pertaining to the Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate: Reduction, Reuse, Recycling, Disposal (if all else fails).
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.

14. TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	N/A

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

N/A

15. REGULATORY INFORMATION

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

ETHYLENE GLYCOL MONOBUTYL ETHER(111-76-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards	Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

16. OTHER INFORMATION

16.1 Ingredients with multiple cas numbers

N/A

16.2 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