1. IDENTIFICATION

GHS Product Identifier
ROCOL SAFETAP METAL CUTTING LIQUID

Company Name
ITW POLYMERS & FLUIDS (ABN 63 004 235 063)

Address
100 Hassall Street Wetherill Park
NSW AUSTRALIA

Telephone/Fax Number
Tel: 1800 063 511; +61 2 9757 8800
Fax: 1800 803 596; +61 2 9757 3855

Emergency phone number
1800 385 556 / 0438 465 960

E-mail Address
info@itwpf.com.au

Recommended use of the chemical and restrictions on use
Relevant identified uses: Tapping and drilling fluid.

Additional Information
Other means of identification: Not Available

Website: www.itwpf.com.au

Once connected and if the message is not in your preferred language then please dial 01

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
[1] Eye Irritation Category 2A, Skin Sensitizer Category 1

Signal Word (s)
WARNING

Hazard Statement (s)
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Pictogram (s)
Exclamation mark

Precautionary statement – Prevention
Avoid breathing dust/fume/gas/mist/vapours/spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response
If ON SKIN: Wash with plenty of soap and water.
If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.

Precautionary statement – Storage
Not Applicable

Precautionary statement – Disposal
Dispose of contents/container in accordance with local regulations.

Classification of the substance or mixture:
HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.


3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethanolamine</td>
<td>102-71-6</td>
<td>&lt;10 % weight</td>
</tr>
<tr>
<td>Non-hazardous ingredients, including water</td>
<td>7732-18-5</td>
<td>&gt;=60 % weight</td>
</tr>
</tbody>
</table>

Other Information
Substances:
See section below for composition of Mixtures

4. FIRST-AID MEASURES

Inhalation
If fumes or combustion products are inhaled remove from contaminated area.
Lay patient down. Keep warm and rested.
Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
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.
Transport to hospital, or doctor.

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

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.
Eye contact
If this product comes in contact with the eyes:
Wash out immediately with fresh running water.
Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
Seek medical attention without delay; if pain persists or recurs seek medical attention.
Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Indication of immediate medical attention and special treatment needed if necessary**
Treat symptomatically

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**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**
The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:
- Foam.

**Specific Methods**
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.

**Specific Hazards Arising From The Chemical**
Fire Incompatibility: Avoid contamination with strong oxidising agents as ignition may result.

- Fire/Explosion Hazard:
  - Non combustible.
  - Not considered to be a significant fire risk.
  - Expansion or decomposition on heating may lead to violent rupture of containers.
  - Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).
  - Other decomposition products include: carbon dioxide (CO2) and nitrogen oxides (NOx)

**Decomposition Temperature**
Not Available

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**6. ACCIDENTAL RELEASE MEASURES**

**Clean-up Methods - Small Spillages**
Slippery when spilt.
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.

**Clean-up Methods - Large Spillages**
Slippery when spilt.
Minor hazard.
Clear area of personnel.
Alert Fire Brigade and tell them location and nature of hazard.
Control personal contact with the substance, by using protective equipment as required.

**Other Information**
Personal Protective Equipment advice is contained in Section 8 of the SDS.
7. HANDLING AND STORAGE

Precautions for Safe Handling
Safe handling:
Limit all unnecessary personal contact.
Wear protective clothing when risk of exposure occurs.
Use in a well-ventilated area.
Avoid contact with incompatible materials.

Other information:
Store in original containers.
Keep containers securely sealed.
Store in a cool, dry, well-ventilated area.
Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities
Suitable container:
Polyethylene or polypropylene container.
Check all containers are clearly labelled and free from leaks.

Storage incompatibility:
Avoid storage with oxidisers

8. EXPOSURE CONTROLS/PERSOMAL PROTECTION

Occupational exposure limit values
Control parameters:
OCCUPATIONAL EXPOSURE LIMITS (OEL):
INGREDIENT DATA:
Source: Australia Exposure Standards
Ingredient: triethanolamine
Material name: Triethanolamine
TWA: 5 mg/m³
STEL: Not Available
Peak: Not Available
Notes: Sen

EMERGENCY LIMITS:
Ingredient: triethanolamine
Material name: Triethanolamine; (Trihydroxytriethylamine)
TEEL-1: 15 mg/m³
TEEL-2: 51 mg/m³
TEEL-3: 1100 mg/m³

Ingredient: triethanolamine
Original IDLH: Not Available
Revised IDLH: Not Available

Ingredient: water
Original IDLH: Not Available
Revised IDLH: Not Available

Appropriate 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.

**Respiratory Protection**

Type AK-P 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: up to 10 x ES
- Half-Face Respirator: AK-AUS P2
- Full-Face Respirator: AK-AUS / Class 1 P2
- Powered Air Respirator: AK-PAPR-AUS / Class 1 P2

Required Minimum Protection Factor: up to 50 x ES
- Half-Face Respirator: AK-AUS / Class 1 P2
- Full-Face Respirator: AK-2 P2
- Powered Air Respirator: AK-PAPR-2 P2

Required Minimum Protection Factor: up to 100 x ES
- Half-Face Respirator: AK-2 P2
- Full-Face Respirator: AK-2 P2
- Powered Air Respirator: AK-PAPR-2 P2

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 (SO2), G = Agricultural chemicals, K = Ammonia (NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds (below 65 degC)

**Eye Protection**

Safety glasses with side shields; or as required,
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.

**Hand Protection**

Wear chemical protective gloves, e.g. PVC.

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: 
Rocol Safetap Metal Cutting Liquid

<table>
<thead>
<tr>
<th>Material</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL</td>
<td>A</td>
</tr>
<tr>
<td>NEOPRENE</td>
<td>A</td>
</tr>
<tr>
<td>NATURAL RUBBER</td>
<td>C</td>
</tr>
<tr>
<td>PVA</td>
<td>C</td>
</tr>
</tbody>
</table>

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.

**Thermal Hazards**

Not Available
Footwear
Wear safety footwear or safety gumboots, e.g. Rubber

Body Protection
Overalls.
Eyewash unit.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form
Liquid

Appearance
Creamish coloured liquid; mixes with water.

Odour
Not Available

Decomposition Temperature
Not Available

Solubility in Water
Miscible

pH
8.0-8.5 (as supplied)
Not Available (as a solution (1%))

Vapour Pressure
<0.1 @ 22 deg C

Vapour Density (Air=1)
Not Available

Evaporation Rate
Not Available

Physical State
Liquid

Odour Threshold
Not Available

Viscosity
Not Available

Volatile Component
Not Available

Partition Coefficient: n-octanol/water
Not Available

Surface tension
Not Available

Flash Point
Not Available

Flammability
Not Available

Auto-Ignition Temperature
Not Applicable

Explosion Limit - Upper
Not Applicable

Explosion Limit - Lower
Not Applicable
Explosion Properties
Not Available

Molecular Weight
Not Applicable

Oxidising Properties
Not Available

Initial boiling point and boiling range
100°C

Relative density
1.04 (Water = 1)

Melting/Freezing Point
Not Available

Other Information
Taste: Not Available
Gas group: Not Available
VOC g/L: Not Available

10. STABILITY AND REACTIVITY

Reactivity
See section 7

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

Conditions to Avoid
See section 7

Incompatible materials
See section 7

Hazardous Decomposition Products
See section 5

Possibility of hazardous reactions
See section 7

11. TOXICOLOGICAL INFORMATION

Toxicology Information
Rocol Safetap Metal Cutting Liquid:
TOXICITY: Not Available
IRRITATION: Not Available

Triethanolamine:
TOXICITY:
Dermal (rat) LD50: >18080 mg/kg[2]
Oral (rat) LD50: 5559.6 mg/kg(female) *[2]
IRRITATION:
Eye (rabbit): 0.1 ml -
Eye (rabbit): 10 mg - mild
Eye (rabbit): 5.62 mg - SEVERE
Minor conjunctival irritation
Minor iritis,
No corneal injury *
No irritation *
Skin (human): 15 mg/3d (int)-mild
Skin (rabbit): 4 h occluded
Skin (rabbit): 560 mg/24 hr- mild with significant discharge;

Water:
TOXICITY: Oral (rat) LD50: >90000 mg/kg[2]
IRRITATION: Not Available

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

TRIETHANOLAMINE:
The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke’s oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.
While it is difficult to generalise about the full range of potential health effects posed by exposure to the many different amine compounds, characterised by those used in the manufacture of polyurethane and polyisocyanurate foams, it is agreed that overexposure to the majority of these materials may cause adverse health effects. Many amine-based compounds can induce histamine liberation, which, in turn, can trigger allergic and other physiological effects, including bronchoconstriction or bronchial asthma and rhinitis. Systemic symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, tachycardia (rapid heartbeat), itching, erythema (reddening of the skin), urticaria (hives), and facial edema (swelling). Systemic effects (those affecting the body) that are related to the pharmacological action of amines are usually transient.
The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Studies done show that triethanolamine is of low toxicity following high dose exposure by swallowing, skin contact or inhalation. It has not been shown to cause cancer, genetic defects, reproductive or developmental toxicity. The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. Lachrymation, diarrhoea, convulsions, urinary tract changes, changes in bladder weight, changes in testicular weight, changes in thymus weight, changes in liver weight, dermatitis after systemic exposure, kidney, ureter, bladder tumours recorded. Equivocal tumourigen by RTECS criteria. Dermal rabbit value quoted above is for occluded patch in male or female animals * Union Carbide

WATER:
No significant acute toxicological data identified in literature search.

Acute Toxicity: Data Not Available to make classification

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.

Inhalation
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. Acute effects from inhalation of high vapour concentrations may be chest and nasal irritation with coughing, sneezing, headache
and even nausea.

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

**Eye**
Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

**Skin corrosion/irritation**
Data Not Available to make classification

**Serious eye damage/irritation**
Data required to make classification available

**Mutagenicity**
Data Not Available to make classification

**Respiratory sensitisation**
Data required to make classification available

**Skin Sensitisation**
Data required to make classification available

**Carcinogenicity**
Data Not Available to make classification

**Reproductive Toxicity**
Data Not Available to make classification

**STOT-single exposure**
Data Not Available to make classification

**STOT-repeated exposure**
Data Not Available to make classification

**Aspiration Hazard**
Data Not Available to make classification

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

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.
12. ECOLOGICAL INFORMATION

Ecotoxicity
Ingredient: triethanolamine
Endpoint: LC50
Test Duration (hr): 96
Species: Fish
Value: 0.0011807mg/L
Source: 4

Ingredient: triethanolamine
Endpoint: EC50
Test Duration (hr): 48
Species: Crustacea
Value: 609.88mg/L
Source: 2

Ingredient: triethanolamine
Endpoint: EC50
Test Duration (hr): 72
Species: Algae or other aquatic plants
Value: >107- <260mg/L
Source: 2

Ingredient: triethanolamine
Endpoint: EC10
Test Duration (hr): 96
Species: Algae or other aquatic plants
Value: 7.1mg/L
Source: 1

Ingredient: triethanolamine
Endpoint: NOEC
Test Duration (hr): 504
Species: Crustacea
Value: 16mg/L
Source: 2

Ingredient: water
Endpoint: LC50
Test Duration (hr): 96
Species: Fish
Value: 897.520mg/L
Source: 3

Ingredient: water
Endpoint: EC50
Test Duration (hr): 96
Species: Algae or other aquatic plants
Value: 8768.874mg/L
Source: 3

Ingredient: water
Endpoint: EC50
Test Duration (hr): 384
Species: Crustacea
Value: 199.179mg/L
Source: 3
DO NOT discharge into sewer or waterways.

**Persistence and degradability**
- **Ingredient:** triethanolamine
  - Persistence: Water/Soil: LOW
  - Persistence: Air: LOW

- **Ingredient:** water
  - Persistence: Water/Soil: LOW
  - Persistence: Air: LOW

**Mobility**
- **Mobility in soil:**
  - **Ingredient:** triethanolamine
  - Mobility: LOW (KOC = 10)

- **Ingredient:** water
  - Mobility: LOW (KOC = 14.3)

**Bioaccumulative Potential**
- **Ingredient:** triethanolamine
  - Bioaccumulation: LOW (BCF = 4)

- **Ingredient:** water
  - Bioaccumulation: LOW (LogKOW = -1.38)

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal**
- **Product / Packaging disposal:** Recycle wherever possible.
  - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
  - Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).
  - Decontaminate empty containers.

### 14. TRANSPORT INFORMATION

**U.N. Number**
None Allocated

**UN proper shipping name**
None Allocated

**Transport hazard class(es)**
None Allocated

**Other Information**
Labels Required:
- Marine Pollutant: NO
- 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 / GGVS): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code:
Source: IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk
Ingredient: triethanolamine
Pollution Category: Z

15. REGULATORY INFORMATION

Regulatory information
Safety, health and environmental regulations / legislation specific for the substance or mixture:
TRIETHANOLAMINE (102-71-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS:
Australia Exposure Standards
Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

WATER (7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS:
Australia Inventory of Chemical Substances (AICS)

National Inventory: Australia - AICS
Status: Y
National Inventory: Canada - DSL
Status: Y
National Inventory: Canada - NDSL
Status: N (triethanolamine; water)
National Inventory: China - IECSC
Status: Y
National Inventory: Europe - EINEC / ELINCS / NLP
Status: Y
National Inventory: Japan - ENCS
Status: N (water)
National Inventory: Korea - KECI
Status: Y
National Inventory: New Zealand - NZIoC
Status: Y
National Inventory: Philippines - PICCS
Status: Y
National Inventory: USA - TSCA
Status: Y
Legend:
Y = All ingredients are on the inventory
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

Poisons Schedule
N/A

16. OTHER INFORMATION
Other Information
Version No: 3.1.1.1
Safety Data Sheet according to WHS and ADG requirements

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

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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END OF SDS

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