SPECIALIST AQUEOUS CLEANER #203-0744 #263-8102

Chemwatch Independent Material Safety Data Sheet
Issue Date: 31-Oct-2008
NA317TC

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
SPECIALIST AQUEOUS CLEANER #203-0744 #263-8102

SYNONYMS
CP-0264/1A, "RS Components"

PRODUCT USE
Cleaner.

SUPPLIER

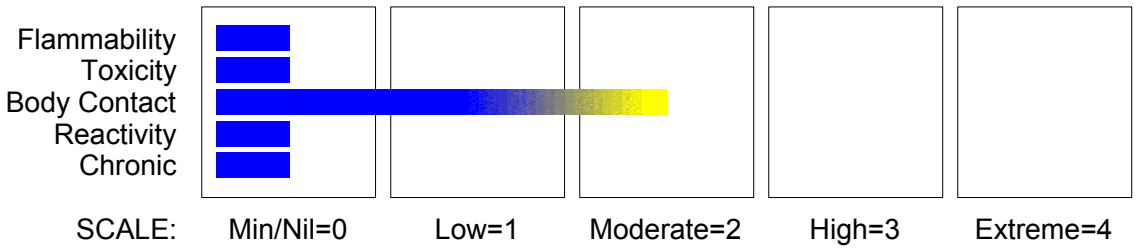
Company: RS Components
Address:
Units 30 & 31
Warehouse World
761 Great South Road
Penrose Auckland

Company: RS Components
Address:
25 Pavesi Street
Smithfield
NSW2164
AUS
Telephone: 1300 656 636
Emergency Tel: 1800 039 008
Emergency Tel: 03 9573 3112
Fax: 1300 656 696

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

CHEMWATCH HAZARD RATINGS



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POISONS SCHEDULE
None

RISK
■ Irritating to eyes and skin.
■ HARMFUL- May cause lung damage if swallowed.
■ Cumulative effects may result following exposure*.
■ May be harmful to the foetus/ embryo*.
* (limited evidence).

SAFETY
■ Do not breathe gas/fumes/vapour/spray.
■ Avoid exposure - obtain special instructions before use.

■ To clean the floor and all objects contaminated by this material use water.
■ Keep away from food drink and animal feeding stuffs.

■ In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.
■ If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
propylene glycol monobutyl ether - alpha isomer	5131-66-8	<20
N- methyl- 2- pyrrolidone	872-50-4	<10
alcohol ethoxylate		<5

Section 4 - FIRST AID MEASURES

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

EYE
■ If 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.
• If pain persists or recurs seek medical attention.
• Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

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

INHALED
• If 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.

NOTES TO PHYSICIAN
■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
• There is no restriction on the type of extinguisher which may be used.

FIRE FIGHTING
• Alert Fire Brigade and tell them location and nature of hazard.
• Wear breathing apparatus plus protective gloves for fire only.
• 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.

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).
• May emit acrid smoke.
Other decomposition products include: carbon dioxide (CO2) and nitrogen oxides (NOx).

FIRE INCOMPATIBILITY
■ None known.

HAZCHEM: None

PERSONAL PROTECTION
Glasses:
Not normally required.
Gloves:
When handling larger quantities:
Respirator:
Type AK Filter of sufficient capacity

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Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
■ Slippery when spilt. • Clean up all spills immediately.
• Avoid breathing vapours and contact with skin and eyes.
• Control personal contact 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
■ Slippery when spilt. Minor hazard.
• Clear area of personnel.
• Alert Fire Brigade and tell them location and nature of hazard.
• Control personal contact by using protective equipment as required.
• Prevent spillage from entering drains or water ways.
• Contain spill with sand, earth or vermiculite.
• Collect recoverable product into labelled containers for recycling.
• Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
• Wash area and prevent runoff into drains or waterways.
• If contamination of drains or waterways occurs, advise emergency services.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
• Limit all unnecessary personal contact.
• Wear protective clothing when risk of exposure occurs.
• Use in a well-ventilated area.
• When handling DO NOT eat, drink or smoke.
• Always wash hands with soap and water after handling.
• Avoid physical damage to containers.
• Use good occupational work practice.
• Observe manufacturer's storing and handling recommendations.

SUITABLE CONTAINER
■ Plastic container.
• Check that containers are clearly labelled.
• Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY
■ Avoid storage with oxidisers.

STORAGE REQUIREMENTS
• Store in original containers.
• Keep containers securely sealed.
• Store in a cool, dry, well ventilated area.
• DO NOT allow to freeze.
• Store away from incompatible materials.
• Protect containers against physical damage and check regularly for leaks.
• Observe manufacturer's storing and handling recommendations.

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SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

+	X	+	X	X	+

+: May be stored together
O: May be stored together with specific preventions
X: Must not be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Notes
Australia Exposure Standards	N- methyl- 2-pyrrolidone (1-Methyl- 2-pyrrolidone)	25	103	75	309	Sk

The following materials had no OELs on our records
• propylene glycol monobutyl ether - alpha isomer: CAS:5131- 66- 8

MATERIAL DATA
SPECIALIST AQUEOUS CLEANER #203-0744 #263-8102:
■ None assigned. Refer to individual constituents.

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

N-METHYL-2-PYRROLIDONE:
■ Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

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Reports of skin and eye irritation and chronic headaches have been reported in workers exposed to 1-methyl-2-pyrrolidone. The Australian ES is based on a 10-fold uncertainty factor of the no-observable-adverse-effect level (NOAEL) of 24 ppm where adverse respiratory effects were observed in a 4-week inhalation study in rats.

PERSONAL PROTECTION




EYE
■ No special equipment for minor exposure i.e. when handling small quantities.
• OTHERWISE:
• Safety glasses with side shields.
• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens 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].

HANDS/FEET
Neoprene rubber gloves.

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

RESPIRATOR
■ Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half- face Respirator	Full- Face Respirator
1000	10	AK- AUS	-
1000	50	-	AK- AUS
5000	50	Airline *	-
5000	100	-	AK- 2
10000	100	-	AK- 3
	100+		Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand.

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

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS
■ None under normal operating conditions.
Provide adequate ventilation in warehouse or closed storage areas.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Orange liquid with a citrus odour; mixes with water.

PHYSICAL PROPERTIES
Liquid.
Mixes with water.

Molecular Weight: Not applicable	Boiling Range (°C): 95- 228	Melting Range (°C): Not available
Specific Gravity (water=1): 1	Solubility in water (g/L): Miscible	pH (as supplied): 9
pH (1% solution): Not available	Vapour Pressure (kPa): Not available	Volatile Component (%vol): Not available
Evaporation Rate: Not available	Relative Vapour Density (air=1): Not available	Flash Point (°C): Not applicable
Lower Explosive Limit (%): Not applicable	Upper Explosive Limit (%): Not applicable	Autoignition Temp (°C): Not available
Decomposition Temp (°C): Not available	State: Liquid	

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY
• Presence of incompatible materials.
• Product is considered stable.
• Hazardous polymerisation will not occur.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ The liquid is discomforting to the gastro-intestinal tract.
Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.
Considered an unlikely route of entry in commercial/industrial environments.

EYE
■ The liquid may produce eye discomfort causing transient smarting, blinking.

SKIN
■ The liquid may produce skin discomfort following prolonged contact. Defatting and/or drying of the skin may lead to dermatitis and it is absorbed by skin if exposure is prolonged.

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Bare unprotected skin should not be exposed to this material.

INHALED
■ Not normally a hazard due to non-volatile nature of product.
The vapour/mist is discomforting to the upper respiratory tract.

CHRONIC HEALTH EFFECTS
■ Primary route of exposure is usually by skin contact.
Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following.
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.

TOXICITY AND IRRITATION
■ Not available. Refer to individual constituents.

PROPYLENE GLYCOL MONOBUTYL ETHER - ALPHA ISOMER:
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 3100 mg/kg as mixed isomers CAS RN 63716- 40-5	
Oral (rat) LD50: 2830 uL/kg	Skin (rabbit0: 500 mg Open - Mild
Inhalation (rat) LC50: >1000 ppm/8h	Eye (rabbit): 15 mg SEVERE
Dermal (rat) LD50: 3560 uL/kg	

■ for propylene glycol ethers (PGEs):
Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM).
Testing of a wide variety of propylene glycol ethers Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on reproductive organs, the developing embryo and fetus, blood (haemolytic effects), or thymus, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces an alkoxyacetic acid. The reproductive and developmental toxicities of the lower molecular weight homologues in the ethylene series are due specifically to the formation of methoxyacetic and ethoxyacetic acids.
Longer chain length homologues in the ethylene series are not associated with the reproductive toxicity but can cause haemolysis in sensitive species, also through formation of an alkoxyacetic acid. The predominant alpha isomer of all the PGEs (thermodynamically favored during manufacture of PGEs) is a secondary alcohol incapable of forming an alkoxypropionic acid. In contrast beta-isomers are able to form the alkoxypropionic acids and these are linked to teratogenic effects (and possibly haemolytic effects).
This alpha isomer comprises greater than 95% of the isomeric mixture in the commercial product.
Because the alpha isomer cannot form an alkoxypropionic acid, this is the most likely reason for the lack of toxicity shown by the PGEs as distinct from the lower molecular weight ethylene glycol ethers. More importantly, however, very extensive empirical test data show that this class of commercial-grade glycol ether presents a low toxicity hazard. PGEs, whether mono, di- or tripropylene glycol-based (and no matter what the alcohol group), show a very similar pattern of low to non-detectable toxicity of any type at doses or exposure levels greatly exceeding those showing pronounced effects from the ethylene series. One of the primary metabolites of the propylene glycol ethers is propylene glycol, which is of low toxicity and completely metabolised in the body.
As a class, the propylene glycol ethers are rapidly absorbed and distributed throughout the body when introduced by inhalation or oral exposure. Dermal absorption is somewhat slower but subsequent distribution is rapid. Most excretion for PGEs is via the urine and expired air. A small portion is excreted in the faeces.
As a group PGEs exhibits low acute toxicity by the oral, dermal, and inhalation routes. Rat oral LD50s range from >3,000 mg/kg (PnB) to >5,000 mg/kg (DPMA). Dermal LD50s are all > 2,000 mg/kg (PnB, & DPnB; where no deaths occurred), and ranging up to >15,000 mg/kg (TPM). Inhalation LC50 values were higher than 5,000 mg/m3 for DPMA (4-hour exposure), and TPM (1-hour exposure). For DPnB the 4-hour LC50 is >2,040 mg/m3. For PnB, the 4-hour LC50 was >651 ppm (>3,412 mg/m3), representing the highest practically attainable vapor level. No

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deaths occurred at these concentrations. PnB and TPM are moderately irritating to eyes while the remaining category members are only slightly irritating to nonirritating. PnB is moderately irritating to skin while the remaining category members are slightly to non-irritating
None are skin sensitisers.
In repeated dose studies ranging in duration from 2 to 13 weeks, few adverse effects were found even at high exposure levels and effects that did occur were mild in nature. By the oral route of administration, NOAELs of 350 mg/kg-d (PnB – 13 wk) and 450 mg/kg-d (DPnB – 13 wk) were observed for liver and kidney weight increases (without accompanying histopathology). LOAELs for these two chemicals were 1000 mg/kg-d (highest dose tested).
Dermal repeated-dose toxicity tests have been performed for many PGEs. For PnB, no effects were seen in a 13-wk study at doses as high as 1,000 mg/kg-d. A dose of 273 mg/kg-d constituted a LOAEL (increased organ weights without histopathology) in a 13-week dermal study for DPnB. For TPM, increased kidney weights (no histopathology) and transiently decreased body weights were found at a dose of 2,895 mg/kg-d in a 90-day study in rabbits. By inhalation, no effects were observed in 2-week studies in rats at the highest tested concentrations of 3244 mg/m3 (600 ppm) for PnB and 2,010 mg/m3 (260 ppm) for DPnB. TPM caused increased liver weights without histopathology by inhalation in a 2-week study at a LOAEL of 360 mg/m3 (43 ppm). In this study, the highest tested TPM concentration, 1010 mg/m3 (120 ppm), also caused increased liver weights without accompanying histopathology. Although no repeated-dose studies are available for the oral route for TPM, or for any route for DPMA, it is anticipated that these chemicals would behave similarly to other category members.
One and two-generation reproductive toxicity testing has been conducted in mice, rats, and rabbits via the oral or inhalation routes of exposure on PM and PMA. In an inhalation rat study using PM, the NOAEL for parental toxicity is 300 ppm (1106 mg/m3) with decreases in body and organ weights occurring at the LOAEL of 1000 ppm (3686 mg/m3). For offspring toxicity the NOAEL is 1000 ppm (3686 mg/m3), with decreased body weights occurring at 3000 ppm (11058 mg/m3). For PMA, the NOAEL for parental and offspring toxicity is 1000 mg/kg/d. in a two generation gavage study in rats. No adverse effects were found on reproductive organs, fertility rates, or other indices commonly monitored in such studies. In addition, there is no evidence from histopathological data from repeated-dose studies for the category members that would indicate that these chemicals would pose a reproductive hazard to human health.
In developmental toxicity studies many PGEs have been tested by various routes of exposure and in various species at significant exposure levels and show no frank developmental effects. Due to the rapid hydrolysis of DPMA to DPM, DPMA would not be expected to show teratogenic effects. At high doses where maternal toxicity occurs (e.g., significant body weight loss), an increased incidence of some anomalies such as delayed skeletal ossification or increased 13th ribs, have been reported. Commercially available PGEs showed no teratogenicity.
The weight of the evidence indicates that propylene glycol ethers are not likely to be genotoxic. In vitro, negative results have been seen in a number of assays for PnB, DPnB, DPMA and TPM. Positive results were only seen in 3 out of 5 chromosome aberration assays in mammalian cells with DPnB. However, negative results were seen in a mouse micronucleus assay with DPnB and PM. Thus, there is no evidence to suggest these PGEs would be genotoxic in vivo. In a 2-year bioassay on PM, there were no statistically significant increases in tumors in rats and mice.

N-METHYL-2-PYRROLIDONE:
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY
Oral (rat) LD50: 4200 mg/kg*
Oral (rat) LD50: 3914 mg/kg *[Manufacturer]
Dermal (rabbit) LD50: 8000 mg/kg

IRRITATION
Eye (rabbit): 100 mg - Moderate

■ The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

N- methyl- 2-pyrrolidone	Australia Exposure Standards - Skin	Notes	Sk

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Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

PROPYLENE GLYCOL MONOBUTYL ETHER - ALPHA ISOMER:
N-METHYL-2-PYRROLIDONE:
■ DO NOT discharge into sewer or waterways.

SPECIALIST AQUEOUS CLEANER #203-0744 #263-8102:
The product is biodegradable. [RS Components]

PROPYLENE GLYCOL MONOBUTYL ETHER - ALPHA ISOMER:
■ For glycol ethers:
Environmental fate:
Ether groups are generally stable to hydrolysis in water under neutral conditions and ambient temperatures. OECD guideline studies indicate ready biodegradability for several glycol ethers although higher molecular weight species seem to biodegrade at a slower rate. No glycol ethers that have been tested demonstrate marked resistance to biodegradative processes. Upon release to the atmosphere by evaporation, high boiling glycol ethers are estimated to undergo photodegradation (atmospheric half lives = 2.4-2.5 hr). When released to water, glycol ethers undergo biodegradation (typically 47-92% after 8-21 days) and have a low potential for bioaccumulation (log Kow ranges from -1.73 to +0.51).
Ecotoxicity:
Aquatic toxicity data indicate that the tri- and tetra ethylene glycol ethers are "practically non-toxic" to aquatic species. No major differences are observed in the order of toxicity going from the methyl- to the butyl ethers.
Glycols exert a high oxygen demand for decomposition and once released to th environments cause the death of aquatic organisms if dissolved oxygen is depleted.
■ for propylene glycol ethers:
Environmental fate:
Most are liquids at room temperature and all are water-soluble.
Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM)
Environmental fate: Log octanol-water partition coefficients (log Kow's) range from 0.309 for TPM to 1.523 for DPnB. Calculated BCFs range from 1.47 for DPnB to 3.16 for DPMA and TPM, indicating low bioaccumulation. Henry's Law Constants, which indicate propensity to partition from water to air, are low for all category members, ranging from 5.7 x 10-9 atm-m3/mole for TPM to 2.7 x10-9 atm-m3/mole for PnB. Fugacity modeling indicates that most propylene glycol ethers are likely to partition roughly equally into the soil and water compartments in the environment with small to negligible amounts remaining in other environmental compartments (air, sediment, and aquatic biota). Propylene glycol ethers are unlikely to persist in the environment. Once in air, the half-life of the category members due to direct reactions with photochemically generated hydroxyl radicals, range from 2.0 hours for TPM to 4.6 hours for PnB. In water, most this family are "readily biodegradable" under aerobic conditions. (DPMA degraded within 28 days (and within the specified 10-day window) but only using pre-adapted or "acclimated" inoculum.). In soil, biodegradation is rapid for PM and PMA.
Ecotoxicity:
Acute aquatic toxicity testing indicates low toxicity for both ethers and acetates. For ethers, effect concentrations are > 500 mg/L. For acetates, effect concentrations are > 151 mg/L.

N-METHYL-2-PYRROLIDONE:

log Kow: -0.44-0.1

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Specialist Aqueous Cleaner #203- 0744 #263- 8102		No data		
propylene glycol	LOW	No data	LOW	HIGH

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monobutyl ether - alpha isomer				
N- methyl- 2- pyrrolidone	LOW	No data	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Treat and neutralise with dilute acid at an effluent treatment plant.
- Recycle containers, otherwise dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None (ADG6)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS
Regulations for ingredients

propylene glycol monobutyl ether - alpha isomer (CAS: 5131-66-8) is found on the following regulatory lists;
"Australia Hazardous Substances","Australia Inventory of Chemical Substances (AICS)","International Council of Chemical Associations (ICCA) - High Production Volume List","OECD Representative List of High Production Volume (HPV) Chemicals"

N-methyl-2-pyrrolidone (CAS: 872-50-4,26138-58-9) is found on the following regulatory lists;
"Australia Exposure Standards","Australia Hazardous Substances","Australia Inventory of Chemical Substances (AICS)","Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2)","Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5", "Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6","GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships","IMO IBC Code Chapter 17: Summary of minimum requirements","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","International Council of Chemical Associations (ICCA) - High Production Volume List","OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Specialist Aqueous Cleaner #203-0744 #263-8102 (CW: 4525-75)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
N- methyl- 2- pyrrolidone	872- 50- 4, 26138- 58- 9

REPRODUCTIVE HEALTH GUIDELINES
■ Established occupational exposure limits frequently do not take into consideration reproductive end points that are clearly below the thresholds for other toxic effects. Occupational reproductive guidelines (ORGs) have been suggested as an additional standard. These have been established after a literature search for reproductive no-observed-adverse effect-level (NOAEL) and the lowest-observed-adverse-effect-level (LOAEL). In addition the US EPA's procedures for risk assessment for hazard identification and dose-response

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assessment as applied by NIOSH were used in the creation of such limits. Uncertainty factors (UFs) have also been incorporated.

Ingredient	ORG	UF	Endpoint	CR	Adeq TLV
N- methyl- 2-pyrrolidone	0.91 mg/m3	1000	D	NA	-

■ These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified otherwise.
CR = Cancer Risk/10000; UF = Uncertainty factor:
TLV believed to be adequate to protect reproductive health:
LOD: Limit of detection
Toxic endpoints have also been identified as:
D = Developmental; R = Reproductive; TC = Transplacental carcinogen
Jankovic J., Drake F.: A Screening Method for Occupational Reproductive
American Industrial Hygiene Association Journal 57: 641-649 (1996).

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ 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.

Issue Date: 31-Oct-2008
Print Date: 5-Feb-2010

This is the end of the MSDS.