

Motor Active

Chemwatch: 4796-64

Version No: 5.1.1.1 Safety Data Sheet according to WHS and ADG requirements Chemwatch Hazard Alert Code: 4 Issue Date: 09/09/2015

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

Application is by spray atomisation from a hand held aerosol pack

Use according to manufacturer's directions.

Carpet cleaner; automotive.

Product Identifier

Product name	Meguiar's G97, Carpet Cleaner (S7547); G9719	
Synonyms	Not Available	
Proper shipping name	AEROSOLS	
Other means of identification	Not Available	
Relevant identified uses of the substance or mixture and uses advised against		

Details of the supplier of the safety data sheet		
Registered company name	Motor Active	
Address	35 Slough Business Park, Holker Street Silverwater NSW 2128 Australia	
Telephone	+61 2 9737 9422 1800 350 622	
Fax	+61 2 9737 9414	
Website	www.motoractive.com.au	
Email	andrew.spira@motoractive.com.au	

Emergency telephone number

Relevant identified uses

Association / Organisation	MotorActive	
Emergency telephone numbers	+61 2 9737 9422 (For General Information Monday to Friday 8:30am to 5:pm)	
Other emergency telephone numbers	13 11 26 (In Case of Emergency contact: Poison Information Hotline)	

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

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

Poisons Schedule	Not Applicable	
Classification ^[1]	Aerosols Category 1, Eye Irritation Category 2A, Acute Aquatic Hazard Category 2	
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI	

Label elements

GHS label elements	
SIGNAL WORD	DANGER

H222	Extremely flammable aerosol.	
H319	Causes serious eye irritation.	
H401	Toxic to aquatic life	
AUH044	Risk of explosion if heated under confinement	
Precautionary statement(s)) Prevention	
P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.	
P211	Do not spray on an open flame or other ignition source.	
P251	Pressurized container: Do not pierce or burn, even after use.	
P273	Avoid release to the environment.	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	
Precautionary statement(s) Response	
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		

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

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
68439-46-3	1-5	alcohols C9-11 ethoxylated
112-34-5	1-5	diethylene glycol monobutyl ether
120-40-1	1-5	lauric diethanolamide
Not Available	75-95	Ingredients determined not to be hazardous
106-97-8.	1-5	butane
74-98-6	1-5	propane

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If aerosols come in contact with the eyes: Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes 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. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If solids or aerosol mists are deposited upon the skin: Flush skin and hair with running water (and soap if available). Remove any adhering solids with industrial skin cleansing cream. DO NOT use solvents. Seek medical attention in the event of irritation.
Inhalation	 If aerosols, fumes or combustion products are inhaled: Remove to fresh air. 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. If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, 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	Not considered a normal route of entry.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

SMALL FIRE: • Water spray, dry chemical or CO2 LARGE FIRE:

Water spray or fog.

Special hazards arising from the substrate or mixture

Fire Incompatibility	Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
dvice for firefighters	
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control fire and cool adjacent 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	 Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air. Severe explosion hazard, in the form of vapour, when exposed to flame or spark. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition with violent container rupture. Aerosol cans may explode on exposure to naked flames. Rupturing containers may rocket and scatter burning materials. Hazards may not be restricted to pressure effects. May emit acrid, poisonous or corrosive fumes. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include:carbon dioxide (CO2) other pyrolysis products typical of burning organic material
HAZCHEM	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

Minor Spills	 Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Shut off all possible sources of ignition and increase ventilation. Wipe up. If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely.
Major Spills	 DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Water spray or fog may be used to disperse / absorb vapour. Absorb or cover spill with sand, earth, inert materials or vermiculite. If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely. Collect residues and seal in labelled drums for disposal. Remove leaking cylinders to a safe place if possible. Release pressure under safe, controlled conditions by opening the valve.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Frecautions for sare nanoling		
Safe handling	 DO NOT allow clothing wet with material to stay in contact with skin 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. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. 	

	When handling, DO NOT eat, drink or smoke.
	DO NOT incinerate or puncture aerosol cans.
	DO NOT spray directly on humans, exposed food or food utensils.
	Avoid physical damage to containers.
	Always wash hands with soap and water after handling.
	Work clothes should be laundered separately.
	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.
	▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can
	Store in original containers in approved flammable liquid storage area.
	DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
	No smoking, naked lights, heat or ignition sources.
	Keep containers securely sealed. Contents under pressure.
Other information	▶ Store away from incompatible materials.
Other Information	► Store in a cool, dry, well ventilated area.
	Avoid storage at temperatures higher than 40 deg C.
	► Store in an upright position.
	Protect containers against physical damage.
	Check regularly for spills and leaks.
	Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	Aerosol dispenser. Check that containers are clearly labelled.
Storage incompatibility	Avoid reaction with oxidising agents

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	butane	Butane	1900 mg/m3 / 800 ppm	Not Available	Not Available	Not Available
Australia Exposure Standards	propane	Propane	Not Available	Not Available	Not Available	Asphyxiant

EMERGENCY LIMITS					
Ingredient	Material name		TEEL-1	TEEL-2	TEEL-3
diethylene glycol monobutyl ether	Butoxyethoxy)ethanol, 2-(2-; (Diethylene glycol monobutyl ether)		10 ppm	10 ppm	170 ppm
lauric diethanolamide	Bis(2-hydroxyethyl)dodecanamide, N,N-		0.045 ppm	0.5 ppm	46 ppm
butane	Butane		Not Available	Not Available	Not Available
propane	Propane		Not Available	Not Available	Not Available
Ingredient	Original IDLH Revised IDLH				
alcohols C9-11 ethoxylated	Not Available	Not	Available		
diethylene glycol monobutyl ether	Not Available	Not Available			
lauric diethanolamide	Not Available	Not Available			
Ingredients determined not to be hazardous	Not Available	Not Available			
butane	Not Available	Not Available			
propane	20,000 [LEL] ppm	2,100 [LEL] ppm			

MATERIAL DATA

For butane:

Odour Threshold Value: 2591 ppm (recognition)

Butane in common with other homologues in the straight chain saturated aliphatic hydrocarbon series is not characterised by its toxicity but by its narcosis-inducing effects at high concentrations. The TLV is based on analogy with pentane by comparing their lower explosive limits in air. It is concluded that this limit will protect workers against the significant risk of drowsiness and other narcotic effects.

Odour Safety Factor(OSF) OSF=0.22 (n-BUTANE)

For diethylene glycol monobutyl ether:

CEL TWA: 15.5 ppm, 100 mg/m3

(CEL = Chemwatch Exposure Limit)

In studies involving the inhalation toxicity of diethylene glycol monobutyl ether, exposure for 6 hours daily at 100 mg/m3 had no effect. This concentration is in the range of the saturated vapour concentration.

Local damage was produced following inhalation of concentrations higher than the saturated vapour concentrations, that is, during inhalation of the aerosol (350 mg/m3). Since the only potential effects of inhalation are restricted to local discomfort (in the aerosol concentration range) the substance is classified in category I for the limitation of exposure peaks. Teratogenicity studies have not revealed prenatal toxic effects at high oral doses and this ether is classified in pregnancy risk group C.

For propane Odour Safety Factor(OSF) OSF=0.16 (PROPANE)

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hard effective in protecting workers and will typically be independent of worker interactions to provide this. 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 "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA appriprotection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, de required to effectively remove the contaminant. Type of Contaminant: aerosols, (released at low velocity into zone of active generation) direct spray, spray painting in shallow booths, gas discharge (active generation into zone of rapid	high level of protection. the worker and ventilatic d properly. The design of oved respirator. Correct t termine the "capture velo	in that strategically "adds" and a ventilation system must match fit is essential to obtain adequate
	Within each range the appropriate value depends on:		
	Lower end of the range	Upper end of the range)
	1: Room air currents minimal or favourable to capture	1: Disturbing room air	currents
	2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high	h toxicity
	3: Intermittent, low production.	3: High production, hea	ivy use
	4: Large hood or large air mass in motion	4: Small hood-local con	ntrol only
Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreas of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after r distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) I solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits wit apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or use			ordingly, after reference to 00-400 f/min.) for extraction of nce deficits within the extraction
Personal protection			
Eye and face protection	 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] 		
Skin protection	See Hand protection below		
Hands/feet protection	 NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. No special equipment needed when handling small quantities. OTHERWISE: For potentially moderate exposures: Wear general protective gloves, eg. PVC. and safety footwear. 		
Body protection	See Other protection below		
Other protection	 No special equipment needed when handling small quantities. OTHERWISE: Overalls. Skin cleansing cream. Eyewash unit. Do not spray on hot surfaces. The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton. Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost. BRETHERICK: Handbook of Reactive Chemical Hazards. 		
Thermal hazards	Not Available		

Respiratory protection

Type KAX-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	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	Air-line*	KAX-2 P2	KAX-PAPR-2 P2 ^
up to 10 x ES	-	KAX-3 P2	-

10+ x ES

* - 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(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)

Air-line**

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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Supplied as an aerosol pack. Contents under PRESSURE . Contains highly flammable hydrocarbon propellant. White liquid/foam aerosol.		
Physical state	Liquid	Relative density (Water = 1)	1
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	-104 (propellant)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	VOC = 5%
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	 Elevated temperatures. Presence of open flame. Product is considered stable. Hazardous polymerisation will not occur.
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	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. WARNING :Intentional misuse by concentrating/inhaling contents may be lethal. Spray mist may produce discomfort
Ingestion	Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments
Skin Contact	One of the mechanisms of skin irritation caused by surfactants is considered to be denaturation of the proteins of skin. It has also been established that there is a connection between the potential of surfactants to denature protein in vitro and their effect on the skin. Nonionic surfactants do not carry any net charge and, therefore, they can only form hydrophobic bonds with proteins. For this reason, proteins are not deactivated by nonionic surfactants, and proteins with poor solubility are not solubilized by nonionic surfactants Spray mist may produce discomfort Open cuts, abraded or irritated skin should not be exposed to this material

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Eye	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. 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. Some nonionic surfactants may produce a localised anaesthetic effect on the cornea; this may effectively eliminate the warning discomfort produced by other substances and lead to corneal injury. Irritant effects range from minimal to severe dependent on the nature of the surfactant, its concentration and the duration of contact. Pain and corneal damage represent the most severe manifestation of irritation. Direct contact with the eye may not cause irritation because of the extreme volatility of the gas; however concentrated atmospheres may produce irritation after brief arcosures.		
Chronic	brief exposures On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body 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. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals. Principal route of occupational exposure to the gas is by inhalation.		
Meguiar's G97, Carpet	ΤΟΧΙΟΙΤΥ	IRRITATION	
Cleaner (S7547); G9719	Not Available	Not Available	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
	Dermal (rabbit) LD50: >2000 mg/kg ^[2]	* [SHELL CCINFO 1441905]	
alcohols C9-11 ethoxylated	Oral (rat) LD50: 1378 mg/kg ^[2]	Eye (human): SEVERE	
		Skin: SEVERE	
	тохісіту	IRRITATION	
diethylene glycol monobutyl ether	Dermal (rabbit) LD50: 2700 mg/kg ^[2]	Eye (rabbit): 20 mg/24h moderate	
elle	Oral (rat) LD50: 3306 mg/kg ^[1]	Eye (rabbit): 5 mg - SEVERE	
	тохісіту	IRRITATION	
lauric diethanolamide	Oral (rat) LD50: 2700 mg/kg ^[2]	Nil reported.	
	тохісіту	IRRITATION	
butane	Inhalation (rat) LC50: 658 mg/L/4hr ^[2]	Nil reported	
	тохісіту	IRRITATION	
	Inhalation (mouse) LC50: >15.6-<17.9 mm/l/2hr ^[1]	Not Available	
	Inhalation (mouse) LC50: 410000 ppm/2hr ^[1]		
	Inhalation (rat) LC50: >800000 ppm15 min ^[1]		
propane	Inhalation (rat) LC50: 1354.944 mg/L15 min ^[1]		
	Inhalation (rat) LC50: 1355 mg/l15 min ^[1]		
	Inhalation (rat) LC50: 1442.738 mg/L15 min ^[1]		
	Inhalation (rat) LC50: 1443 mg/115 min ^[1]		
	Inhalation (rat) LC50: 570000 ppm15 min ^[1]		
Legend:	Value obtained from Europe ECHA Registered Substances - Acute toxi	icity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data	
-	extracted from RTECS - Register of Toxic Effect of chemical Substances		

Human beings have regular contact with alcohol ethoxylates through a variety of industrial and consumer products such as soaps, detergents, and other cleaning products . Exposure to these chemicals can occur through ingestion, inhalation, or contact with the skin or eyes. Studies of acute toxicity show that volumes well above a reasonable intake level would have to occur to produce any toxic response. Moreover, no fatal case of poisoning with alcohol ethoxylates has ever been reported. Multiple studies investigating the acute toxicity of alcohol ethoxylates have shown that the use of these compounds is of low concern in terms of oral and dermal toxicity Clinical animal studies indicate these chemicals may produce gastrointestinal irritation such as ulcerations of the stomach, pilo-erection, diarrhea, and lethargy. Similarly, slight to severe irritation of the skin or eye was generated when undiluted alcohol ethoxylates were applied to the skin and eyes of rabbits and rats. The chemical shows no indication of being a genotoxin, carcinogen, or mutagen (HERA 2007). No information was available on levels at which these effects might occur, though toxicity is thought to be substantially lower than that of nonylphenol ethoxylates Alcohol ethoxylates are according to CESIO (2000) classified as Irritant or Harmful depending on the number of EO-units: EO < 5 gives Irritant (Xi) with R38 (Irritating to skin) and R41 (Risk of serious damage to eyes) ALCOHOLS C9-11 EO > 5-15 gives Harmful (Xn) with R22 (Harmful if swallowed) - R38/41 **ETHOXYLATED** EO > 15-20 gives Harmful (Xn) with R22-41 >20 EO is not classified (CESIO 2000) Oxo-AE, C13 EO10 and C13 EO15, are Irritating (Xi) with R36/38 (Irritating to eyes and skin) AE are not included in Annex 1 of the list of dangerous substances of the Council Directive 67/548/EEC In general, alcohol ethoxylates (AE) are readily absorbed through the skin of guinea pigs and rats and through the gastrointestinal mucosa of rats. AE are quickly eliminated from the body through the urine, faeces, and expired air (CO2). Orally dosed AE was absorbed rapidly and extensively in rats, and more than 75% of the dose was absorbed. When applied to the skin of humans, the doses were absorbed slowly and incompletely (50% absorbed in 72 hours). Half of the absorbed surfactant was excreted promptly in the urine and smaller amounts of AE appeared in the faeces and expired air (CO2)). The metabolism of C12 AE yields PEG, carboxylic acids, and CO2 as metabolites. The LD50 values after oral administration to rats range from about 1-15 g/kg body weight indicating a low to moderate acute toxicity.

Meguiar's G97, Carpet Cleaner (S7547); G9719

	The ability of nonionic surfactants to cause a swelling of the stratum comeum of guinea pig skin has been studied. The swelling mechanism of the skin involves a combination of ionic binding of the hydrophilic group as well as hydrophobic interactions of the alkyl chain with the substrate. One of the mechanisms of skin irritation caused by surfactants is considered to be denaturation of the proteins of skin. It has also been established that there is a connection between the potential of surfactants to denature protein in vitro and their effect on the skin. Nonionic surfactants, and proteins with poor solubility are not solubilized by nonionic surfactants. A substantial amount of toxicological data and information in vivo and in vitro demonstrates that there is no evidence for alcohol ethoxylates (AEs) being genotoxic, mutagenic or carcinogenic. No adverse reproductive or developmental effects were observed. The majority of available toxicity studies revealed NOAELs in excess of 100 mg/kg bwld but the lowest NOAEL for an individual AE was established to be 50 mg/kg bw/day. This value was subsequently considered as a conservative, representative value in the risk assessment of AE. The effects were restricted to changes in organ weights with no histopathological organ changes with the exception of liver hypertrophy (indicative of an adaptive response to metabolism rather than a toxic effect). It is noteworthy that there was practically no difference in the NOAEL in oral studies of 90-day or 2 years of duration in rats. A comparison of the aggregate consumer exposure and the systemic NOAEL (taking into account an oral absorption value of 75%) results in a Margin of Exposure of 5,800. Taking into account the conservatism in the exposure assessment and the assigned systemic NOAEL, this margin of exposure is considered more than adequate to account for the inherent uncertainty and variability of the hazard database and inter and intra-species extrapolations. AEs are not contact sensitisers. Neat AE are ir
DIETHYLENE GLYCOL MONOBUTYL ETHER	For diethylene glycol monoalkyl ethers and their acetates: 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. Acute toxicity: 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. No lethality was observed for any of these materials under these conditions. Dermal LD50 values in rabbits range from 2000 mg/kg bw (DGHE) to 15000 mg/kg bw (DGEEA). Signs of acute toxicity in rodents are consistent with non-specific CNS depression typical of organic solvents in general. All category members are slightly irritating to skin and slightly to moderately irritating to eyes (with the exception of DGHE, which is highly irritating to eyes). Sensitisation tests with DGEE, DGEEA, DGPE, DGBE and DGBE ranged in duration from 30 days to 2 years. Effects predominantly included kidney and liver toxicity, absolute and/or relative changes in organ weights, and some changes in haematological parameters. All effects were seen at doses greater than 800-1000 mg/kg bw/day from oral or dermal studies; no systemic effects were observed in inhalation studies with less than continuous exposure regimens. Mutagenicity: DGEE, DGEEA, DGBE, A BGBA, and DGHE generally tested negative for mutagenicity in <i>S. typhimurium</i> strains TA98, TA100, TA1535, TA1537 and TA1538 and DGBEA tested negative in E. coll WP2urA, with and without metabolic activation. <i>In vivo</i> cytogenicity and sister chromatid exchange assays with DGBE and DGHE in Chinese Hamster Ovary Cells with and without metabolic activation. <i>In vivo</i> micronucleus or cytogenicity tests with DGEE, DGBE
LAURIC DIETHANOLAMIDE	The terminal toxicity, these doses had no effect on the developing toetus For Fatty Nitrogen Derived (FND) Amides (including several high molecular weight alkyl amino acid amides) The chemicals in the Fatty Nitrogen Derived (FND) Amides of surfactants are similar to the class in general as to physical/chemical properties, environmental fate and toxicity. Human exposure to these chemicals is substantially documented. Some typical applications of FND Amides are: masonry cement additives (curing agent for epoxy resins; closed hydrocarbon systems in oil field production, refineries and chemical plants; and slip and antiblocking additives for polymers. The safety of the FND Amides to humans is recognised by the U.S. FDA, which has approved stearamide, oleamide and/or erucamide for adhesives; coatings for articles in food contact; coatings for polyolefin films; defoaming agents for manufacture of paper and paperboard; animal glue (defoamer in food packaging); in EVA copolymers for food packaging; lubricants for manufacture of metallic food packaging; closure sealing gaskets; and release agents in polymeric resins and petroleum wax. The low order of toxicity indicates that the use of FND Amides does not pose a significant hazard to human health. The differences in chain length, degree of saturation of the carbon chains, source of the natural oils, or addition of an amino group in the chain would not be expected to have an impact on the toxicity profile. This conclusion is supported by a number of studies in the FND family of chemicals (amines, cationics, and amides as separate categories) that show no differences in the length or degree of saturation of the alkyl substituents and is also supported by the limited toxicity of these long-chain substituted chemicals The Fatty nitrogen-derived amides (FND amides) compruse four categories: Subcategory II: Fatty Acid Reaction Products with Amino Compounds (Note: Subcategory II chemicals, in many cases, contain Subcategory I chemicals as amajor components) Subcategory II: Fat

	Two subchronic toxicity studies in Subcategory III confirmed the two subchronic toxicity studies for one of the chemicals indicate order of repeat-dose toxicity for the FND amphoteric salts sim Genetic Toxicity in vitro : Based on the lack of effect of one of Salmonella reverse mutation assay exist for all of the subcatege Developmental Toxicity : A developmental toxicity study in S available. The studies indicate these chemicals are not develoe and knowledge of similar chemicals. As above for repeat-dose in evaluating potential toxicity of the FND Amides chemicals, in Category chemicals. Acute oral toxicity studies (approximately to 10,000 mg/kg with no apparent organ specific toxicity. Similibetween 10 and 100 mg/kg/day for rats and slightly lower for <i>vivo</i> studies) indicated no mutagenic activity among more thar and/or reproductive organs for 11 chemicals, and 15 studies e effects for the FND group as a whole. Fatty acid amides (FAA) are ubiquitous in household and commalkanolamides. These are the most widely studied in terms of the FAU acid diethanolamides (C8-C18) are classified by Comit (Xi) with the risk phrases R38 (Irritating to skin) and R41 (Rist the risk phrases R41 Several studies of the sensitization potential of cocoamide die number of reports on skin allergy patch testing of cocoamide D common. Alkanolamides are manufactured by condensation of diethanon akanolamides) are susceptible to nitrosamine formation which pre-existing contamination of the diethanolamine used to man containing cocoamide DEA. According to the Cosmetic Direct risk of formation of N-nitrosamines. The maximum content allo N-nitrosodialkanolamines is 50 mg/kg. The preservative 2-bro amides. Model assays have indicated that 2-bromo-2-nitropro compound, N-nitrosodiethanolamine which is a potent liver cate the serveral FAAs have been tested in short-term genotoxicity assets tested in mutagenicity assays and did not show mutagenic actimutagenic in strains of <i>Salmonella</i> typhimurium when tested we Environmental and Health Asses	ted a low illar to that seen in the other categor promore chemicals in each subcategor promore chemicals in each subcategor promore chemicals in each subcategory IV a present toxicants, as expected base toxicity, the data for Subcategory I at is also useful to review the available r80 studies for 40 chemicals in the th arly, repeated dose toxicity studies (a dogs. More than 60 genetic toxicity sin a 0 chemicals tested. For reproductive valuated developmental toxicity for 1 mercial environments. The most com- uman exposure. the Europeen des Agents de Surface k of serious damage to eyes). Fatty ethanolamide (DEA) indicate that this DEA have been published. These test damine and the methylester of long c in constitutes a potential health proble ufacture cocoamide DEA, or from ni- tive (2000) reveaments is 5% fatty acid dia mo-2-nitropropane-1,3-diol is a knon- pane-1,3-diol may lead to the N-nitror arcinogen in rats (IARC 1978). ays. No indication of any potential to ivity in <i>Salmonella typhimurium</i> strains- tith or without metabolic activation	ies. ny, adequate data for mutagenic activity as measured by the and a third study for a chemical in Subcategory III are ed on their structures, molecular weights, physical properties re adequate to support Subcategory II. e data for the related FND Cationic and FND Amines tree categories) provide LD50 values from approximately 400 approximately 35 studies for 15 chemicals) provide NOAELs tudies (<i>in vitro</i> bacterial and mammalian cells as well as <i>in</i> ve evaluations, 14 studies evaluated reproductive endpoints 3 chemicals indicating no reproductive or developmental mon of these are based on coconut oil fatty acids et de leurs Intermediaires Organiques (CESIO) as Irritating acid monoethanolamides are classified as Irritant (Xi) with s FAA induces occupational allergic contact dermatitis and a tsi indicate that allergy to cocoamide DEA is becoming more hain fatty acids. Several alkanolamides (especially secondary errosamine formation by nitrosating agents in formulations to used in products with nitrosating agents because of the kanolamides, and the maximum content of win itrosating agent for secondary and tertiary amines or bactor of diethanolamine forming the carcinogenic cause genetic damage was seen Lauramide DEA was not
Meguiar's G97, Carpet Cleaner (S7547); G9719 & PROPANE	No significant acute toxicological data identified in literature s	search.	
ALCOHOLS C9-11 ETHOXYLATED & DIETHYLENE GLYCOL MONOBUTYL ETHER	The material may produce severe irritation to the eye causing conjunctivitis.	pronounced inflammation. Repeated	l or prolonged exposure to irritants may produce
Acute Toxicity	\otimes	Carcinogenicity	\otimes
Skin Irritation/Corrosion	0	Reproductivity	0
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	\otimes
Respiratory or Skin sensitisation	\otimes	STOT - Repeated Exposure	\otimes
Mutagenicity	\otimes	Aspiration Hazard	\otimes

Legend:

Data available but does not fill the criteria for classification
 Data required to make classification available

🚫 – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity					
Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
alcohols C9-11 ethoxylated	LC50	96	Fish	5-7mg/L	2
alcohols C9-11 ethoxylated	EC50	48	Crustacea	2.5mg/L	2
alcohols C9-11 ethoxylated	EC50	96	Algae or other aquatic plants	1.4mg/L	2
alcohols C9-11 ethoxylated	EC50	48	Crustacea	2.686mg/L	4
alcohols C9-11 ethoxylated	NOEC	720	Fish	0.11-0.28mg/L	2
diethylene glycol monobutyl ether	LC50	96	Fish	488.016mg/L	3
diethylene glycol monobutyl ether	EC50	48	Crustacea	>100mg/L	1
diethylene glycol monobutyl ether	EC50	96	Algae or other aquatic plants	>100mg/L	2

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Meguiar's G97, Carpet Cleaner (S7547); G9719

diethylene glycol monobutyl ether	EC50	96	Algae or other aquatic plants	>100mg/L	2
diethylene glycol monobutyl ether	NOEC	96	Algae or other aquatic plants	>=100mg/L	2
lauric diethanolamide	LC50	96	Fish	2.4mg/L	2
lauric diethanolamide	EC50	48	Crustacea	ca.3.2mg/L	2
lauric diethanolamide	EC50	96	Algae or other aquatic plants	23.276mg/L	3
lauric diethanolamide	EC50	384	Crustacea	2.678mg/L	3
lauric diethanolamide	NOEC	504	Crustacea	0.07mg/L	2
butane	LC50	96	Fish	5.862mg/L	3
butane	EC50	96	Algae or other aquatic plants	7.71mg/L	2
butane	EC50	384	Crustacea	1.416mg/L	3
propane	LC50	96	Fish	10.307mg/L	3
propane	EC50	96	Algae or other aquatic plants	7.71mg/L	2
propane	EC50	384	Crustacea	2.462mg/L	3
	Extracted from 1 IIICI	D Tovicity Data 2 Europa ECHA Br	agistered Substances - Ecotoxicological Inform	action Aquatia Taxiaity 2 EPIW	INI Suito V/2 12

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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

Toxic to aquatic organisms.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For surfactants:

Environmental fate:

Octanol/water partition coefficients cannot easily be determined for surfactants because one part of the molecule is hydrophilic and the other part is hydrophobic. Consequently they tend to accumulate at the interface and are not extracted into one or other of the liquid phases. As a result surfactants are expected to transfer slowly, for example, from water into the flesh of fish. During this process, readily biodegradable surfactants are expected to be metabolised rapidly during the process of bioaccumulation. This was emphasised by the OECD Expert Group stating that chemicals are not to be considered to show bioaccumulation potential if they are readily biodegradable.

Several anionic and nonionic surfactants have been investigated to evaluate their potential to bioconcentrate in fish. BCF values (BCF - bioconcentration factor) ranging from 1 to 350 were found. These are absolute maximum values, resulting from the radiolabelling technique used. In all these studies, substantial oxidative metabolism was found resulting in the highest radioactivity in the gall bladder. This indicates liver transformation of the parent compound and billary excretion of the metabolised compounds, so that "real" bioconcentration is overstated. After correction it can be expected that "real" parent BCF values are one order of magnitude less than those indicated above, i.e. "real" BCF is <100. Therefore the usual data used for classification by EU directives to determine whether a substance is "Dangerous to the "Environment" has little bearing on whether the use of the surfactant is environmentally acceptable.

Surfactant should be considered to be toxic (EC50 and LC50 values of < 10 mg/L) to aquatic species under conditions that allow contact of the chemicals with the organisms. The water solubility of the chemicals does not impact the toxicity except as it relates to the ability to conduct tests appropriately to obtain exposure of the test species. The acute aquatic toxicity generally is considered to be related to the effects of the surfactant properties on the organism and not to direct chemical toxicity

DO NOT discharge into sewer or waterways

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
diethylene glycol monobutyl ether	LOW	LOW
lauric diethanolamide	LOW	LOW
butane	LOW	LOW
propane	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
diethylene glycol monobutyl ether	LOW (BCF = 0.46)
lauric diethanolamide	LOW (LogKOW = 2.885)
butane	LOW (LogKOW = 2.89)
propane	LOW (LogKOW = 2.36)

Mobility in soil

Ingredient	Mobility
diethylene glycol monobutyl ether	LOW (KOC = 10)
lauric diethanolamide	LOW (KOC = 51.65)
butane	LOW (KOC = 43.79)
propane	LOW (KOC = 23.74)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging

g 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

disposal	 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. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. bON OT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Consult State Land Waste Management Authority for disposal. Discharge contents of damaged aerosol cans at an approved site. Allow small quantities to evaporate. DO NOT incinerate or puncture aerosol cans. Bury residues and emptied aerosol cans at an approved site.
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SECTION 14 TRANSPORT INFORMATION

Labels Required



 Marine Pollutant
 NO

 HAZCHEM
 Not Applicable

Land transport (ADG)

Land transport (ADG)		
UN number	50	
UN proper shipping name	ROSOLS	
Transport hazard class(es)	Class 2.1 Subrisk Not Applicable	
Packing group	ot Applicable	
Environmental hazard	ot Applicable	
Special precautions for user	Special provisions 63 190 277 327 344 Limited quantity 1000ml	

Air transport (ICAO-IATA / DGR)

UN number	1950		
UN proper shipping name	Aerosols, flammable; Aerosols, flammable (engine starting fluid)		
Transport hazard class(es)	ICAO/IATA Class 2.1 ICAO / IATA Subrisk Not Applicable ERG Code 10L		
Packing group	Not Applicable		
Environmental hazard	Not Applicable		
	Special provisions	A145A167A802; A1A145A167A802	
	Cargo Only Packing Instructions	203	
	Cargo Only Maximum Qty / Pack	150 kg	
Special precautions for user	Passenger and Cargo Packing Instructions	203; Forbidden	
	Passenger and Cargo Maximum Qty / Pack	75 kg; Forbidden	
	Passenger and Cargo Limited Quantity Packing Instructions	Y203; Forbidden	
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G; Forbidden	

Sea transport (IMDG-Code / GGVSee)

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	IMDG Class 2.1 IMDG Subrisk Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable

	Special precautions for user	EMS Number	F-D, S-U
Sp		Special provisions	63 190 277 327 344 959
		Limited Quantities	1000ml

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

ALCOHOLS C9-11 ETHOXYLATED(68439-46-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

DIETHYLENE GLYCOL MONOBUTYL ETHER(112-34-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

LAURIC DIETHANOLAMIDE(120-40-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

BUTANE(106-97-8.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS) International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

Australia Inventory of Chemical Substances (AICS)

PROPANE(74-98-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Notional Inventory

Australia Hazardous Substances Information System - Consolidated Lists

Stat

Australia Inventory of Chemical Substances (AICS) International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Υ
Canada - NDSL	N (diethylene glycol monobutyl ether; butane; propane; lauric diethanolamide; alcohols C9-11 ethoxylated)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	N (alcohols C9-11 ethoxylated)
Japan - ENCS	N (alcohols C9-11 ethoxylated)
Korea - KECI	Υ
New Zealand - NZIoC	Y
Philippines - PICCS	Υ
USA - TSCA	Υ
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)

SECTION 16 OTHER 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.

A list of reference resources used to assist the committee may be found at: www.chemwatch.net

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 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