Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
MEGUIAR'S M44 - HEAVY DUTY COLOUR RESTORER

SYNONYMS
"Manufacturer's Code: M44"

PRODUCT USE
Heavy duty colour restorer.

SUPPLIER
Company: Meguiar' s Australia Pty Ltd
Address:
35 Slough Business Park
Holker St, Silverwater
NSW, 2128
AUS
Telephone: +61 2 9737 9422
Telephone: 1800 804 182
Fax: +61 2 9737 9414

Section 2 - HAZARDS IDENTIFICATION

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

POISONS SCHEDULE
None

RISK
Harmful: danger of serious damage to health by prolonged exposure through inhalation.

SAFETY
Keep container in a well ventilated place.

Avoid exposure - obtain special instructions before use.
To clean the floor and all objects contaminated by this material, use water.
Keep container tightly closed.
Keep away from food, drink and animal feeding stuffs.
Take off immediately all contaminated clothing.
If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

continued...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
silica amorphous, diatomaceous earth	61790-53-2	5-15
tripoli	1317-95-9	8-10
silica amorphous	7631-86-9	5-10
distillates, petroleum, middle, hydrotreated	64742-46-7.	3-8
naphtha petroleum, isoparaffin, hydrotreated	64742-48-9.	2-8
glycerol	56-81-5	1-5
N- methyl- 2- pyrrolidone	872-50-4	1-5
diethylene glycol monoethyl ether	111-90-0	1-5
acrylic copolymer proprietary		1-5
conditioners proprietary		1-5

Section 4 - FIRST AID MEASURES

SWALLOWED

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

SKIN

If skin or hair contact occurs:
- 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.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

continued...

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

FIRE FIGHTING
Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.

DO NOT approach containers suspected to be hot.
If safe to do so, remove containers from path of fire.
Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD
- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive. Other combustion products include: carbon dioxide (CO2) and nitrogen oxides (NOx).

FIRE INCOMPATIBILITY
Avoid contamination with strong oxidising agents as ignition may result.

HAZCHEM: None

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS
Slippery when spilt.
- Remove all ignition sources.
- 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.

continued...

- 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.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:
silica amorphous 500 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:
silica amorphous 100 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:
silica amorphous 6 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:
silica amorphous 2 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Use good occupational work practice.
Wear personal protective equipment when handling.
Avoid contact with skin and eyes.
When handling, DO NOT eat, drink or smoke.
Avoid physical damage to containers.
Keep containers securely sealed when not in use.

SUITABLE CONTAINER

- Lined metal can, Lined metal pail/ can
- Plastic pail
- Polyliner drum
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid storage with oxidisers and acids.

continued...

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC
Australia Exposure Standards	silica amorphous, diatomaceous earth (Silica - Diatomaceous earth (uncalcined) (a))		10					
Australia Exposure Standards	silica amorphous (Fumed silica (respirable dust))		2					
Australia Exposure Standards	distillates, petroleum, middle, hydrotreated (Oil mist, refined mineral)		5					
Australia Exposure Standards	glycerol (Glycerin mist (a))		10					
Australia Exposure Standards	N- methyl- 2- pyrrolidone (1- Methyl- 2- pyrrolidone)	25	103	75	309			

The following materials had no OELs on our records

- naphtha petroleum, isoparaffin, hydrotreated: CAS:64742-48-9
- diethylene glycol monoethyl ether: CAS:111-90-0

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m3)	Revised IDLH Value (ppm)
tripoli	50	
silica amorphous	3, 000	

MATERIAL DATA

None assigned. Refer to individual constituents.

INGREDIENT DATA

SILICA AMORPHOUS, DIATOMACEOUS EARTH:

Amorphous crystalline silica shows little potential for producing adverse effects on the lung and the TLV-TWA reflects that of a particulate of low intrinsic toxicity. Mixtures of diatomaceous earth and crystalline silica

continued...

are treated in a different manner.

TRIPOLI:

The concentration of respirable dust for application of this limit is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative lognormal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e..generally less than 5 µm.

Tripoli is a microcrystalline form of quartz. The TLV-TWA is thought to be protective against the risk of pulmonary fibrosis in workers exposed at higher levels.

SILICA AMORPHOUS:

Not available

DISTILLATES, PETROLEUM, MIDDLE, HYDROTREATED:

Human exposure to oil mist alone has not been demonstrated to cause health effects except at levels above 5 mg/m3 (this applies to particulates sampled by a method that does not collect vapour). It is not advisable to apply this standard to oils containing unknown concentrations and types of additive.

NAPHTHA PETROLEUM, ISOPARAFFIN, HYDROTREATED:

No exposure limits set by NOHSC or ACGIH.
REL TWA: 400 ppm [EXXON]
for petroleum distillates:
CEL TWA: 500 ppm, 2000 mg/m3 (compare OSHA TWA).

GLYCEROL:

The mist is considered to be a nuisance particulate which appears to have little adverse effect on the lung and does not produce significant organic disease or toxic effects. OSHA concluded that this limit would protect the worker form kidney damage and perhaps, testicular effects.

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.

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.

DIETHYLENE GLYCOL MONOETHYL ETHER:

CEL TWA: 25 ppm, 140 mg/m3 (compare WEEL TWA)
Saturated vapour concentration: 170 ppm at 25 deg. C.
The material is generally not thought to be irritating to the skin but may cause a minor degree of eye irritation on direct contact. Acute toxic effects include central nervous system depression and adverse kidney effects. Liver effects are also reported on occasion.
The no-observable-effect levels (NOEL) from various studies range from 0.17 to 1.0 g/kg/day depending on the species tested. A 2-year, three generation study of rats produced kidney damage and changes in liver, spleen and intestine at 0.95 g/kg/day. The NOEL was 0.2 g/kg/day.

continued...

Extrapolation of the NOEL to man, with a 10-fold safety margin, suggests a permissible intake of 1.4 g/kg in man. Assuming similar intake by inhalation the AIHA has suggested a workplace environmental exposure level (WEEL) of 25 ppm. The in-air exposure value is based on a 70 kg man who inhales 10 m3 of air in one work shift. In contrast to several other glycol ethers DiEGEE is poorly absorbed from the skin.

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

Wear physical protective gloves, eg. leather.
Wear safety footwear.

OTHER

No special equipment needed when handling small quantities.
OTHERWISE:
- Overalls.
- Barrier cream.
- Eyewash 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 P-	-
1000	50	-	AK- AUS P-
5000	50	Airline *	-
5000	100	-	AK- 2 P-
10000	100	-	AK- 3 P-
	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.

continued...

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

A light brown viscous lotion with a sweet hydrocarbon odour; mixes with water.

PHYSICAL PROPERTIES

Liquid.
Mixes with water.

Molecular Weight: Not Applicable
Melting Range (°C): Not Available
Solubility in water (g/L): Miscible
pH (1% solution): Not Available
Volatile Component (%vol): 8 (VOC)
Relative Vapour Density (air=1): >1
Lower Explosive Limit (%): Not Applicable
Autoignition Temp (°C): Not Applicable
State: Liquid

Boiling Range (°C): 176 approx.
Specific Gravity (water=1): 1.03
pH (as supplied): 8.0
Vapour Pressure (kPa): <1.862 @ 21C
Evaporation Rate: <1
Flash Point (°C): >93
Upper Explosive Limit (%): Not Applicable
Decomposition Temp (°C): Not Available
Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Product is considered stable and hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Not considered to cause discomfort through normal use.
The liquid is mildly discomforting to the gastro-intestinal tract.
Ingestion may result in nausea, abdominal irritation, pain and vomiting.

EYE

The liquid is mildly discomforting to the eyes and is capable of causing a mild, temporary redness of the conjunctiva (similar to wind-burn), temporary impairment of vision and/ or other transient eye damage/ ulceration.

SKIN

The liquid is discomforting to the skin if contact is prolonged and is capable of causing skin reactions which may lead to dermatitis from repeated exposures over long periods.

continued...

INHALED
The vapour is discomforting to the upper respiratory tract and lungs if inhaled.
Inhalation of vapour may aggravate a pre-existing respiratory condition.

CHRONIC HEALTH EFFECTS
Principal routes of exposure are by accidental skin and eye contact and by inhalation of vapours especially at higher temperatures.
Prolonged or repeated skin contact may cause drying with cracking, irritation and possible 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.

SILICA AMORPHOUS, DIATOMACEOUS EARTH:
Not available. Refer to individual constituents.

TRIPOLI:
Not available. Refer to individual constituents.

SILICA AMORPHOUS:

TOXICITY	IRRITATION
Oral (rat) LD50: 3160 mg/kg	Skin (rabbit): non- irritating *
Dermal (rabbit) LD50: >5000 mg/kg *	Eye (rabbit): non- irritating *
Inhalation (rat) LC50: >0.139 mg/l/14h *	* [Grace]

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.
Reports indicate high/prolonged exposures to amorphous silicas induced lung fibrosis in experimental animals; in some experiments these effects were reversible. [PATTYS]

DISTILLATES, PETROLEUM, MIDDLE, HYDROTREATED:

TOXICITY	IRRITATION
typical for isoparaffinic hydrocarbons:	
Inhalation (rat) LC50: 3400 ppm/4H	None reported
	[EXXON]

Oral (rat) LD50
: >8000 mg/kg
[CCINFO-Shell]

NAPHTHA PETROLEUM, ISOPARAFFIN, HYDROTREATED:
No significant acute toxicological data identified in literature search.

GLYCEROL:

TOXICITY	IRRITATION
Oral (Rat) LD50: 12600 mg/kg	

The material may be irritating to the eye, with prolonged contact causing inflammation.
Repeated or prolonged exposure to irritants may produce conjunctivitis.
The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

continued...

N-METHYL-2-PYRROLIDONE:

TOXICITY	IRRITATION
Oral (rat) LD50: 4200 mg/kg*	Eye (rabbit): 100 mg - Moderate
Oral (rat) LD50: 3914 mg/kg	*[Manufacturer]
Dermal (rabbit) LD50: 8000 mg/kg	

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

DIETHYLENE GLYCOL MONOETHYL ETHER:

TOXICITY	IRRITATION
Oral (rat) LD50: 5500 mg/kg	Skin (rabbit): 500 mg/24h Mild
Dermal (rabbit) LD50: 8500 mg/kg	Eye (rabbit): 125 mg Mild
Eye (rabbit): 500 mg Moderate	

MATERIAL	CARCINOGEN	REPROTOXIN	SENSITISER	SKIN
silica amorphous	IARC:3			

CARCINOGEN
IARC: International Agency for Research on Cancer (IARC) Carcinogens: silica amorphous
Category: 3

Section 12 - ECOLOGICAL INFORMATION

DO NOT discharge into sewer or waterways.
Refer to data for ingredients, which follows:

SILICA AMORPHOUS:
Aquatic toxicity (Daphnia magna) 24h EC50: >1000 mg/l
Fish toxicity (Brachydanio rerio) 96h LC50: >10,000 mg/l [Grace]

NAPHTHA PETROLEUM, ISOPARAFFIN, HYDROTREATED:
DO NOT discharge into sewer or waterways.

GLYCEROL:

Algae IC50 (72hr.) (mg/l):	2900- 10000
log Kow (Sangster 1997):	- 1.76
log Pow (Verschueren 1983):	1.07692307
BOD5:	51%
COD:	95%
ThOD:	93%

DO NOT discharge into sewer or waterways.
log Kow: -2.66- -2.47
BOD 5 if unstated: 0.617-0.87,31-51%
COD: 1.16,82-95%
ThOD: 1.217-1.56
Completely biodegradable.
Fish LC50: >5000 mg/l
Algae IC50: >2900 mg/l
Bacteria EC50: .10000 mg/l (Pseudomonas putida)

N-METHYL-2-PYRROLIDONE:
DO NOT discharge into sewer or waterways.

continued...

log Kow: -0.44-0.1

DIETHYLENE GLYCOL MONOETHYL ETHER:

Hazardous Air Pollutant:	Yes
Fish LC50 (96hr.) (mg/l):	10000
BCF<100:	- 0.34
log Kow (Prager 1995):	- 0.15
log Pow (Verschueren 1983):	0.84946236
BOD5:	0.2
COD:	1.85
Half- life Soil - High (hours):	672
Half- life Soil - Low (hours):	168
Half- life Air - High (hours):	22.3
Half- life Air - Low (hours):	2.23
Half- life Surface water - High (hours):	672
Half- life Surface water - Low (hours):	168
Half- life Ground water - High (hours):	1344
Half- life Ground water - Low (hours):	336
Aqueous biodegradation - Aerobic - High (hours):	672
Aqueous biodegradation - Aerobic - Low (hours):	168
Aqueous biodegradation - Anaerobic - High (hours):	2688
Aqueous biodegradation - Anaerobic - Low (hours):	672
Photooxidation half- life air - High (hours):	22.3
Photooxidation half- life air - Low (hours):	2.23

log Kow: -0.79- -0.15
Koc: 20
Henry's atm m³ /mol: 8.63E-10
BOD 5 if unstated: 0.20-0.58
COD: 1.85
Log BCF: -0.34
Toxicity Fish: LD50(24)2700mg/L
Toxicity invertebrate: cell mult. inhib.73-420mg/L
Bioacculmulation: not sig
Effects on algae and plankton: cell mult. inhib. algae 53-1000mg/L
Degradation Biological: sig
processes Abiotic: nohydrol&photol,RxnOH*

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

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

continued...

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS

silica amorphous, diatomaceous earth (CAS: 61790-53-2) is found on the following regulatory lists;
Australia - Australia New Zealand Food Standards Code - Processing Aids - Generally permitted
Australia Exposure Standards
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
OECD Representative List of High Production Volume (HPV) Chemicals

tripoli (CAS: 1317-95-9) is found on the following regulatory lists;
Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)

silica amorphous (CAS: 7631-86-9) is found on the following regulatory lists;
Australia - Australia New Zealand Food Standards Code - Food Additives - Schedule 1 Permitted uses of food additives by food type
Australia Exposure Standards
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP
International Agency for Research on Cancer (IARC) Carcinogens
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals
silica amorphous (CAS: 112945-52-5) is found on the following regulatory lists;
Australia High Volume Industrial Chemical List (HVICL)
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

distillates, petroleum, middle, hydrotreated (CAS: 64742-46-7) is found on the following regulatory lists;
Australia Exposure Standards
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
Australia Poisons Schedule
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

naphtha petroleum, isoparaffin, hydrotreated (CAS: 64742-48-9) is found on the following regulatory lists;
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
Australia Poisons Schedule
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

glycerol (CAS: 56-81-5) is found on the following regulatory lists;
Australia Exposure Standards

continued...

Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances
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) is found on the following regulatory lists;
Australia Exposure Standards
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6
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

diethylene glycol monoethyl ether (CAS: 111-90-0) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

No data available for N-methyl-2-pyrrolidone as CAS: 26138-58-9.

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
silica amorphous	7631- 86- 9, 112945- 52- 5
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 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

continued...

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).

EXPOSURE STANDARD FOR MIXTURES

"Worst Case" computer-aided prediction of vapour components/concentrations:
Composite Exposure Standard for Mixture (TWA) (mg/m3): 140 mg/m³
If the breathing zone concentration of ANY of the components listed below is exceeded,
"Worst Case" considerations deem the individual to be overexposed.
Component Breathing Zone ppm Breathing Zone mg/m3 Mixture Conc: (%).

Component	Breathing zone (ppm)	Breathing Zone (mg/m³)	Mixture Conc (%)
diethylene glycol monoethyl ether	25.00	140.0000	5.0

Operations which produce a spray/mist or fume/dust, introduce particulates to the
breathing zone.
If the breathing zone concentration of ANY of the components listed below is exceeded,
"Worst Case" considerations deem the individual to be overexposed.
At the "Composite Exposure Standard for Mixture" (TWA) (mg/m3): 5 mg/m³

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