

MAX GS738 FUEL CELL

Melbourne Nails Australia P/L

Chemwatch: **4918-6** Version No: **4.1.1.1**

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 4

Issue Date: 01/01/2013 Print Date: 15/10/2014 Initial Date: Not Available S.GHS.AUS.EN

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

Product Identifier

Product name	MAX GS738 FUEL CELL
Chemical Name	Not Applicable
Proper shipping name	PETROLEUM GASES, LIQUEFIED (see 3.2.5 for relevant [AUST.] entries)
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Fuel cell.

Details of the manufacturer/importer

Registered company name	Melbourne Nails Australia P/L	
Address	65 Banbury Road 3073 Victoria Australia	
Telephone	+61394621907	
Fax	Not Available	
Website	www.melbnails.com.au/	
Email	sales@melbnails.com.au	

Emergency telephone number

Association / Organisation	Melbourne Nails Australia
Emergency telephone numbers	+61394605322
Other emergency telephone numbers	+61394605322

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

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

Poisons Schedule	Not Applicable
GHS Classification [1]	Flammable Gas Category 1, Gas under Pressure (Liquefied gas)
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

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Hazard statement(s)

remely flammable gas	
Contains gas under pressure; may explode if heated	
Risk of explosion if heated under confinement	

Precautionary statement(s): Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautionary statement(s): Response

P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.	
P381	Eliminate all ignition sources if safe to do so.	

Precautionary statement(s): Storage

P410+P403 Protect from sunlight. Store in a well-ventilated place.

Precautionary statement(s): Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
75-28-5	76	<u>iso-butane</u>
74-98-6	24	propane

SECTION 4 FIRST AID MEASURES

Description of first aid measures

If product comes in contact with eyes remove the patient from gas source or contaminated area. Take the patient to the nearest eye wash, shower or other source of clean water. Open the evelid(s) wide to allow the material to evaporate. ▶ Gently rinse the affected eye(s) with clean, cool water for at least 15 minutes. Have the patient lie or sit down and tilt the head back. Hold the eyelid(s) open and pour water slowly over the eveball(s) at the inner corners, letting the water run out of the outer corners, The patient may be in great pain and wish to keep the eyes closed. It is important that the material is rinsed from the eyes to prevent further damage Ensure that the patient looks up, and side to side as the eye is rinsed in order to better reach all parts of the eye(s) **Eve Contact** Transport to hospital or doctor. Even when no pain persists and vision is good, a doctor should examine the eve as delayed damage may occur. ▶ If the patient cannot tolerate light, protect the eyes with a clean, loosely tied bandage. Ensure verbal communication and physical contact with the patient. DO NOT allow the patient to rub the eyes DO NOT allow the patient to tightly shut the eves DO NOT introduce oil or ointment into the eve(s) without medical advice DO NOT use hot or tepid water. In case of cold burns (frost-bite): ▶ Move casualty into warmth before thawing the affected part; if feet are affected carry if possible ▶ Bathe the affected area immediately in luke-warm water (not more than 35 deg C) for 10 to 15 minutes, immersing if possible and without rubbing DO NOT apply hot water or radiant he Skin Contact ▶ Apply a clean, dry, light dressing of "fluffed-up" dry gauze bandage If a limb is involved, raise and support this to reduce swelling ▶ If an adult is involved and where intense pain occurs provide pain killers such as paracetomol Transport to hospital, or doctor ▶ Subsequent blackening of the exposed tissue indicates potential of necrosis, which may require amputation. • 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. Inhalation Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if

▶ Give water

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do **NOT** induce vomiting

necessary.

- 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.

▶ Transport to hospital, or doctor.

- ▶ 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.
- Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically

For frost-bite caused by liquefied petroleum gas:

Ingestion

- If part has not thawed, place in warm water bath (41-46 C) for 15-20 minutes, until the skin turns pink or red.
- ▶ Analgesia may be necessary while thawing.
- If there has been a massive exposure, the general body temperature must be depressed, and the patient must be immediately rewarmed by whole-body immersion, in a bath at the above temperature.

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- Shock may occur during rewarming.
- · Administer tetanus toxoid booster after hospitalization.
- Prophylactic antibiotics may be useful.
- The patient may require anticoagulants and oxygen.

[Shell Australia 22/12/87]

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

Dry chemical powder.

Carbon dioxide

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

Advice for firefighters

Fire Fighting

Alert Fire Brigade and tell them location and nature of hazard.

- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course

Fire/Explosion Hazard

HIGHLY FLAMMABLE: will be easily ignited by heat, sparks or flames.

- ▶ Will form explosive mixtures with air
- Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/or vapour concentration.
- Vapours may travel to source of ignition and flash back.
- Containers may explode when heated Ruptured cylinders may rocket
- ▶ Fire may produce irritating, poisonous or corrosive gases.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills

- Avoid breathing vapour and any contact with liquid or gas. Protective equipment including respirator should be used.
- DO NOT enter confined spaces where gas may have accumulated
- Shut off all sources of possible ignition and increase ventilation.

Major Spills

- Clear area of all unprotected personnel and move upwind.
- Alert Emergency Authority and advise them of the location and nature of hazard.
- May be violently or explosively reactive.
- ▶ Wear full body clothing with breathing apparatus.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- Consider use in closed pressurised systems, fitted with temperature, pressure and safety relief valves which are vented for safe dispersal.
- The tubing network design connecting gas cylinders to the delivery system should include appropriate pressure indicators and vacuum or suction lines.
- Fully-welded types of pressure gauges, where the bourdon tube sensing element is welded to the gauge body, are recommended.
- ▶ Before connecting gas cylinders, ensure manifold is mechanically secure and does not containing another gas

If possible, use outdoors.

Other information

- Store in original containers in approved flame-proof area.
- as where vapours may be trapped.
- ▶ No smoking, naked lights, heat or ignition sources.
- ▶ Keep containers securely sealed.

Conditions for safe storage, including any incompatibilities

Suitable container

- Cylinder:
- ▶ Ensure the use of equipment rated for cylinder pressure. ▶ Ensure the use of compatible materials of construction.
- Valve protection cap to be in place until cylinder is secured, connected.
- Cylinder must be properly secured either in use or in storage.

Storage incompatibility

Avoid storage with oxidisers

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

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	propane	Propane	Not Available	Not Available	Not Available	Not Available

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Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
MAX GS738 FUEL CELL	Not Available	Not Available	Not Available	Not Available
Ingredient	Original IDLH		Revised IDLH	
	Original IDEIT		NOVIDOG IDEN	
iso-butane	Not Available		Not Available	

Exposure controls

Air supplied breathing apparatus. In confined spaces, the following protective equipment should be worn: Appropriate engineering Local exhaust ventilation may be required for safe working, i.e. to keep exposures below required standards, otherwise PPE is required. controls Use in a well-ventilated area Personal protection Safety glasses with side shields Chemical goggles Eve and face protection ▶ Full face shield may be required for supplementary but never for primary protection of eyes. 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. Skin protection See Hand protection below Wear chemical protective gloves, e.g. PVC. Hands/feet protection Wear safety footwear. ▶ When handling sealed and suitably insulated cylinders wear cloth or leather gloves. **Body protection** See Other protection below ▶ Protective overalls, closely fitted at neck and wrist. Eye-wash unit IN CONFINED SPACES: Other protection Non-sparking protective boots Static-free clothing. ▶ Ensure availability of lifeline.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

Thermal hazards

The effect(s) of the following substance(s) are taken into account in the computergenerated selection:

Not Available

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Material CPI

- * CPI Chemwatch Performance Index
- A: Best Selection
- B: Satisfactory; may degrade after 4 hours continuous immersion
- C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Type GAX 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 10 x ES	GAX-AUS	-	GAX-PAPR-AUS / Class 1
up to 50 x ES	-	GAX-AUS / Class 1	-
up to 100 x ES	-	GAX-2	GAX-PAPR-2 ^

^ - 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)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Packed as liquid under pressure and remains liquid only under pressure. Sudden release of pressure or leakage may result in rapid vapourisation with generation of large volumes of gas.		
Physical state	Liquified Gas	Relative density (Water = 1)	0.5501
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature	Not Applicable
Melting point / freezing point (°C)	-102.8	Viscosity (cSt)	Not Applicable

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	1		1
Initial boiling point and boiling range (°C)	-6.5	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	-68	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available
Upper Explosive Limit (%)	9.5	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.8	Volatile Component (%vol)	100
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Partly Miscible	pH as a solution(1%)	Not Applicable

VOC g/L

Not Available

SECTION 10 STABILITY AND REACTIVITY

>1.5

Vapour density (Air = 1)

Reactivity	See section 7
Chemical stability	Hazardous polymerisation will not occur. Stable under normal storage conditions Unstable in the presence of incompatible materials Presence of oxygen. Presence of an ignition source Presence of heat source
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	Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure. Symptoms of asphyxia (suffocation) may include headache, dizziness, shortness of breath, muscular weakness, drowsiness and ringing in the ears.
Ingestion	Considered an unlikely route of entry in commercial/industrial environments
Skin Contact	Vapourising liquid causes rapid cooling and contact may cause cold burns, frostbite, even through normal gloves. Frozen skin tissues are painless and appear waxy and yellow. Signs and symptoms of frost-bite may include "pins and needles", paleness followed by numbness, a hardening an stiffening of the skin, a progression of colour changes in the affected area, (first white, then mottled and blue and eventually black; on recovery, red, hot, painful and blistered).
Eye	The gas is non-irritating to the eyes.
Chronic	Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anaemia and degenerative changes in the liver and kidney. Chronic exposure by petroleum workers, to the lighter hydrocarbons, has been associated with visual disturbances, damage to the central nervous system, peripheral neuropathies (including numbness and paraesthesias), psychological and neurophysiological deficits, bone marrow toxicities (including hypoplasia possibly due to benzene) and hepatic and renal involvement. Chronic dermal exposure to petroleum hydrocarbons may result in defatting which produces localised dermatoses. Surface cracking and erosion may also increase susceptibility to infection by microorganisms.

MAX GS738 FUEL CELL	TOXICITY Not Available	IRRITATION Not Available
iso-butane propane	TOXICITY Inhalation (Mouse) LC50: 52 mg/kg/1h *	IRRITATION
	Not Available	Not Available
	TOXICITY Not Available	IRRITATION Not Available

Not available. Refer to individual constituents.

ISO-BUTANE	*WISER		
PROPANE	No significant acute toxicological data identified in literature search.		
Acute Toxicity	0	Carcinogenicity	0
Skin Irritation/Corrosion	0	Reproductivity	0
Serious Eye Damage/Irritation	0	STOT - Single Exposure	0

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Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

Legend:

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

Data Not Available to make classification

CMR STATUS

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
iso-butane	LOW	LOW
propane	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
iso-butane	LOW (BCF = 26.62)
propane	LOW (BCF = 13.1)

Mobility in soil

Ingredient	Mobility
iso-butane	LOW (KOC = 35.04)
propane	LOW (KOC = 23.74)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal

- ▶ Evaporate or incinerate residue at an approved site.
- ▶ Return empty containers to supplier.
- ▶ Ensure damaged or non-returnable cylinders are gas-free before disposal.

SECTION 14 TRANSPORT INFORMATION

Labels Required



Land transport (ADG)

UN number	1075	
Packing group	Not Applicable	
UN proper shipping name	PETROLEUM GASES, LIQUEFIED (see 3.2.5 for relevant [AUST.] entries)	
Environmental hazard	No relevant data	
Transport hazard class(es)	Class 2.1 Subrisk Not Applicable	
Special precautions for user	Special provisions AU03 Limited quantity 0	

Air transport (ICAO-IATA / DGR)

UN number	1075
Packing group	Not Applicable
UN proper shipping name	Petroleum gases, liquefied
Environmental hazard	No relevant data

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	ICAO/IATA Class 2.1	
Transport hazard class(es)	ICAO / IATA Subrisk Not Applicable	
	ERG Code 10L	
Special precautions for user	Special provisions	 A1
	Cargo Only Packing Instructions	200
	Cargo Only Maximum Qty / Pack	150 kg
	Passenger and Cargo Packing Instructions	Forbidden
	Passenger and Cargo Maximum Qty / Pack	Forbidden
	Passenger and Cargo Limited Quantity Packing Instructions	Forbidden
	Passenger and Cargo Limited Maximum Qty / Pack	Forbidden

Sea transport (IMDG-Code / GGVSee)

UN number	1075		
Packing group	Not Applicable		
UN proper shipping name	PETROLEUM GASES, LIQUEFIED		
Environmental hazard	No relevant data		
Transport hazard class(es)	IMDG Class 2.1 IMDG Subrisk Not Applicable		
Special precautions for user	EMS Number F-D , S-U Special provisions Not Applicable Limited Quantities 0		

SECTION 15 REGULATORY INFORMATION

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

iso-butane(75-28-5) is found on the following regulatory lists	"Australia Inventory of Chemical Substances (AICS)","Australia Hazardous Substances Information System - Consolidated Lists"
propane(74-98-6) is found on the following regulatory lists	"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"

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/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.

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