

## FASTENING TOOLS FOR THE PROFESSIONAL

**MATERIAL SAFETY DATA SHEET****Gas Fuel Cell – 40g/80ml**

MANUFACTURER'S NAME: Tacwise Group Plc

**01 COMPOSITION/INFORMATION ON INGREDIENTS**

<b>CHEMICAL NAME:</b>	Propane	Butane
<b>CONTENT %:</b>	20-40	60-80
<b>MAK-value:</b>	1000ppm (1800mg/m <sup>3</sup> )	1000ppm (2350mg/m <sup>3</sup> )
<b>BAT-value:</b>	CAS 74-98-6	CAS 106-97-8

**02 HAZARDS IDENTIFICATION**

**TO PEOPLE:** See point 14  
Inhalation of fumes may have narcotic effect

**TO THE ENVIRONMENT:** See point 11

**03 FIRST AID MEASURES**

**INHALATION:** Supply person with fresh air and consult doctor according to symptoms. Keep Data Sheet available.

**EYE CONTACT:** Wash thoroughly for several minutes using ample water. Seek medical help if necessary.

**SKIN CONTACT:** Wash thoroughly using ample water, remove contaminated clothing immediately. If skin irritation occurs (redness, etc) consult doctor.

**INGESTION:** Call doctor immediately, have Data Sheet available.

**04 FIRE-FIGHTING MEASURES**

**SUITABLE EXTINGUISHER MEDIA:**  
Dry extinguisher  
CO<sub>2</sub>

**UNSUITABLE FIRE EXTINGUISHER FOR REASONS OF SAFETY:**  
Water

**SPECIAL DANGERS CAUSED BY THE SUBSTANCE OR PREPARATION ITSELF, RESULTS OF FIRE/BURNING, OR ENSURING GASES:**  
In case of fire/following can develop:  
Danger of explosion by prolonged heating.  
Gases hazardous to health.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING:**  
Protective respirator with independent air supply, according to size of fire. Full protection if necessary.

**05 ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS:** Remove possible causes of ignition, do not smoke.  
Ensure sufficient supply of air.  
Avoid inhaling.

**ENVIRONMENTAL MEASURES:** If leakage occurs, dam up.

**PROCEDURE FOR CLEANING UP:** If spray or gas escapes, ensure ample fresh air is

available.

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- 06**     **HANDLING AND STORAGE**  
**TIPS FOR SAFE HANDLING:**                    Observe directions on label  
Keep away from sources of ignition, do not smoke  
Ensure good ventilation
- REQUIREMENTS FOR STORAGE ROOMS AND CONTAINERS:**  
Not to be stored in gangways or stairwells  
Do not store with flammable or self-igniting materials  
Observe regulations for keeping separated  
Only store products unopened, in original packing  
Observe special regulations for aerosols
- PROHIBITIONS FOR JOINT STORAGE:**  
Observe TRGS 514  
Observe TRGS 515  
Observe TRGS 300
- SPECIAL STORAGE CONDITIONS:**  
See point 9  
Keep protected from direct sunlight and temperatures  
over 50°C

- 07**     **EXPOSURE CONTROLS/PERSONAL PROTECTION**
- |                                 |                                      |                     |
|---------------------------------|--------------------------------------|---------------------|
| <b>CHEMICAL NAME:</b>           | Propane                              | Butane              |
| <b>CONTENT %:</b>               | 20-40                                | 60-80               |
| <b>MAK-value:</b>               | 1000ppm (1800mg/m3)                  | 1000ppm (2350mg/m3) |
| <b>RESPIRATORY PROTECTIONS:</b> | Only if MAK-value is exceeded (AX)   |                     |
| <b>HAND PROTECTION:</b>         | Chemical resistant protective gloves |                     |
| <b>EYE PROTECTION:</b>          | Protective goggles                   |                     |
| <b>BODY PROTECTION:</b>         | Protective working garments          |                     |

- 08**     **PHYSICAL AND CHEMICAL PROPERTIES**
- |                               |                                     |  |
|-------------------------------|-------------------------------------|--|
| <b>APPEARANCE/ODOUR:</b>      | Physical state                      | Aerosol  |
|                               | Odour                               | n.v.   |
|                               | Colour                              | n.v.   |
|                               | PH-value undiluted                  | n.v.   |
|                               | Flammability (solid/gas)            | Yes  |
|                               | <b>DANGER OF EXPLOSION (VOL %):</b> | Minimum limit of explosion 1.8 (main substrates)<br>Maximum limit of explosion 9.5 (main substrates) |
| <b>FURTHER SPECIFICATION:</b> | Vapour pressure: ≤18 bar/50 °C      |  |

- 09**     **STABILITY AND REACTIVITY**
- CONDITIONS TO AVOID:**                    See point 6  
Pressure increase will lead to danger of bursting  
Heating, open flame, ignition sources
- MATERIALS TO AVOID:**                    See point 6  
Avoid contact with oxidizing agents  
Avoid contact with other chemicals
- HAZARDOUS DECOMPOSITION PRODUCTS:**  
See point 4

- 10**     **TOXICOLOGICAL INFORMATION**
- ACUTE TOXICITY**
- |                                     |      |
|-------------------------------------|------|
| Ingestion, LD50 rat oral (mg/kg)    | n.v. |
| Ingestion, LD50 rat inhal (mg/l/4h) | n.v. |

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		Skin contact, LD50 rat dermal(mg/kg)	n.v.
<b>CHRONIC EFFECTS</b>		Eye contact	n.v.
		Sensitization	n.g.
		Carcinogenicity	n.g.
		Mutagenicity	n.g.
		Reproductive toxicity	n.g.
<b>FURTHER INFORMATION</b>		Narcosis	n.g.
			n.v.
<b>11</b>	<b><u>ECOLOGICAL INFORMATION</u></b>		
	<b>ACUTE TOXICITY</b>	Water hazard class	0
		Self classification acc. to VCI	VwVwS (German regulation)
		Degradability	n.v.
		Aquatic toxicity	n.v.
		Ecological toxicity	n.v.
<b>12</b>	<b><u>DISPOSAL CONSIDERATIONS</u></b>		
	<b>FOR THE MATERIAL/PREPARATION/RESIDUE</b>	EEC disposal code no. 20 01 22	
		Recommendation:	
		Pay attention to local and national official regulations	
		E.g. dispose at suitable refuse site	
	<b>FOR CONTAMINATED PACKING MATERIAL</b>	See point 12	
		Pay attention to local and national official regulations	
<b>13</b>	<b><u>TRANSPORT INFORMATION</u></b>		
	<b>GENERAL STATEMENTS</b>	UN-Number	1950
		Road/Rail-transport (GGVS/ADR/GGVE/RID)	
		GGVS/ADR	2/10b/2 (class/number)
		GGVE/RID	2/10b/2 (class/number)
		1950 aerosole	
	<b>TRANSPORT BY SEA</b>	GGVE See/IMDG-code	9/9022/II (class/code/packing group)
		UN-Number	1950
		EmS-Number	2-13
		MFAG-Number	(620)
	<b>TRANSPORT BY AIR</b>	Marine Pollutant	n.a.
		ICAO/ IATA-DGR	2.1/-/II (class/secondary danger/packing group)
	<b>ADDITIONAL INFORMATION</b>	Minimum amount regulations have not been taken into account	
<b>14</b>	<b><u>REGULATORY INFORMATION</u></b>		
		Classification according to Dangerous product Regulations incl. EEC Guidelines 967/548/EEC and 88/379/EEC)	

**FASTENING TOOLS FOR THE PROFESSIONAL**

	<b>SYMBOL: F+</b>	
	<b>R-PHRASES</b>	R12 Extremely flammable R18 In use, may form flammable/explosive vapour-air mixture
	<b>S-PHRASES</b>	S9 Keep container in a well ventilated place S23 Do not breathe gas/fumes/vapour/spray S51 Use only in well ventilated areas
	<b>ADDITIONS</b>	Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C Do not pierce or burn, even after use Do not spray on naked flame or any incandescent material Keep away from sources of ignition-no smoking Keep out of reach of children
15	<b><u>OTHER INFORMATION</u></b>	These details refer to the product as it is delivered
16	<b><u>LEGEND</u></b>	
	n.a	Not applicable
	n.v	Not available
	n.g	Not checked
	<b>MAK</b>	Maximum concentration per work place liquids
	<b>WGK3</b>	Water Hazard Class
	<b>WGK2</b>	Very hazardous to water
	<b>WGK1</b>	Slightly hazardous to water
	<b>WGK0</b>	Generally not hazardous to water

The statements made here should describe the product with regard to the necessary safety precautions. They are not meant to guarantee definite characteristics, but they are based on our present up to date knowledge.