



### 1.0 Identification of the substance / preparation and the company / undertaking

**1.1 Product Name**  
Pulsa Fuel Cells 700E, 700P, 800E and 800P+

**1.2 Supplier**  
ITW Construction Products  
Fleming Way  
Crawley  
West Sussex RH10 9DP  
England

**1.3 Emergency Telephone Number**  
44 (0) 1293 523372

### 2.0 Composition / information on ingredients

**2.1 Chemical characteristics**  
Aerosol, propellant: propane/butane

**2.2 Chemical Name / Content % / Symbols / R-Phrases / CAS No. / EINECS, eilincs**  
Butane / 50-90 / F+ / R12 / 106-97-8 / 203-448-7  
Propane / 10-20 / F+ / R12 / 115-07-1 / 204-062-1

### 3.0 Hazards identification

**3.1 Most important hazards**  
In use may form flammable/explosive vapour-air mixtures.

**3.2 Specific hazards**  
Inhalation of vapour may have narcotising effect.

### 4.0 First aid measures

**4.1 General advice**  
Avoid contact with skin and eyes.

**4.2 Inhalation**  
Move to fresh air. Seek medical advice if necessary.

**4.3 Skin contact**  
Rinse thoroughly with plenty of water, remove contaminated clothes.  
In case of skin irritation seek medical advice.

**4.4 Eye contact**  
Rinse immediately with plenty of water and seek medical advice.

### 5.0 Fire fighting measures

**5.1 Suitable extinguishing media**  
Dry extinguisher, CO<sub>2</sub>, water jet spray

**5.2 Extinguisher not to be used**

**5.3 Risks arising from combustion**  
In case of fire, the following can develop:  
Gases hazardous to health.  
Decomposition products.  
Danger of explosion by prolonged heating.  
Dangerous vapours heavier than air.

**5.4 Special protective equipment for fire fighters**  
Use protection for the respiratory tract.

### 6.0 Accidental release measures

**6.1 Personal precautions**  
Remove ignition sources, do not smoke, ventilate rooms, avoid inhaling.

**6.2 Environmental precautions**  
If large amounts leak, try to stop it.

**6.3 Methods for cleaning up leakage of aerosol/gas**  
Provide appropriate ventilation.

### 7.0 Handling and storage

**7.1 Handling**  
Observe directions on label and instructions for use.  
Keep away from sources of ignition - do not smoke.  
Ensure good ventilation.

Handle only when appropriate ventilation system is activated.  
Take precautions against electrostatic charges.

**7.2 Storage for storage rooms and containers**  
Do not store in gangways or stairwells.  
Do not store with flammable or self-igniting materials.  
Storage rooms must be well ventilated, keep away from open fire and other ignition sources.  
Only store products unopened, in original packing.  
Observe special regulations for aerosols.

**7.3 Special storage conditions**  
Protect from sunlight and do not expose to temperatures exceeding 50°C.

### 8.0 Exposure controls / personal protection

**Chemical Name / Content % / OES, MEL, MAK, TRK / BMGV, BAT**  
Butane / 50-90 / 1000ppm (2400 mg/m<sup>3</sup>)

**Respiratory protection**

**Respiratory protection**  
On exceeding OES-MEL-MAK-value gas mask filter AX (EN 141)

**Hand protection**  
Recommended, protective hand cream recommended.

**Eye protection**  
Tight fitting protective goggles with side protection (EN 166).

**Skin and body protection**  
Protective working garments (e.g. safety shoes EN 344, long-sleeved protective working garments).

### 9.0 Physical and chemical properties

<b>State of aggregation</b>	Aerosol
<b>Smell</b>	Characteristic
<b>Boiling point</b>	-48 to -1°C (butane)
<b>Flash point</b>	ca. -80°C (propene)
<b>Flammability</b>	Yes
<b>Vapour pressure</b>	7 bar / 20°C, 11.6 bar / 50°C
<b>Minimum explosion limit</b>	1.5 - 2.0 (propene)
<b>Maximum explosion limit</b>	8.5 - 11.7 (propene)
<b>Water solubility</b>	poorly

### 10.0 Stability and reactivity

**10.1 Conditions to avoid**  
Refer to section 7  
Rise of pressure leads to danger of burst, open fire, ignition sources.

**10.2 Materials to avoid**  
Refer to section 7  
Avoid contact with oxidising and other chemicals.  
Dinitrogen monoxide, fluorine, hydrogen chloride.

**10.3 Hazardous decomposition products**  
Refer to section 5

### 11.0 Toxicological information

No data available, inhalation of vapour may have narcotising effect.

### 12.0 Ecological information

**Class of water damaging**  
1 - slightly hazardous to water.

**Degradability**  
No data.

### 13.0 Disposal considerations

**13.1 For the material / preparation / residue**  
EC disposal code no:



The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances.

16 05 04 gases in pressure containers (included halons) containing dangerous substances.

21 01 99 other fractions not otherwise specified.

Recommendation:

Pay attention to local and national regulations e.g dispose at suitable refuse site.

- 13.2 For contaminated packaging materials**  
See point 13.1. According to local and national regulations.  
Pay attention to local and national regulations.

## 14.0 Transport information

### General statements

UN-Number 1950

### Road / rail transport (ADR / RID)

Class / packing-group: 2 / -

1950 AEROSOLS

Classification code: 5F

LQ 2

### Marine transport

IMDG-code / 2 - (class / packing-group)

EmS-number 2-1

Marine Pollutant n/a

AEROSOLS

Spit Fuel Cell printed date 31.01.03

### Air transport

IATA 2.1 / - / - (class / secondary danger / packing-group)

Aerosols, flammable

### Additional information

Danger code and packing code on request.

## 15.0 Regulatory information

- 15.1 Labelling**  
Classification according to Dangerous Product Regulations including EEC Guidelines (67/548/EEC and 88/379/EEC).

- 15.2 Name of product**  
Pulsa Fuel Cells

- 15.3 Contains**  
Propane, Butane

- 15.4 Symbol(s)**
- R - phrase(s)**
- R12 Extremely flammable.
- R18 In use, may form flammable explosive vapour mixtures.



- S - phrase(s)**
- S9 Keep containers in a well ventilated place.
- S23 Do not breathe aerosols.
- S51 Use only in well ventilated areas.

### Appendixes

Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C.

Do not pierce or burn, ever after use.

Do not spray on a naked flame or any incandescent material.

Keep away from ignition sources - no smoking.

Keep out of the reach of children.

## 16.0 Other information

These statements refer to the product in the state of being delivered.

Storage classification according to VCI: 2B

Revised: 1-16

The above mentioned statements are based on our knowledge and information at the date stated on this Safety Data Sheet. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

### Legend

n/a = not applicable

n.v. / kDv = not available

n.g. = not checked

OES = occupational exposure standard

MEL = maximum exposure limit

BMGV = biological monitoring guidance value

MAK = maximum concentration for work place

(Germany) / TRK = technical guidance concentration

(Germany) / BAT = biological tolerance for work place

(Germany) / WGK = water hazard class - WK 3 = very hazardous,

WK 2 = hazardous, WK 1 = slightly hazardous to water

VOC-CH = volatile organic compounds (VOCV - Switzerland)

AOX = absorbable organic halogen compounds

VwVwS = administrative order relating to substances hazardous to water

(Germany)

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. No responsibility.

This safety data sheet has been produced according to EEC Regulations 91/155/EEC

Further advice and assistance can be obtained from the ITW Construction Products Technical Helpline:

UK Freephone: 0800 731 4924  
ROI Freephone: 1 800 882 388

