

Safety Data Sheet

Fuel cell SERIES-I, Fuel Cell IM90i EU (010811), Fuel cell IM90i UK (057631), Fuel cell Pulsa 800 (014605), Fuel cell IM350 (011780) EU

Issued: 8/20/2023

Version: 1.0.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: Fuel cell SERIES-I, Fuel Cell IM90i EU (010811), Fuel cell IM90i UK (057631), Fuel cell Pulsa 800 (014605), Fuel cell IM350 (011780) EU

Unique Formula Identifier (UFI): F300-W0XG-900S-GWSX

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

Recommended uses: Process chemical.

1.3. Details of the supplier of the safety data sheet

Supplier

Company: ITW Construction Products ApS
Address: Gl. Banegårdsvej 25
Zip code: 5500
City: Middelfart
Country: DENMARK
E-mail: post@itwbyg.dk
Phone: +45 63 41 10 10

1.4. Emergency Telephone Number

+45 63 41 10 10 The emergency telephone is open between 8 a.m. and 4 p.m. on workdays.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: Aerosol 1;H222
Aerosol 1;H229

Most serious harmful effects: Extremely flammable aerosol. Pressurised container: May burst if heated.

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2.2. Label elements

Pictograms



Signal word: Danger

Hazard Statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.

Precautionary statements

P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

2.3. Other hazards

The product does not contain any PBT or vPvB substances.
Endocrine disrupting properties: None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No./ EC No./ REACH Reg. No.	Concentration	Notes	CLP-classification
but-1-ene	106-98-9 203-449-2 01-2119456615-34	70 - 100 %		Flam. Gas 1A;H220 Press. Gas liq. gas;H280
propene	115-07-1 204-062-1 01-2119447103-50	20 - 30 %		Flam. Gas 1A;H220 Press. Gas liq. gas;H280

Please see section 16 for the full text of H- / EUH-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Seek fresh air. Seek medical advice in case of persistent discomfort.

Ingestion: Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of persistent discomfort.

Skin contact: Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.

Eye contact: Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.

Burns: Flush with water until pain ceases. Remove clothing that is not stuck to the skin - seek

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medical advice/transport to hospital. If possible, continue flushing until medical attention is obtained.

General: When obtaining medical advice, show the safety data sheet or label.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation of vapours/spray mist may cause irritation to the upper airways. May cause slight irritation to the skin and eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms. No special immediate treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with powder, foam, carbon dioxide or water mist.

Unsuitable extinguishing media: Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

CAUTION! Aerosol containers may explode. Heating will cause a rise in pressure in packaging with a risk of bursting. The product decomposes when combusted and the following toxic gases can be formed: Carbon monoxide and carbon dioxide.

5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases - seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with chemical resistant gloves.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear safety goggles if there is a risk of eye splash. Wear gloves. Keep unnecessary personnel away. Provide adequate ventilation. Smoking and naked flames prohibited. Stay upwind/keep distance from source. Take precautionary measures against static discharges. Use spark-free tools and explosion proof equipment.

For emergency responders: In addition to the above: Normal protective clothing equivalent to EN 469 is recommended.

6.2. Environmental precautions

Avoid unnecessary release to the environment.

6.3. Methods and material for containment and cleaning up

Wipe up drops and splashes with a cloth.

6.4. Reference to other sections

See section 8 for type of protective equipment.
See section 13 for instructions on disposal.

SECTION 7: Handling and storage

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7.1. Precautions for safe handling

Work under effective process ventilation (e.g. local exhaust ventilation). Running water and eye wash equipment must be available. Smoking and naked flames prohibited. Wash hands before breaks, before using restroom facilities, and at the end of work. Take precautionary measures against static discharges. Use spark-free tools and explosion proof equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Pressurized container: Protect from sunlight and do not expose to temperatures exceeding 50°C. Store in a well-ventilated area. Do not store with the following: Oxidisers/ Chlorine / fluorine / hydrogen chloride / oxygen

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit

Substance name	Time period	ppm	mg/m ³	fiber/cm ³	Remarks	Notation
propene	8h	500			Asphx.	
but-1-ene	8h	250				

Measuring methods: Compliance with occupational exposure limits may be checked by occupational hygiene measurements.

Legal basis: Ireland: 2021 For the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2021)

DNEL - workers

but-1-ene, cas-no 106-98-9					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	769 mg/m ³				
Inhalation DNEL (long-term exposure - local effects)	1530 mg/m ³				

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles if there is a risk of eye splash. Eye protection must conform to EN 166.

Personal protective equipment, hand protection: In the event of direct skin contact, wear protective gloves: Type of material: Nitrile rubber. Gloves must conform to EN 374. The suitability and durability of a glove is dependant on usage, e.g. frequency and duration of contact, glove material thickness, functionality and chemical resistance. Always seek advice from the glove supplier.

Personal protective equipment, respiratory protection: In case of spraying/formation of spraying mists: Wear respiratory protective equipment. Filter type: AX. Respiratory protection must conform to one of the following standards: EN

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136/140/145.

Environmental exposure controls:

Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Aerosol
Colour	Colourless
Odour	Almost odourless.
Solubility	Insoluble in the following: Water.

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	No data	
Freezing point	No data	
Initial boiling point and boiling range	-47.6 °C	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	1.6 - 11.1 vol%	
Flash Point	< -112 °C	
Auto-ignition temperature	> 450 °C	
Decomposition temperature	No data	
pH (solution for use)	No data	
pH (concentrate)	No data	
Kinematic viscosity	No data	
Viscosity	No data	
Partition coefficient n-octanol/water	No data	
Vapour pressure	4.8 bar	(20 °C) 9.9 bar (50 °C)
Density	0.57 g/cm ³	(20 °C)
Relative density	No data	
Vapour density	No data	
Relative density (sat. air)	No data	
Particle characteristics	No data	

9.2. Other information

Parameter	Value/unit	Remarks
Explosive properties		May form explosive gas/air mixtures.
Oxidising properties		Non-oxidising.

Other Information: None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with the following: Oxidisers/ oxygen / Chlorine/ hydrogen chloride / fluorine

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10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

Product vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

10.4. Conditions to avoid

Avoid heating and contact with ignition sources. Do not expose to heat (e.g. sunlight). Avoid temperatures >50°C.

10.5. Incompatible materials

Oxidisers/ oxygen / Chlorine. / Hydrogen chloride / fluorine

10.6. Hazardous decomposition products

The product decomposes when combusted or heated to high temperatures and the following toxic gases can be formed: Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - oral: Spray mist in mouth may irritate mucous membranes in mouth and throat. The product does not have to be classified. Test data are not available.

Acute toxicity - dermal: The product does not have to be classified. Test data are not available.

Acute toxicity - inhalation
but-1-ene, cas-no 106-98-9

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50	4h	> 22948 mg/l			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Skin corrosion/irritation: The product does not have to be classified. Test data are not available.

Serious eye damage/eye irritation: The product does not have to be classified. Test data are not available.

Respiratory sensitisation or skin sensitisation: The product does not have to be classified. Test data are not available.

Germ cell mutagenicity: The product does not have to be classified. Test data are not available.

Carcinogenic properties: The product does not have to be classified. Test data are not available.

Reproductive toxicity: The product does not have to be classified. Test data are not available.

Single STOT exposure: The product does not have to be classified. Test data are not available.

Repeated STOT exposure: The product does not have to be classified. Test data are not available.

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Aspiration hazard: The product does not have to be classified. Test data are not available.

11.2. Information on other hazards

Endocrine disrupting properties: None known.

Other toxicological effects: None known.

SECTION 12: Ecological information

12.1. Toxicity

propene, cas-no 115-07-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Crustacea	Daphnia		48hEC50	28.2 mg/l		QSAR	ECHA
Algae			96hEC50	12.1 mg/l		QSAR	ECHA
Fish			96hLC50	51.7 mg/l		QSAR	ECHA

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

but-1-ene, cas-no 106-98-9

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Pow	2.42			

propene, cas-no 115-07-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Pow	2.32			ECHA

No bioaccumulation expected.

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

The product does not contain any PBT or vPvB substances.

12.6. Endocrine disrupting properties

None known.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods

Avoid unnecessary release to the environment. If this product as supplied becomes a waste, it meets the criteria of a hazardous waste (Dir. 2008/98/EU). Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site. Do not dispose of aerosol sprays in refuse collection, even when empty. The sprays must be sent to the municipal chemical waste collection facility.

Category of waste:

EWC code: Depends on line of business and use, for instance 16 05 04* gases in pressure containers (including halons) containing hazardous substances

Absorbent/cloth contaminated with the product:

EWC code: 15 02 02* absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: 1950

14.2. UN proper shipping name: AEROSOLS

14.3. Transport hazard class(es): 2.1

Hazard label(s): 2.1

Hazard identification number:

14.4. Packing group:

14.5. Environmental hazards:

The product should not be labelled as an environmental hazard (symbol: fish and tree).

Tunnel restriction code: D

Inland water ways transport (ADN)

14.1. UN number or ID number: 1950

14.2. UN proper shipping name: AEROSOLS

14.3. Transport hazard class(es): 2.1

Hazard label(s): 2.1

Transport in tank vessels:

14.4. Packing group:

14.5. Environmental hazards:

The product should not be labelled as an environmental hazard (symbol: fish and tree).

Sea transport (IMDG)

14.1. UN number or ID number: 1950

14.2. UN proper shipping name: AEROSOLS

14.3. Transport hazard class(es): 2.1

Hazard label(s): 2.1

EmS: F-D, S-U

14.4. Packing group:

14.5. Environmental hazards:

Environmental Hazardous Substance Name(s):

The product is not a Marine Pollutant (MP).

IMDG Code segregation group: - None -

Air transport (ICAO-TI / IATA-DGR)

14.1. UN number or ID number: 1950

14.2. UN proper shipping name: AEROSOLS, FLAMMABLE

14.4. Packing group:

14.5. Environmental hazards:

The product should not be labelled as an environmental hazard (symbol: fish and tree).

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14.3. Transport hazard class(es): 2.1

Hazard label(s): 2.1

14.6. Special precautions for user

None.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

Special Provisions:

Special care should be applied for employees under the age of 18. Young people under the age of 18 may not carry out any work causing harmful exposure to this product.

Directive 2012/18/EU (Seveso), P3a FLAMMABLE AEROSOLS: Column 2: 150 (net) t, Column 3: 500 (net) t.

Covered by:
Council Directive (EC) on the protection of young people at work.

Irish regulation: Regulation 4(1)(e), 4(5)(d), 6(1) (c), (d) and (e) and 9(1)(b) of the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001), and amended collectively referred to as the 'Chemical Agents Regulations'

15.2. Chemical Safety Assessment

REACH Reg. No.	Substance name
01-2119447103-50	propene
01-2119456615-34	but-1-ene

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
1.0.0	8/18/2023	Bureau Veritas HSE / PBB	new

Abbreviations:

DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative
STOT: Specific Target Organ Toxicity

Other Information:

This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.

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Training advice: A thorough knowledge of this safety data sheet should be a prerequisite condition.

Classification method: Calculation based on the hazards of the known components.

List of relevant H-statements

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure, may explode if heated.

SDS is prepared by

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