

**Safety Data Sheet**  
**According to Regulation (EC) No 1907/2006**

Fuel Cells For Nailer (High-pressure)

Version 1.0

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SDS Record Number: CSSS-TCO-010-100005

**Section 1 Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier:**

Identification on the label/Trade name: Fuel Cells For Nailer (High-pressure)  
Additional identification: Not available  
Identification of the product: See section 3  
Index Number: Not available  
REACH pre-registration No.: See section 3

**1.2 Relevant identified uses of the substance and uses advised against:****1.2.1 Identified uses:**

Combustion.

**1.2.2 Uses advised against:**

Not available.

**1.3 Details of the supplier of the safety data sheet:**

Supplier: Nailco Limited  
Suite C, 74 Oldfield Road  
Hampton, Middlesex TW12 2HR  
Contact person: Ruth Keane  
Telephone: 0208 941 1722  
Fax: 0208 941 3029

**1.4 Emergency telephone Number:**

0208 941 1722

Available outside office hours?

YES

☐

NO

☒**Section 2 Hazards Identification****2.1 Classification of the substance/mixture:****2.1.1 Classification:**

The mixture is classified as following according to REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement codes
Press. Gas	H280
Flam. Gas 1	H220

For full text of H- phrases: see section 2.2.

**2.2 label elements:**

## Hazard Pictograms:



## Signal Word(S):

Danger

## Hazard Statement:

H220: Extremely flammable gas.

H280: Contains gas under pressure; may explode if heated.

## Precautionary statement:

P101 If medical advice is needed, have product container or label at hand

P102 Keep out of reach of children

P103 Read label before use

P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381: Eliminate all ignition sources if safe to do so.

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

## 2.3 Other hazards:

Not available.

## Section 3 Composition/information on ingredients

### Substance/Mixture:

Mixture

### Ingredient(s):

Chemical Name	Pre-Registration No.	CAS No.	EC No.	Concentration	Classification
Propene	05-2114131914-52-0000	115-07-1	204-062-1	40-60%	H220 H280
Isobutane	05-2118669741-32-0000	75-28-5	200-857-2	15-60%	H220 H280
Butane	05-2114131909-43-0000	106-97-8	203-448-7	0-15%	H220 H280
Propane	05-2114131905-51-0000	74-98-6	200-827-9	0-15%	H220 H280

## Section 4 First aid measures

### 4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

#### 4.1.1 In case of inhalation:

If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

#### 4.1.2 In case of skin contact:

Treat burned or frostbitten skin by flushing or immersing the affected area(s) in lukewarm water. Keep skin warm, dry, and clean. If blistering occurs, apply a sterile dressing. Seek immediate medical attention.

#### 4.1.3 In case of eyes contact:

For contact with the liquefied gas, hold eyelids apart and gently flush the affected eye(s) with lukewarm water. Seek immediate medical attention.

**4.1.4 In case of ingestion:**

This material is a gas under normal atmospheric conditions and ingestion is unlikely.

**4.2 Most important symptoms and effects, both acute and delayed:**

The product is not classified as harmful to human health effect.

**4.3 Indication of any immediate medical attention and special treatment needed:**

If skin irritation or rash occurs, get medical advice/attention.

**Section 5 Fire-Fighting measures****5.1 Extinguishing media:****Suitable extinguishing media:**

Dry chemical or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

**Unsuitable extinguishing media:**

Not available.

**5.2 Special hazards arising from the substance or mixture**

This material is flammable and can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Closed containers exposed to extreme heat can rupture due to pressure buildup.

**5.3 Advice for firefighters:**

If necessary, equipped with isolated style protective mask and full protective clothing.

**Section 6 Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures:****6.1.1 For non-emergency personnel:**

Use personal protective equipment. Ensure adequate ventilation. If insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of vapour.

**6.1.2 For emergency responders:**

Wear an appropriate NIOSH/MSHA approved respirator if vapour is generated.

**6.2 Environmental Precautions:**

Do not discharge into the sewage / drainage systems.

**6.3 Methods for Containment and Cleaning up:**

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate danger area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment. Water spray may be useful in minimizing or dispersing vapors.

**6.4 Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**Section 7 Handling and storage****7.1 Precautions for safe handling:****7.1.1 Protective measures:**

Practice good housekeeping. Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Do not ingest. Use with adequate ventilation. Wash thoroughly after handling.

**7.1.2 Advice on general occupational hygiene:**

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

**7.2 Conditions for safe storage, including any incompatibilities:**

Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 30 °C. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated.

**7.3 Specific end use(s):**

Not applicable.

**Section 8 Exposure Controls/Personal Protection****8.1 Control parameters:**

**8.1.1 Occupational exposure limits:** Not available.

**8.1.2 Additional exposure limits under the conditions of use:** Not available.

**8.1.3 DNEL/DMEL and PNEC-Values:** Not available.

**8.2 Exposure controls:**

**8.2.1 Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin. Provide safety shower and cleaning eyes equipments.

**8.2.2 Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Wear safety goggles.

**Hand protection:** Wear safety gloves to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

**Body protection:** Protective clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

**Respiratory protection:** In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protective device.

**Thermal hazards:** Wear suitable protective clothing to prevent heat.

**8.2.3 Environmental exposure controls:** Avoid discharge into the environment.  
According to local regulations, Federal and official regulations.

**Section 9 Physical and chemical properties****9.1 Information on basic physical and chemical properties:**

<b>Appearance:</b>	Gaseous
<b>Colour:</b>	Colorless
<b>Odour:</b>	Odorless
<b>Odour threshold:</b>	Not available
<b>pH:</b>	Not available
<b>Melting point/range (°C):</b>	Not available
<b>Boiling point/range (°C):</b>	Not available
<b>Flash point (°C):</b>	Not available
<b>Evaporation rate:</b>	Not available
<b>Flammability limit - lower (%):</b>	Not available
<b>Flammability (solid, gas):</b>	Extremely Flammable
<b>Ignition temperature (°C):</b>	Not available
<b>Upper/lower flammability/explosive limits:</b>	Not available
<b>Vapour pressure (25°C):</b>	17.8bar/50°C
<b>Vapour density:</b>	Not available



Relative Density:	Not available
Bulk density (kg/m <sup>3</sup> ):	Not available
Water solubility (g/l):	Slightly soluble
n-Octanol/Water (log Po/w):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	Not available
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	Not available
Molecular Weight:	Not available

**9.2. Other information:**

Fat solubility(solvent– oil to be specified) etc:	Slightly soluble in alcohol, ether.
Surface tension:	Not available
Dissociation constant in water( pKa):	Not available
Oxidation-reduction Potential:	Not available

**Section 10 Stability and reactivity**

10.1 Reactivity:	The substance is stable under normal storage and handling conditions.
10.2 Chemical stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	No dangerous reactions known.
10.4 Conditions to avoid:	Incompatible materials. Avoid high temperatures. Avoid all possible sources of ignition.
10.5 Incompatible materials:	Avoid contact with strong oxidizing agents.
10.6 Hazardous decomposition products:	Carbon oxides, water.

**Section 11 Toxicological information****11.1 Information on toxicological effects:**

Acute toxicity:	
LD50(Oral, Rat):	Not available
LD50(Dermal, Rabbit):	Not available
LC50(Inhalation, Rat):	Not available
Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

## Section 12 Ecological information

### 12.1 Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	N/A	96h	Fish	OECD 203	N/A	N/A
EC50	N/A	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	72h	Algae	OECD 201	N/A	N/A

12.2 Persistence and degradability: Not available.

12.3 Bioaccumulative potential: Not available.

12.4 Mobility in soil: Not available.

12.5 Results of PBT&vPvB assessment: Not available.

12.6 Other adverse effects: Not available.

## Section 13 Disposal considerations

13.1 Waste treatment methods: The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.

## Section 14 Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	UN3478	UN3478	UN3478
UN Proper shipping name	Fuel cell cartridges or fuel cell cartridges contained in equipment or fuel cell cartridges packed with equipment	Fuel cell cartridges or fuel cell cartridges contained in equipment or fuel cell cartridges packed with equipment	Fuel cell cartridges or fuel cell cartridges contained in equipment or fuel cell cartridges packed with equipment
Transport hazard Class	2.1	2.1	2.1
Packaging group	-	-	-
Environmental hazards	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL and the IBC Code	-	-	-

## Section 15 Regulation information

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

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

15.2 Chemical Safety Assessment has been carried out? YES

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NO

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## Section 16 Other information

### 16.1 Indication of changes:

Version 1.0 Amended by (EU) 2015/830

### 16.2 Training instructions:

Not applicable.

### 16.3 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

### 16.4 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.