

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

Fuel Cells For Nailer

Version 1.0

Issue date: 18/09/2017

Revision date: 18/09/2017

SDS Record Number: C5SS-TCO-010-100006

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

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(Only representative): Serracon Ltd T/A DART Tool Group

Supplier(Manufacturer): Unit 1 Wheatfield Road

Address: Dunnikier Business Park
Mitchelson Ind Est, Kirkcaldy

Contact person(E-mail): Fife, KY1 3PD

Telephone: sales@darttoolgroup.com

Fax: +44 (0) 1592 652900

1.4 Emergency telephone Number:

+44 (0) 1592 652900

Available outside office hours?

YES

NO

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

2.1.1 Classification:

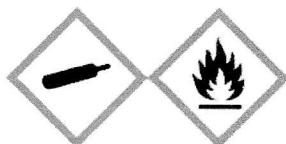
The substance is classified as following according to REGULATION (EC) No 1272/2008:

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

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

2.2 label elements:

Hazard Pictograms:



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Signal Word(S): Danger

Hazard Statement: H220: Extremely flammable gas.
H280: Contains gas under pressure; may explode if heated.

Precautionary statement: 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
Butane	05-2114131909-43-0000	106-97-8	203-448-7	20-60%
Isobutane	05-2118669741-32-0000	75-28-5	200-857-2	20-35%
Propane	05-2114131905-51-0000	74-98-6	200-827-9	20-45%

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 breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician if you feel unwell.

4.1.2 In case of skin contact:

Take off contaminated clothing and shoes. Wash off with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

4.1.3 In case of eyes contact:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Consult a physician if you feel unwell.

4.1.4 In case of ingestion:

Wash out mouth with water, induce vomiting unless directed to do so by medical personnel. Consult a physician if you feel unwell.

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: Water spray, foam, carbon dioxide, dry powder.

Unsuitable extinguishing media:

Not available.

5.2 Special hazards arising from the substance or mixture

This material is flammable. In case of fire, the following can be release: Oxides of carbon and water.

5.3 Advice for fire-fighters:

As in any fire, wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH (approved or equivalent) and full protective gear.

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 gas.

6.1.2 For emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if leaks.

6.2 Environmental Precautions:

Do not discharge into sewage / drainage system.

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 including respiratory protection as conditions warrant. 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:

Avoid breathing vapors or spray mists. Avoid contact with skin and eyes. Contents under pressure. The use of explosion-proof electrical equipment is recommended and may be required. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits.

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:

Substance Name	CAS No.	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		
		ppm	mg/ m ³	ppm	mg/ m ³	Notes
Butane	106-97-8	600	1430	750	1780	-
Propane	74-98-6	-	-	-	-	Asphx.

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:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used.
- 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:

Appearance:	Gaseous
Colour:	Colorless
Odour:	Odorless
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	-160 °C / -187.1 °C
Boiling point/range (°C):	-11.7 °C / - 42.1°C
Flash point (°C):	-60 °C / -140 °C
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not available
Ignition temperature (°C):	Not available
Upper/lower flammability/explosive limits:	9.5/ 1.8
Vapour pressure:	11.8bar/50°C
Vapour density:	Not available
Density:	1.56 / 2.01
Bulk density (kg/m³):	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) Soluble in alcohol, ether.

etc:

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: Strong oxidizing agents.
10.6 Hazardous decomposition products: Carbon monoxide, carbon dioxide.

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	1950	1950	1950
UN Proper shipping name	Aerosols	Aerosols	Aerosols
Transport hazard Class	2.1	2.1	2.1
Packaging group	Not regulated	Not regulated	Not regulated
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	Not regulated	Not regulated	Not regulated

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 NO

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by EU No 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.

Author: Hangzhou CIRS Co., Limited Website: www.cirs-group.com Tel: 0571-87206555 Email: info@cirs-group.com