

Product Name	Bossweld Argon/CO ² Disposable Gas Bottle
Part Number	600033
SDS Document Number	SDS_Bossweld_Argon-CO2 Gas Bottle_V1.1_060121
Issue Date	18/01/21

1 Product identifier & identity for the chemical

1.1 Product Identifier

Product Name: Bossweld Argon/CO² Disposable Gas Bottle
 Part Numbers: 600033
 Synonyms: N/A

1.2 Other means of identification

Argon/Carbon Dioxide

1.3 Recommended use of the chemical and restrictions on use

Argon/CO² gas for welding. Not to be used for any other purpose.

1.4 Suppliers name, address and phone number

Supplier Name: Dynaweld Industrial Supplies Pty Ltd
 Address: Building 2, 10 Jessica Place, Prestons NSW 2214, Australia
 Phone: +61 2 8761 6500
 Email: sales@dynaweld.com.au
 Web Site: https://www.dynaweld.com.au

1.5 Emergency phone number

Emergency Phone: +61 2 8761 6500 (Australia)

2 Hazard Identification

2.1 Classification of the hazardous chemical

Press. Gas, H280 – Contains gas under pressure; may explode if heated.

2.2 Label elements, including precautionary statements

Signal Word: WARNING

Symbols:



Hazard Statements:

H280	Contains gas under pressure; may explode if heated
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Precautionary Statements Storage

P410 + P403	Protect from sunlight. Store in a well-ventilated place.
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2.3 Other hazards which do not result in classification

Do not expose to temperatures exceeding 50°C / 122°F.

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3 Composition/information on ingredients

3.1 Identity of chemical ingredients

Chemical Name	CAS No.	Concentration Range (%)
Argon	(7440-37-1)	80-98
Carbon Dioxide	(124-38-9)	2-20

3.2 CAS number and other unique identifiers

Note: See section 3.1

3.3 Concentration of ingredients

Note: See section 3.1

4 First Aid Measures

4.1 Description of necessary first aid measures

General:	If exposed or concerned get medical advice / attention. Get medical advice/attention if you feel unwell.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.
Skin contact:	Not expected to present a significant skin hazard under anticipated conditions of normal use.
Eye contact:	Not expected to present a significant skin hazard under anticipated conditions of normal use.
Ingestion:	Not considered a normal route of exposure.

4.2 Symptoms caused by exposure

High concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.

Note: Refer to Section 11 for further information.

4.3 Medical Attention and Special Treatment

Treat symptomatically.

5 Fire Fighting Measures

As shipped, this product is non-flammable. However, welding arc and sparks can ignite combustibles and flammable products. Read and understand *WTIA Technical Note No. 7 Health and Safety in Welding* before using this product.

5.1 Suitable extinguishing media

There is no unsuitable extinguishing media known. Use fire extinguishing methods suitable to surrounding conditions.

5.2 Specific hazards arising from the chemical

Fire exposure can cause the pressure to increase and the container may burst or explode. Use water to cool fire exposed containers.

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Issue Date	18/01/21

5.3 Special protective equipment and precautions for fire fighters

Special protective equipment: Follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special precautions: Use firefighting procedures suitable for surrounding area. If safe to do so, remove containers from path of fire and prevent spillage from entering drains or water courses. May produce toxic fumes of metal oxides, poisonous fumes and corrosive fumes.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate unnecessary personnel. Ensure adequate air ventilation. Wear self-contained breathing apparatus when entering area, until safe.

Note: Refer to recommendations in Section 8.

6.2 Environmental precautions

If safe, try to stop release. Prevent from entering sewers or water courses, or anywhere accumulation can be dangerous.

6.3 Methods and materials for containment and cleaning up

If safe, try to stop release. Ensure adequate ventilation.

Note/s: For further information, see Section 8. Refer to Section 13 for proper disposal.

7 Handling and Storage

7.1 Precautions for safe handling

Do not eat, drink and/or smoke in the working areas or plants.

Use proper personal protective equipment such as safety shoes and gloves when handling cylinder.

Do not allow back feed into the cylinder.

Suck back of liquids into the container must be prevented.

Use only properly specified equipment that are suitable for this product.

Open slowly the valve to avoid pressure blows.

Avoid the direct contact of the product.

Container valve caps should be in place.

Handle carefully the cylinders, thus avoiding violent collisions between them or against other surfaces, as well as falls and other mechanical strains susceptible to damage their integrity/resistance.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool, dry, and well ventilated place. Store cylinders in location free from fire risk and away from sources of heat and ignition. Keep cylinders below 50°C in a well ventilated place.

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Issue Date	18/01/21

8 Exposure controls/personal protection

8.1 Control parameters – exposure standards, biological monitoring

Use industrial hygiene monitoring equipment to ensure that exposure does not exceed the applicable national exposure limits.






Chemical Name	CAS No.	
Argon	(7440-37-1)	Asphyxiant
Carbon Dioxide	(124-38-9)	STEL: 54000 mg/m ³ , 30000 ppm TWA: 9000 mg/m ³ , 5000 ppm

8.2 Appropriate engineering controls

Ventilation: Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases below the exposure limits in the worker's breathing zone, and the general area. Keep exposure as low as possible.

Note: See WTI Technical Note 7 – Health and Safety in Welding for further information / guidance.

8.3 Personal protective equipment (PPE)

Eye Protection		Wear safety glasses with side shields or goggles.
Hand protection:		Wear protective gloves. Suitable gloves can be recommended by the glove supplier.
Protective Clothing		Wear hand, head, and body protection that will help to prevent injury from using this product. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Wear dry gloves free of holes or split seams.
Respiratory protection:		Keep your head out of fumes. Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area. Use respirable fume respirator, or air-supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below exposure limits.
Hygiene measures:		Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Note: See WTI Technical Note 7 – Health and Safety in Welding for further information / guidance.

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Issue Date	18/01/21

9 Physical and chemical properties

	Property	Product description
9.1	Appearance	Colourless gas
9.2	Odour	Odourless
9.3	Odour threshold	Odour threshold is subjective and is inadequate to warn of over exposure
9.4	pH	No further relevant information available
9.5	Melting point/freezing point	Argon: -189 °C. Freezing point not available. Carbon Dioxide: Sublimation -78.5 °C
9.6	Boiling point and boiling range	Argon: -186 °C (1,013 bar) Carbon Dioxide: Sublimation -78.5 °C
9.7	Flash point	Not applicable
9.8	Evaporation rate	Not applicable
9.9	Flammability	Not applicable
9.10	Upper/lower flammability or explosive limits	Not applicable
9.11	Vapour pressure	Not applicable
9.12	Vapour density	Argon: 5.7722 kg/m ³ (1.013 bar at boiling point) Argon: 1.6903 kg/m ³ (1.013 bar at 15 °C) Carbon dioxide: 1.8714 kg/m ³ (1.013 bar at 15 °C)
9.13	Relative density (air = 1)	Argon: 1.38 Carbon Dioxide: 1.52
9.14	Solubility(ies)	Argon: 67 mg/l (15 °C; 1,013 bar) Carbon dioxide: 1.7163 vol/vol (0 °C; 1.013 bar)
9.15	Partition coefficient: (n-octanol/water)	No further relevant information available
9.16	Auto-ignition temperature	No further relevant information available
9.17	Decomposition temperature	No further relevant information available
9.18	Viscosity	Argon: 2.1017E-04 Poise (1.013 bar e 0 °C) Carbon dioxide: 1.3711E-04 Poise (1.013 bar e 0 °C)
9.19	Specific heat value	No further relevant information available
9.20	Particle size	No further relevant information available
9.21	Volatile organic compounds content	No further relevant information available
9.22	% volatile	No further relevant information available
9.23	Saturated vapour concentration	No further relevant information available
9.24	Release of invisible flammable vapours and gases	No further relevant information available
	Additional parameters	
9.25	Shape and aspect ratio	No further relevant information available
9.26	Crystallinity	No further relevant information available
9.27	Dustiness	No further relevant information available
9.28	Surface area	No further relevant information available
9.29	Degree of aggregation or agglomeration	No further relevant information available
9.30	Ionisation (redox potential)	No further relevant information available
9.31	Biodurability or biopersistence	No further relevant information available

10 Stability and Reactivity

10.1 Reactivity

The product is non-reactive under normal conditions of storage and transport.

10.2 Chemical stability

Stable under normal conditions of storage and transport.

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SDS Document Number	SDS_Bossweld_Argon-CO2 Gas Bottle_V1.1_060121
Issue Date	18/01/21

10.3 Conditions to avoid

Avoid heat, sparks, open flames, hot surfaces.

10.4 Incompatible materials and possible hazardous reactions

No reaction with any common materials in dry or wet conditions.

10.5 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

11 Toxicological information

Acute Toxicity: no known toxicological effects from this product

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

Specific target organ toxicity (single exposure): Not classified.

Specific target organ toxicity (repeated exposure): Not classified.

Aspiration hazard: Not classified

11.1 Information on routes of exposure

Inhaled: Inhalation of dusts, generated by the material, during the course of normal handling, may be harmful. The inhalation of small particles of metal oxide results in sudden thirst, a sweet, metallic foul taste, throat irritation, cough, dry mucous membranes, tiredness and general unwellness. Headache, nausea and vomiting, fever or chills, restlessness, sweating, diarrhoea, excessive urination and prostration may also occur.

Ingestion: Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments

Skin Contact: Skin contact does not normally present a hazard, though individuals may be found who react to substances usually regarded as inert.
Molten material is capable of causing burns.

Eye: Fumes from welding/brazing operations may be irritating to the eyes..

Chronic: Principal routes of exposure include accidental contact with the molten metal and inhalation of fume arising as a consequence of the action of the flame on the rod / wire. Although fume generation rates are generally low, excessive heating of the material, well above its quoted melting point, may result in over-exposure.

11.2 Symptoms related to exposure

Note: See Section 11.1

11.3 Numerical measures of toxicity

No further information available

11.4 Immediate, delayed and chronic health effects from exposure

Note: See Section 11.1

11.5 Exposure Levels

Note: See Section 11.1

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SDS Document Number	SDS_Bossweld_Argon-CO2 Gas Bottle_V1.1_060121
Issue Date	18/01/21

11.6 Interactive effects

Note: See Section 11.1

11.7 Data limitations

No further information available.

12 Ecological information

Welding consumables and materials could degrade / weather into components originating from the consumables or from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater.

12.1 Ecotoxicity

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Other adverse effects

No further information available.

13 Disposal considerations

13.1 Safe handling and disposal methods

Do not discharge into any place where its accumulation could be dangerous, but in atmosphere or well ventilated area. Gas cylinders are not refillable. Dispose according to applicable local and state government regulations.

13.2 Disposal of any contaminated packaging

Dispose according to applicable local and state government regulations.

13.3 Environmental regulations

Consult State Land Waste Management Authority for more information.

14 Transport information

No international regulations or restrictions are applicable.

14.1 UN number

UN 1956

14.2 Proper shipping name

COMPRESSED GAS, N.O.S. (Argon, Carbon Dioxide)

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Issue Date	18/01/21

14.3 Transport hazard class(es)

2.2

14.4 Packing group

No further relevant information available

14.5 Environmental hazards

No further relevant information available

14.6 Special precautions during transport

No further relevant information available

14.7 Hazchem Code

2TE

14.8 Additional Information

Sea Transport

EMS: F-C, S-V

Proper Shipping Name: COMPRESSED GAS, N.O.S. (Argon, Carbon Dioxide)

Air Transport

Cargo Pkg Inst: 200
Max Net Qty/Pkg: 150kg

Passenger Pkg Inst: 200
Max Net Qty/Pkg: 75kg
ERG Code: 2L

15 Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Regulations of each country are applied to substances / mixtures.

Australian Inventory of Chemical Substances	
7440-37-1	Argon
124-38-9	Carbon Dioxide

15.2 Poisons Schedule number

A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

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Part Number	600033
SDS Document Number	SDS_Bossweld_Argon-CO2 Gas Bottle_V1.1_060121
Issue Date	18/01/21

16 Other information

Training advice: Ensure that user is aware of the potential hazards and knows what to do in the event of an accident or an emergency.

16.1 Date of preparation or review

13th January, 2021

16.2 Key abbreviations or acronyms used

BEI - Biological Exposure Indices

GHS - Globally Harmonized System of classification and labelling of chemicals.

IARC - International Agency for Research on Cancer

NTP - National Toxicology Program

PPE - Personal Protection Equipment

SUSMP - Standard for the Uniform Scheduling of Medicines and Poisons

TLVs - Threshold Limit Value

WTIA – Welding Technology Institute of Australia

Dynaweld Industrial Supplies Pty Ltd requires that all customers read this safety data sheet carefully so as to be informed about the risks implied in the use of the product, and provide any person involved with a copy of the same and/or adequate training on the use of the product.

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END OF SAFETY DATA SHEET