SAFETY DATA SHEET (SDS)

ONEGAS 52

SECTION 1 – IDENTIFICATION (MATERIAL & SUPPLIER)

Product Identifier OneGas 52

Other Means of Identification SDS Product Code PG23

Chemical Formula Components Ar, CO_2 & O_2

Recommended Use (of the Chemical and Restrictions on use)
An Argon,CO2 & Oxygen mixture suited for MIG welding of mild steel.

Details of Manufacturer or Importer

Supplier Name: OneGas Australia
Phone: 1300 663 427
Address: 284 Victoria Road MALAGA WA
Emergency: 6090 000 (Emergency Services)

EMERGENCY SERVICES: DFES Western Australia

Website: http://www.dfes.wa.gov.au

MSDS Date: June 2021

SECTION 2 – HAZARDS IDENTIFICATION

Classification of the Hazardous Chemical

Compressed Argon is

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA but rather

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE.

Hazard Class and Category Code Regulation EC 1272/2008 (CLP)
Physical Hazards
Gases under Pressure **Compressed gas - Warning - (CLP : Press. Gas) -H280**

Classification EC 67/548 or EC 1999/45 **Not classified as dangerous substance/ mixture.**

Label Elements, including Precautionary Statements
Labelling Regulation EC 1272/2008 (CLP)

Hazard Pictograms

Hazard Pictograms Code GHS04
Signal Word Warning
Hazard Statements H280 - Contains gas under pressure; may explode if heated.

Precautionary Statements
Storage P403
Store in a well ventilated place.

Other Hazards None.

SECTION 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Material	Abbreviation	Contents	CAS No.	EC NO
Argon	Ar	93%	7440-37-1	231-147-0
Oxygen	O_2	2%	7782-44-7	231-956-9
Carbon Dioxide	CO^2	5%	124-38-9	204-696-9

SECTION 4 – FIRST AID MEASURES

4.1. Description of First Aid Measures

First Aid Measures

Inhalation In high concentrations will cause asphyxiation. Symptoms may include loss of mobility/consciousness. The affected person may not be aware of asphyxiation. Remove the affected person to a ventilated & non contaminated area wearing Rescuers must be wearing & use self contained breathing apparatus (SCBA). Keep the affected person warm and allow to rest & recover. The low concentration of carbon dioxide would cause increased respiration and headache but this would be overridden by the asphyxiate properties of the mixture as a whole. Call a doctor. Apply artificial respiration if breathing stopped.
Skin Contact No adverse effects expected.
Eye Contact No adverse effects expected.
Ingestion An unlikely route for adverse reactions.

4.2. Most important Symptoms and Effects, both Acute and Delayed

See section 11.

4.3. Indication of any immediate Medical Attention and Special Treatment needed

None.

Swallowed: Not applicable.
Skin: Not applicable.
Eyes: Not applicable.
Inhaled: Remove the affected person from the Argon rich incident area to the nearest well ventilated & safe area by means of personnel wearing/using SCBA so as to avoid themselves becoming asphyxiated injury.
Check the state of consciousness of the affected person and whether breathing. If not, perform artificial respiration preferably using an automated oxygen resuscitator.
Keep the affected person's body warm and level.
Dial 000 for medical assistance.

SECTION 5 – FIRE-FIGHTING MEASURES

Flammability Non flammable.

Fire and Explosion Temperatures in a fire may cause cylinders to rupture. Cool cylinders or containers exposed to fire by applying water from a protected location. Remove cool cylinders from the path of the fire. Evacuate the area if unable to keep cylinders cool. Do not approach cylinders or containers suspected of being hot.
Isolate gas flow where safe to do so.
Extinguishing Use water fog to cool containers from protected area.
Hazchem Code 2T
2 Fine Water Spray.
T Wear full fire kit and breathing apparatus.
Dilute spill and run-off.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
If possible prevent gas from discharging.

Personnel Precautions
Evacuate area.
Rescuers to wear SCBA when entering area unless atmosphere is confirmed safe.
Open windows or use fans to make sure that there is sufficient fresh air entering the affected area.

6.2. Environmental Precautions
None.
Try to stop release.
Prevent from entering low lying areas such as cellars, basements and work pits, or any such place where Argon accumulation & buildup would prove to be dangerous.

6.3. Methods and Material for Containment and Cleaning Up
None.
Clean Up Procedure
Ventilate area.

6.4. Reference to Subsequent Sections
t See also sections 8 & 13.

SECTION 7 – HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

Observe the following requirement of the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Observe the requirements of State Dangerous Goods (Storage and Handling) Regulations.

7.1 Storage and Handling

Storage Temperature Room Temperature
UN Class 2.2 Non-Flammable, Non-toxic gas

SAFETY DATA SHEET (SDS)

ONEGAS 52 *continued*

Packaging Group	Not assigned
UN Number	1956
EPG Number	2C1
Correct Shipping Name	COMPRESSED GAS, N.O.S. (Argon 83%)

7.2 Storage Conditions (See Also AS4332 For Details)

Cylinders (Containers) are to be stored upright with their valve protective cap fitted, ideally outside of buildings or in a well ventilated area.
Keep cylinders cool to minimise the pressure build up inside the cylinder (Container). i.e. Do not store the Cylinders (Containers) in direct sunlight.
Argon Cylinders (Containers) should be stored in areas not exceeding 45°C.
Observe safe manual handling of Cylinders (Containers) to avoid back or other injuries. Always move Cylinders (Containers) with cylinder dollies or portable racks; never roll or drag a bottle.
Store Argon Cylinders (Containers) in an area away from foot and vehicle traffic to reduce the risk of accidental damage or impact & make sure that they are secured to say a wall bracket with a strap or chain.
For indoors, use a well-ventilated storage area.
For outdoors, use a storage area that's protected from weather and equipped with a lock to prevent theft or tampering.

7.3 Spills, Leaks, and Disposal

CAUTION: In the event of a cylinder (Container) rupture or uncontrolled release, evacuate all non-essential personnel from the immediate vicinity until the cylinder (Container) gas release has subsided & dissipated.
Use the necessary protective measures (i.e. Wear gloves and goggles) when approaching the discharged cylinder (Container). If in a confined or non ventilated space use a self-contained breathing apparatus.
Do not attempt to repair leaking BD's or cylinder valves but simply fit a secure tag & print whether the valve and/or BD are defective and leaking. If possible date and print your name & contact details.
Argon gas is non-flammable and does not support combustion.
Exposing the cylinder (Container) to intense heat or flame (e.g. a fire.) may cause the cylinder to vent rapidly and/or rupture violently.
To prevent the above happening, all Argon cylinder valves are fitted with a BD (Burst disc.)
This should in most cases prevent the Cylinder (Container) from rupturing.
The BD's act as a safety valve and are designed to vent the Argon gas when exposed to an elevated temperature of 65 degrees Centigrade.
If the cylinders have simply become hot and the BDs have not released any gas cool/spray with water from a hose until cooled to the ambient air temperature.
If the Cylinders (Containers) are in a fire call the emergency services or fire brigade to deal with the situation as they are trained & have the equipment to deal with the matter.

7.4 Decomposition Products

Argon	None (Remains as Argon.)
In case of Small Fire/explosion use:	Water
In case of Major Emergency Hazchem Code:	2(T)
Extinguishing medium:	Water fog or fine water spray
Danger of Violent Reaction or Explosion:	Not from the Argon gas decomposition or some chemical reaction.
Protective Clothing:	For Cylinder handling & when using with gas regulators: Wear appropriate protective work gloves, safety shoes and safety glasses. For rescue operations of people affected by Argon build up in a confined space, ensure rescuers are wearing & using self contained breathing apparatus (SCBA) to ensure that they to do not suffer the risk of asphyxiation.
Appropriate Measures:	Isolate the Argon leak & dilute the effect of the presence of Argon by increased ventilation by opening all doors & windows or by forced ventilation if available.
Evacuate	All other personnel in the immediate vicinity of the incident area.

7.5 Other Information

Store and use compressed Argon in well ventilated areas.
Do not drop, tip, or roll Cylinders (Containers) on their sides.
Do not use oil and grease on Cylinders (Containers), cylinder valves or the threaded valve caps.
Connect the Equipment or Materials properly as detailed in the Manufacturer's instructions.
Only use regulators, interconnecting piping and equipment with the correct mating connections and that are designed to withstand the high pressures to be encountered.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1. Control Parameters

DNEL: Derived No Effect Level	None available.
PNEC: Predicted No Effect Concentration	None available.

8.2. Exposure Controls

8.2.1. Appropriate Engineering - Controls	Systems under pressure are to be regularly checked for leakages. Provide adequate general and local exhaust ventilation. Consider work permit system e.g. for maintenance activities.
8.2.2. Individual Protection	A risk assessment should be such measures as PPE conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk.

The following recommendations should be considered.

	Wear safety glasses with side shields, leather safety gloves, safety shoes when manually handling cylinders.
Personal Protection	Ensure adequate ventilation.
8.2.3. Environmental Exposure Controls	Refer to local regulations for restriction of emissions to the atmosphere. See also section 13 for controls specific methods for waste gas treatment.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties Appearance

Physical state at 20°C / 101.3kPa	Gas.
Colour	Colourless.
Odour	3 Component odourless mixture.
Odour threshold	Any odour threshold is subjective and inadequate to warn for overexposure.
pH value	N/A for gas mixtures.
Molar mass [g/mol]	N/A for gases and gas-mixtures.
Melting point [°C]	N/A for gas mixtures.
Boiling point [°C]	N/A for gas mixtures.
Critical temperature [°C]	N/A for gas mixtures.
Flash point [°C]	N/A for gas mixtures.
Evaporation rate (ether=1)	N/A for gas mixtures.
Flammability range [vol% in air]	Non flammable.
Vapour pressure [20°C]	N/A
Partition coefficient n-octanol/water	N/A for gas mixtures.
Viscosity at 20°C [mPa.s]	N/A.
Explosive Properties	N/A. (Inert)

SECTION 10 – STABILITY AND REACTIVITY

Reactivity
No reactivity hazard other than the effects described in sub-sections below.
Stability and reactivity: Stable.
Chemical Stability
Stable.
Possibility of Hazardous Reactions
None.
Conditions to Avoid
None.
Incompatible Materials
None.
Hazardous Decomposition Products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Toxicity Information	No known toxicological effects from this product.
Acute Toxicity	No known toxicological effects from this product.
Rat Inhalation LC50 [ppm/4h]	No data available.
Skin Corrosion/irritation	No known effects from this product.

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ONEGAS 52 *continued*

Serious Eye Damage/Irritation	No known effects from this product.
Respiratory Or Skin Sensitization	No known effects from this product.
Stot-Single Exposure	No known effects from this product.
Stot-Repeated Exposure	No known effects from this product.
Aspiration Hazard	Not applicable for gases and gas-mixtures.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity	No data available.
Persistence degradability	No data available.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Results of PBT and vPvB assessment	No data available.

Other Adverse Effects
Ecological Effects Information
Contains greenhouse gas(es) not covered by 842/2006/EC

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Treatment Methods: May be vented to atmosphere in a well ventilated place.
Do not discharge into any place where its accumulation could be dangerous.

Refer to the code of practice of EIGA (Doc. 30/10 "Disposal of Gases, downloadable at http://www.eiga.org) for more guidance on suitable disposal methods.
Contact supplier if guidance is required.
General: Do not discharge into any place where its accumulation could be dangerous.
May be vented to atmosphere in a well ventilated place.
Contact supplier if guidance is required.

Additional information: None.

SECTION 14 – TRANSPORT INFORMATION

Un Number: 1956
Labelling ADR, IMDG, IATA

2.2: Non flammable, non toxic gas.

Land Transport (Adr/rid)

H.I. nr	20
UN Proper Shipping Name	COMPRESSED GAS, N.O.S. (Contains Argon)
Transport Hazard Class(es)	2.2
Classification Code	1 A
Packing Instruction(s)	P200
Tunnel Restriction	E Passage forbidden through tunnels of category E.
HAZCHEM - Emergency Action Code	2T 2 = Fine water spray. T = Recommended personal protective equipment : Full fire kit and breathing apparatus. Appropriate measures: Dilute.

Sea Transport (IMDG)

Proper Shipping Name	COMPRESSED GAS, N.O.S. (Contains Argon)
Class	2.2
Emergency Schedule (EmS) - Fire	F-C
Emergency Schedule (EmS) - Spillage	S-V
Packing instruction	P200

Air Transport (ICAO-TI / IATA-DGR)

Proper Shipping Name (IATA)	COMPRESSED GAS, N.O.S. (Contains Argon)
Class	2.2
Passenger and Cargo Aircraft	Allowed.
Packing instruction - Passenger & Cargo Aircraft	200
Cargo Aircraft Only	Allowed.
Packing instruction - Cargo Aircraft Only	200

Special Precautions for User

Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers:
Ensure there is adequate ventilation.
Ensure that containers are firmly secured.
Ensure cylinder valve is closed and not leaking.
Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
Ensure valve protection device (where provided) is correctly fitted.

Labelling ADR: 2.2: Non flammable, non toxic gas.
Other Transport Information

Before transporting product containers:
Ensure that containers are firmly secured.
Ensure cylinder valve is closed and not leaking.
Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
Ensure valve protection device (where provided) is correctly fitted.
Ensure there is adequate ventilation.
Compliance with applicable regulations.

SECTION 15 – REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture.
EU Legislation

Seveso Directive 96/82/EC	Not covered.
National Legislation	Ensure all national/local regulations are observed.
Chemical Safety Assessment	A CSA does not need to be carried out for this product.

SECTION 16 – ANY OTHER RELEVANT INFORMATION

Indication Of Changes: Revised safety data sheet in accordance with commission regulation (EU) No 453/2010

Training Advice

Receptacle under pressure.
Asphyxiate in high concentrations.
Keep container in a well-ventilated place.
Do not breathe the gas.
Ensure all national/local regulations are observed.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.

List of Full Text of H-Statements in Section 3: H281 - Contains compressed gas; may cause cold burns when gas is expanding or injury.

Further Information: Classification in accordance with calculation methods of regulation (EC) 1272/2008 CLP / (EC) 1999/45 DPD.

Note: This Safety Data Sheet has been established in accordance with "Preparation of safety data sheets for hazardous chemicals" - code of practice

DISCLAIMER OF LIABILITY

Details given in this document are believed to be correct at the time of issue. Although proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

Before using this product in ***any new process or experiment,*** a thorough material compatibility and safety study should be carried out.