Air	liaı	Jide

SAFETY DATA SHEET

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Revised edition no : 3.0 Revision date : 2023-01-24

Supersedes version of : 2021-07-14

NOXAL 4

NOAL_1054 UFI: 8GW2-T0DR-400N-TSYS

Country : SE / Language : EN

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

1.1. Product ide	ntifier			
Trade name SDS no		AL 4 L_1054 8GW2-T0DR-400N-TSYS		
1.2. Relevant id	entified uses of the substance or mixture	and uses advised against		
Relevant identifie	Indu Iabo	strial and professional uses. Perfe strial and professional use for che ratory use, under controlled cond act supplier for more information	emical analysis, calibration, (reitions.	
Uses advised ag	Uses	 Consumer use. Uses other than those listed above are not supported, contact your supplier for more information on other uses. 		
1.3. Details of t	ne supplier of the safety data sheet			
Company identi Supplier AIR LIQUIDE G Lundavägen 15 212 09 Malmö T +46 40 38 10 info.sweden@a E-Mail address	GAS AB 1 - SWEDEN 00 irliquide.com	ic-sds@airliquide.com		
1.4. Emergency	telephone number			
Emergency telep		lability 7)		
Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftnotruf Erfurt	Nordhäuser Straße 74	+49 (0) 361 730 730	

Germany	Giftnotruf Erfurt	Nordhäuser Straße 74	+49 (0) 361 730 730	
	Gemeinsames Giftinformationszentrum	99089 Erfurt		
	der Länder Mecklenburg-Vorpommern,			
	Sachsen, Sachsen-Anhalt und Thüringen,			
	c/o HELIOS Klinikum Erfurt			

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Physical hazards	Flammable gases, Category 1B	H221
	Gases under pressure : Compressed gas	H280

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		400N-TSYS	
		Country : SE / Language : EN	
2.2. Label elements			
Labelling according to Regulation (E	C) No. 1272/2008 [CLP]		
Hazard pictograms (CLP)			
Signal word (CLP)	GHS02 GHS04 : Danger		
Hazard statements (CLP)	: H221 - Flammable gas.		
× ,	H280 - Contains gas under pressure; may explode	e if heated.	
Precautionary statements (CLP)			
- Prevention	: P210 - Keep away from heat, hot surfaces, sparks	anon flomos and other ignition sources	
- Prevention	No smoking.	s, open names and other ignition sources.	
- Prevention		leak can be stopped safely.	
Response	No smoking. P377 - Leaking gas fire: Do not extinguish, unless	leak can be stopped safely.	
	No smoking. P377 - Leaking gas fire: Do not extinguish, unless P381 - In case of leakage, eliminate all ignition so	leak can be stopped safely.	
Response Storage	No smoking. P377 - Leaking gas fire: Do not extinguish, unless P381 - In case of leakage, eliminate all ignition so	leak can be stopped safely.	
Response Storage	No smoking. P377 - Leaking gas fire: Do not extinguish, unless P381 - In case of leakage, eliminate all ignition so P403 - Store in a well-ventilated place.	leak can be stopped safely.	

SECTION 3: Composition/information on ingredients

3.1. Substances

Not established.

3.2. Mixtures

Name	Product identifier	Composition [V- %]:	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Argon	CAS-No.: 7440-37-1 EC-No.: 231-147-0 EC Index-No.: REACH-no: *1	93	Press. Gas (Comp.), H280
Hydrogen	CAS-No.: 1333-74-0 EC-No.: 215-605-7 EC Index-No.: 001-001-00-9 REACH-no: *1	7	Flam. Gas 1A, H220 Press. Gas (Comp.), H280

Full text of H- and EUH-statements: see section 16

Contains no other components or impurities which will influence the classification of the product.

*1: Listed in Annex IV / V REACH, exempted from registration.

*3: Registration not required: Substance manufactured or imported < 1t/y.

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SECTION 4: First aid measu			
4.1. Description of first aid measur	es		
- Inhalation	: Remove victim to uncontaminated area wearing s		
	victim warm and rested. Call a doctor. Perform ca	rdiopulmonary resuscitation if breathing	
Skin contact	stopped. : Adverse effects not expected from this product.		
- Eye contact	: Adverse effects not expected from this product.		
- Ingestion	: Ingestion is not considered a potential route of ex	posure.	
4.2. Most important symptoms and	effects, both acute and delayed		
	See section 11.		
4.3. Indication of any immediate me	edical attention and special treatment needed		
	None.		
	None.		
	None.		
SECTION 5: Firefighting me			
5.1. Extinguishing media	asures		
5.1. Extinguishing media - Suitable extinguishing media			
5.1. Extinguishing media Suitable extinguishing media	asures : Water spray or fog.		
SECTION 5: Firefighting me 5.1. Extinguishing media - Suitable extinguishing media - Unsuitable extinguishing media 5.2. Special hazards arising from th	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish.		
5.1. Extinguishing media - Suitable extinguishing media - Unsuitable extinguishing media 5.2. Special hazards arising from t	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish. ne substance or mixture	explode.	
5.1. Extinguishing media • Suitable extinguishing media • Unsuitable extinguishing media 5.2. Special hazards arising from the Specific hazards	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish.	explode.	
5.1. Extinguishing media • Suitable extinguishing media • Unsuitable extinguishing media 5.2. Special hazards arising from the Specific hazards Hazardous combustion products	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish. ne substance or mixture : Exposure to fire may cause containers to rupture/	explode.	
 5.1. Extinguishing media Suitable extinguishing media Unsuitable extinguishing media 5.2. Special hazards arising from the second seco	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish. ne substance or mixture : Exposure to fire may cause containers to rupture/ : None.		
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 5.1. Extinguishing media Suitable extinguishing media Unsuitable extinguishing media 5.2. Special hazards arising from the second seco	 asures Water spray or fog. Carbon dioxide. Do not use water jet to extinguish. ne substance or mixture Exposure to fire may cause containers to rupture/ None. Use fire control measures appropriate for the surr radiation may cause gas receptacles to rupture. O spray jet from a protected position. Prevent water sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes i Do not extinguish a leaking gas flame unless absorbance. 	ounding fire. Exposure to fire and heat Cool endangered receptacles with water used in emergency cases from entering	
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 5.1. Extinguishing media Suitable extinguishing media Unsuitable extinguishing media 5.2. Special hazards arising from the second seco	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish. the substance or mixture : Exposure to fire may cause containers to rupture/ : None. : Use fire control measures appropriate for the surr radiation may cause gas receptacles to rupture. C spray jet from a protected position. Prevent water sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes i Do not extinguish a leaking gas flame unless absore-ignition may occur. Extinguish any other fire. Move containers away from the fire area if this call	ounding fire. Exposure to fire and heat Cool endangered receptacles with water used in emergency cases from entering if possible. olutely necessary. Spontaneous/explosive n be done without risk.	
5.1. Extinguishing media - Suitable extinguishing media - Unsuitable extinguishing media	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish. te substance or mixture : Exposure to fire may cause containers to rupture/ : None. : Use fire control measures appropriate for the surradiation may cause gas receptacles to rupture. Caspray jet from a protected position. Prevent water sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes i Do not extinguish a leaking gas flame unless absore-ignition may occur. Extinguish any other fire. Move containers away from the fire area if this calighters	ounding fire. Exposure to fire and heat Cool endangered receptacles with water used in emergency cases from entering if possible. olutely necessary. Spontaneous/explosive n be done without risk. oparatus.	
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5.1. Extinguishing media • Suitable extinguishing media • Unsuitable extinguishing media 5.2. Special hazards arising from the Specific hazards Hazardous combustion products 5.3. Advice for firefighters Specific methods	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish. the substance or mixture : Exposure to fire may cause containers to rupture/ : None. : Use fire control measures appropriate for the surradiation may cause gas receptacles to rupture. Or spray jet from a protected position. Prevent water sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes i Do not extinguish a leaking gas flame unless absorre-ignition may occur. Extinguish any other fire. Move containers away from the fire area if this cause for the surre-ignition may occur. : In confined space use self-contained breathing appropriate for the surre-ignitor. : Standard Protective clothing and equipment (Self fighters. : Standard EN 137 - Self-contained open-circuit contained open-circui	ounding fire. Exposure to fire and heat Cool endangered receptacles with water used in emergency cases from entering of possible. In possible. In be done without risk. Oparatus. Contained Breathing Apparatus) for fire	
5.1. Extinguishing media • Suitable extinguishing media • Unsuitable extinguishing media 5.2. Special hazards arising from the Specific hazards Hazardous combustion products 5.3. Advice for firefighters Specific methods	asures : Water spray or fog. : Carbon dioxide. Do not use water jet to extinguish. te substance or mixture : Exposure to fire may cause containers to rupture/ : None. : Use fire control measures appropriate for the surr radiation may cause gas receptacles to rupture. C spray jet from a protected position. Prevent water sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes i Do not extinguish a leaking gas flame unless absor re-ignition may occur. Extinguish any other fire. Move containers away from the fire area if this car ighters : In confined space use self-contained breathing ap Standard protective clothing and equipment (Self fighters.	ounding fire. Exposure to fire and heat Cool endangered receptacles with water used in emergency cases from entering of possible. Dutely necessary. Spontaneous/explosive n be done without risk. Deparatus. Contained Breathing Apparatus) for fire mpressed air breathing apparatus with full	

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipme	nt and emergency procedures
For non-emergency personnel	 Act in accordance with local emergency plan. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Stay upwind. See section 8 of the SDS for more information on personal protective equipment

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For emergency responders	: See section 5.3 of the SDS for more information.	·	
6.2. Environmental precautions			
	Try to stop release.		
5.3. Methods and material for contain	ment and cleaning up		
	Ventilate area.		
6.4. Reference to other sections			
	See also sections 8 and 13.		
SECTION 7: Handling and stor	rage		
7.1. Precautions for safe handling			
Safe use of the product	: Do not breathe gas.		
	Avoid release of product into atmosphere.		
	The product must be handled in accordance with go	ood industrial hygiene and safety	
	procedures.		
	Only experienced and properly instructed persons s		
		Consider pressure relief device(s) in gas installations.	
	Ensure the complete gas system was (or is regulari	ly) checked for leaks before use.	
	Do not smoke while handling product. Use only properly specified equipment which is suitable for this product, its supply pressure		
	and temperature. Contact your gas supplier if in dou		
	Avoid suck back of water, acid and alkalis.		
	Assess the risk of potentially explosive atmospheres	s and the need for explosion-proof	
	equipment.		
	Purge air from system before introducing gas.		
	Take precautionary measures against static dischar	ge.	
	Keep away from ignition sources (including static di	scharges).	
	Consider the use of only non-sparking tools.		
	Ensure equipment is adequately earthed.		
Safe handling of the gas receptacle	: Refer to supplier's container handling instructions.		
	Do not allow backfeed into the container.	en nell state en l	
	Protect containers from physical damage; do not dra		
	When moving cylinders, even for short distances, us	se a cart (trolley, hand truck, etc.)	
	designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a		
		-	
	wall or bench or placed in a container stand and is r	ready for use.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis	eady for use. continue use and contact supplier.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves o	ready for use. continue use and contact supplier. or safety relief devices.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves o Damaged valves should be reported immediately to	eady for use. continue use and contact supplier. or safety relief devices. the supplier.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves o	eady for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves o Damaged valves should be reported immediately to Keep container valve outlets clean and free from co	eady for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves of Damaged valves should be reported immediately to Keep container valve outlets clean and free from co Replace valve outlet caps or plugs and container ca	ready for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water. ps where supplied as soon as contained	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves of Damaged valves should be reported immediately to Keep container valve outlets clean and free from co Replace valve outlet caps or plugs and container ca is disconnected from equipment.	eady for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water. ups where supplied as soon as containe	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves of Damaged valves should be reported immediately to Keep container valve outlets clean and free from co Replace valve outlet caps or plugs and container ca is disconnected from equipment. Close container valve after each use and when emp	ready for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water. ups where supplied as soon as containe oty, even if still connected to equipment. ontainer to another.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves of Damaged valves should be reported immediately to Keep container valve outlets clean and free from co Replace valve outlet caps or plugs and container ca is disconnected from equipment. Close container valve after each use and when emp Never attempt to transfer gases from one cylinder/c	ready for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water. ups where supplied as soon as containe oty, even if still connected to equipment. ontainer to another. to raise the pressure of a container.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves of Damaged valves should be reported immediately to Keep container valve outlets clean and free from co Replace valve outlet caps or plugs and container ca is disconnected from equipment. Close container valve after each use and when emp Never attempt to transfer gases from one cylinder/c Never use direct flame or electrical heating devices	ready for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water. ups where supplied as soon as containe oty, even if still connected to equipment. ontainer to another. to raise the pressure of a container.	
	wall or bench or placed in a container stand and is r If user experiences any difficulty operating valve dis Never attempt to repair or modify container valves of Damaged valves should be reported immediately to Keep container valve outlets clean and free from co Replace valve outlet caps or plugs and container ca is disconnected from equipment. Close container valve after each use and when emp Never attempt to transfer gases from one cylinder/c Never use direct flame or electrical heating devices Do not remove or deface labels provided by the sup	ready for use. continue use and contact supplier. or safety relief devices. the supplier. ntaminants particularly oil and water. ups where supplied as soon as containe oty, even if still connected to equipment. ontainer to another. to raise the pressure of a container. uplier for the identification of the content	

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.2. Conditions for safe storage, in	cluding any incompatibilities	· ·
Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to p from falling over. Stored containers should be periodically checked for general condition and b Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of hear Keep away from combustible materials. Segregate from oxidant gases and other oxidants in store. All electrical equipment in the storage areas should be compatible with the ri potentially explosive atmosphere.		or general condition and leakage. e. way from sources of heat and ignition. n store.
.3. Specific end use(s)		
	None.	
ECTION 8: Exposure contr	ols/personal protection	

DNEL (Derived-No Effect Level)

8.2.	Exposure	controls

8.2.1. Appropriate engineering controls

8.2.2. Individual protection measures, e.g. personal protective equipment

······································
A risk assessment should be 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: PPE compliant to the recommended EN/ISO standards should be selected.
: Wear safety glasses with side shields.
Standard EN 166 - Personal eye-protection - specifications.
: Wear working gloves when handling gas containers. Standard EN 388 - Protective gloves against mechanical risk, performance level 1 or higher.
: Consider the use of flame resistant anti-static safety clothing.
Standard EN ISO 14116 - Limited flame spread materials. Standard EN 1149-5 - Protective clothing: Electrostatic properties.
Wear safety shoes while handling containers.
Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

Provide adequate general and local exhaust ventilation.

Systems under pressure should be regularily checked for leakages.

Gas detectors should be used when flammable gases/vapours may be released. Consider the use of a work permit system e.g. for maintenance activities.

Product to be handled in a closed system.

: None available.

: None available.

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 Respiratory protection Thermal hazards 	 Country : SE / Language : EN Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. When indicated by a risk assessment, Respiratory Protective Equipment must be used. The selection of the Respiratory Protective Device (RPD) must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected RPD. Self contained breathing apparatus is recommended, where unknown exposure may be expected, e.g. during maintenance activities on installation systems. None necessary. None in addition to the above sections. 	
8.2.3. Environmental exposure contro	ls	
· · · · · · · · · · · · · · · · · · ·	Refer to local regulations for restriction of emissic specific methods for waste gas treatment.	ons to the atmosphere. See section 13 for

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Appediation	
- Physical state at 20°C / 101.3kPa	: Gas
- Colour	: Colourless
Odour	: Odourless.
	Odour threshold is subjective and inadequate to warn of overexposure.
pH	: Not applicable for gases and gas mixtures.
Melting point / Freezing point	: Not applicable for gas mixtures.
Boiling point	: Not applicable for gas mixtures.
Flash point	: Not applicable for gases and gas mixtures.
Flammability	: Extremely flammable gas
Explosive limits	: Flammability range not available.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Vapour pressure [20°C]	: Not applicable.
Vapour pressure [50°C]	: Not applicable.
Density	: Not applicable
Vapour density	: Not applicable for gases and gas mixtures.
Relative density, liquid (water=1)	: Not applicable
Relative density, gas (air=1)	: Heavier than air.
Water solubility	: Solubility in water of component(s) of the mixture :
	Hydrogen: 1.6 mg/l Argon: 67.3 mg/l
Partition coefficient n-octanol/water (Log Kow)	: Not applicable for gas mixtures.
Auto-ignition temperature	: Not known.
Decomposition temperature	: Not applicable.
Viscosity, kinematic	: No reliable data available.
Particle characteristics	: Not applicable for gases and gas mixtures.
9.2. Other information	
9.2.1. Information with regard to physical hazar	d classes
- · ·	

Explosive properties	: Not applicable.
Oxidising properties	: Not applicable.
9.2.2. Other safety characteristics	
Molar mass	· Not applicable for das mixtures

Woldi Mass	. Not applicable for gas mixtures.
Evaporation rate	: Not applicable for gases and gas mixtures.

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Other data	: Gas/vapour heavier than air. May accumulate in ground level. None.	confined spaces, particularly at or below
SECTION 10: Stability and	reactivity	
-	reactivity	
-	reactivity No reactivity hazard other than the effects descr	ibed in sub-sections below.
SECTION 10: Stability and 10.1. Reactivity 10.2. Chemical stability		ibed in sub-sections below.

Can form explosive mixture with air. May react violently with oxidants.

smoking.

Air, Oxidisers.

with air. May react violently with oxidants.

Avoid moisture in installation systems.

For additional information on compatibility refer to ISO 11114.

10.3. Possibility of hazardous reactions

Reactivity

10.4. Conditions to avoid

10.5. Incompatible materials

10.6. Hazardous decomposition products

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

: This mixture contains components with the following reactivity : Can form explosive mixture

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008			
: No toxicological effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: No known effects from this product.			
: Not applicable for gases and gas mixtures.			
: The substance/mixture has no endocrine disrupting properties.			

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SECTION 12: Ecological inform	nation		
12.1. Toxicity			
Assessment	: No ecological damage caused by this product.		
EC50 48h - Daphnia magna [mg/l]	: No data available.		
EC50 72h - Algae [mg/l]	: No data available.		
LC50 96 h - Fish [mg/l]	: No data available.	: No data available.	
12.2. Persistence and degradability			
Assessment	: No ecological damage caused by this product.		
12.3. Bioaccumulative potential			
Assessment	: No data available.		
<u>12.4. Mobility in soil</u>			
Assessment	: Because of its high volatility, the product is unlikel Partition into soil is unlikely.	ly to cause ground or water pollution.	
12.5. Results of PBT and vPvB assess	sment		
Assessment	: Not classified as PBT or vPvB.		
12.6. Endocrine disrupting properties			
	The substance/mixture has no endocrine disruptir	ng properties.	
12.7. Other adverse effects			
Other adverse effects	: No known effects from this product.		
Effect on the ozone layer			
Effect on global warming	: Contains greenhouse gas(es).		

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
List of hazardous waste codes (from Commission Decision 2000/532/EC as amended)	 Contact supplier if guidance is required. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into any place where its accumulation could be dangerous. Ensure that the emission levels from local regulations or operating permits are not exceeded. Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at http://www.eiga.org for more guidance on suitable disposal methods. Return unused product in original container to supplier. 16 05 04 *: Gases in pressure containers (including halons) containing hazardous substances.
13.2. Additional information	
	External treatment and disposal of waste should comply with applicable local and/or national regulations.

SECTION 14: Transport information

14.1. UN number or ID number

In accordance with ADR / RID / IMDG / IATA / ADN	
UN-No.	:

1954

Air Liquide

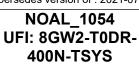
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14.2. UN proper shipping name

Transport by road/rail (ADR/RID) Transport by air (ICAO-TI / IATA-DGR) Transport by sea (IMDG)

14.3. Transport hazard class(es)

Labelling

Transport by road/rail (ADR/RID)

Classification code Hazard identification number Tunnel Restriction

Transport by air (ICAO-TI / IATA-DGR) Class / Div. (Sub. risk(s))

Transport by sea (IMDG)

Class / Div. (Sub. risk(s)) Emergency Schedule (EmS) - Fire Emergency Schedule (EmS) - Spillage

14.4. Packing group

Transport by road/rail (ADR/RID) Transport by air (ICAO-TI / IATA-DGR) Transport by sea (IMDG)

14.5. Environmental hazards

Transport by road/rail (ADR/RID) Transport by air (ICAO-TI / IATA-DGR) Transport by sea (IMDG)

14.6. Special precautions for user

Packing Instruction(s) Transport by road/rail (ADR/RID) Transport by air (ICAO-TI / IATA-DGR) Passenger and Cargo Aircraft Cargo Aircraft only Transport by sea (IMDG)

Special transport precautions

- : COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Argon)
- : Compressed gas, flammable, n.o.s. (Hydrogen, Argon)
- : COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Argon)



2.1 : Flammable gases.

- : 2
- : 1F
- : 23
- : B/D Tank carriage : Passage forbidden through tunnels of category B, C, D and E. Other carriage : Passage forbidden through tunnels of category D and E
- : 2.1
- : 2.1
- : F-D
- : S-U
- : Not established.
- : Not established.
- : Not established.
- : None.
- : None.
- : None.
- : P200
- : Forbidden.
- : 200.
- : P200
- : 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 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.

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14.7. Maritime transport in bulk acco	ording to IMO instruments	
	Not applicable.	
SECTION 15: Regulatory info	rmation	
15.1. Safety, health and environmen	tal regulations/legislation specific for the substance o	r mixture
EU-Regulations		
Restrictions on use	: None.	
	Contains no substance(s) listed on the R	EACH Candidate List
National legislation	: Ensure all national/local regulations are o	
Seveso Directive : 2012/18/EU (Seveso	o III) : Covered.	
National regulations		
Ensure all national/local regulations are	observed.	
Germany		
Water hazard class (WGK)	: WGK nwg, Non-hazardous to water (Clas	ssification according to AwSV, Annex 1)
National Rules and Recommendations	725 Ortsbewegliche Druckgasbehälter", Gasen", GefahrstoffV mit Technischen R	W mit TRBSen insbesondere TRBS 3145 / TRGS TRBS 2141, BGRegel 500 Teil 2.33: "Umgang mit egeln Gefährliche Stoffe TRGS insbesondere hrdungsbeurteilung", TRGS 400, 500, 510, 900."
Netherlands		
SZW-lijst van kankerverwekkende stoff	•	
SZW-lijst van mutagene stoffen	: None of the components are listed	
SZW-lijst van reprotoxische stoffen – B SZW-lijst van reprotoxische stoffen –	orstvoeding : None of the components are listed : None of the components are listed	
Vruchtbaarheid		
SZW-lijst van reprotoxische stoffen – C	ntwikkeling : None of the components are listed	
Denmark		
Danish National Regulations	: Young people below the age of 18 years	are not allowed to use the product
Switzerland		
Storage class (LK)	: LK 2 - Liquefied or pressurized gases	
15.2. Chemical safety assessment		
	A CSA does not need to be carried out for	or this product.

SECTION 16: Other information

Indication of changes

: Safety data sheet in accordance with commission regulation (EU) No 2020/878.

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Abbreviations and acronyms	CLP - Classification Labelling Packaging Regulation REACH - Registration, Evaluation, Authorisation and (EC) No 1907/2006 EINECS - European Inventory of Existing Commerci CAS# - Chemical Abstract Service number PPE - Personal Protection Equipment LC50 - Lethal Concentration to 50 % of a test popula RMM - Risk Management Measures PBT - Persistent, Bioaccumulative and Toxic vPvB - Very Persistent and Very Bioaccumulative STOT- SE : Specific Target Organ Toxicity - Single I CSA - Chemical Safety Assessment EN - European Standard UN - United Nations ADR - European Agreement concerning the Internat Road IATA - International Air Transport Association IMDG code - International Maritime Dangerous Goo RID - Regulations concerning the International Carri WGK - Water Hazard Class	ATE - Acute Toxicity Estimate CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 EINECS - European Inventory of Existing Commercial Chemical Substances CAS# - Chemical Abstract Service number PPE - Personal Protection Equipment LC50 - Lethal Concentration to 50 % of a test population RMM - Risk Management Measures PBT - Persistent, Bioaccumulative and Toxic vPvB - Very Persistent and Very Bioaccumulative STOT- SE : Specific Target Organ Toxicity - Single Exposure CSA - Chemical Safety Assessment EN - European Standard UN - United Nations ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road IATA - International Air Transport Association IMDG code - International Maritime Dangerous Goods RID - Regulations concerning the International Carriage of Dangerous Goods by Rail	
Fraining advice Further information	 Ensure operators understand the flammability hazar Classification using data from databases maintained Association (EIGA). Data is maintained in EIGA doc Guide', downloadable at : http://www.eiga.eu. Classification in accordance with the procedures and (EC) 1272/2008 (CLP). 	l by the European Industrial Gases 169 : 'Classification and Labelling	

Full text of H- and EUH-statements	
Flam. Gas 1A	Flammable gases, Category 1A
Flam. Gas 1B	Flammable gases, Category 1B
H220	Extremely flammable gas.
H221	Flammable gas.
H280	Contains gas under pressure; may explode if heated.
Press. Gas (Comp.)	Gases under pressure : Compressed gas

DISCLAIMER OF LIABILITY

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

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

End of document