**O** Air Liquide

# SAFETY DATA SHEET

Page : 1/11

Revised edition no : 4.0 Revision date : 2023-01-23

Supersedes version of : 2021-07-14

## Arcal F10, Arcal F2, Formiergas

NOAL\_1016 UFI: E7T2-K05N-G00U-PTUA

Country : DK / Language : EN

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

#### 1.1. Product identifier

Trade name SDS no	<ul> <li>Arcal F10, Arcal F2, Formiergas</li> <li>NOAL_1016</li> <li>UFI: E7T2-K05N-G00U-PTUA</li> </ul>

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	: Industrial and professional uses. Perform risk assessment prior to use.
	Industrial and professional use for chemical analysis, calibration, (routine) quality control,
	laboratory use, under controlled conditions.
	Contact supplier for more information on uses.
Uses advised against	: Consumer use.
	Uses other than those listed above are not supported, contact your supplier for more
	information on other uses.

#### 1.3. Details of the supplier of the safety data sheet

#### Company identification Supplier AIR LIQUIDE Denmark A/S Høje Taastrupvej 42 2630 Taastrup - DENMARK T +45 76 25 25 25 info.denmark@airliquide.com

E-Mail address (competent person)

: eunordic-sds@airliquide.com

#### 1.4. Emergency telephone number

Emergency telephone number

: 112 (24 / 7) Availability

#### **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	

#### 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP) Hazard statements (CLP) : Danger

: H221 - Flammable gas. H280 - Contains gas under pressure; may explode if heated.

	SAFETY DATA SHEET	Page : 2/11
<b>Air Liquide</b>		Revised edition no : 4.0
		Revision date : 2023-01-23
		Supersedes version of : 2021-07-14
Arcal	F10, Arcal F2, Formiergas	NOAL_1016 UFI: E7T2-K05N- G00U-PTUA
		Country : DK / Language : EN
Precautionary statements (CLP)		
- Prevention	: P210 - Keep away from heat, hot surfaces, sparks, No smoking.	open flames and other ignition sources.
- Response	: P377 - Leaking gas fire: Do not extinguish, unless le P381 - In case of leakage, eliminate all ignition sour	
- Storage	: P403 - Store in a well-ventilated place.	
2.3. Other hazards		
	None.	
	Not classified as PBT or vPvB.	
	The substance/mixture has no endocrine disrupting	properties.

#### **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]
Nitrogen	CAS-No.: 7727-37-9 EC-No.: 231-783-9 EC Index-No.: REACH-no: *1	90	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	10	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.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- Inhalation	: Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing
	stopped.
- Skin contact	: 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 exposure.

#### 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.

	SAFETY DATA SHEET	Page : 3/11	
<b>O</b> Air Liquide		Revised edition no : 4.0	
		Revision date : 2023-01-23	
		Supersedes version of : 2021-07-14	
Arcal F10, A	rcal F2, Formiergas	NOAL_1016 UFI: E7T2-K05N- G00U-PTUA	
		Country : DK / Language : EN	
SECTION 5: Firefighting measures			
5.1. Extinguishing media			
- Suitable extinguishing media - Unsuitable extinguishing media	<ul><li>Water spray or fog.</li><li>Carbon dioxide.</li><li>Do not use water jet to extinguish.</li></ul>		
5.2. Special hazards arising from the substar	nce or mixture		
Specific hazards Hazardous combustion products	: Exposure to fire may cause containers to rupture/exp : None.	lode.	
5.3. Advice for firefighters			
Specific methods Special protective equipment for fire fighters	<ul> <li>Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems.</li> <li>If possible, stop flow of product.</li> <li>Use water spray or fog to knock down fire fumes if possible.</li> <li>Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.</li> <li>Move containers away from the fire area if this can be done without risk.</li> <li>In confined space use self-contained breathing apparatus.</li> <li>Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.</li> <li>Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.</li> </ul>		
	Standard EN 469 - Protective clothing for firefighters. for firefighters.	Standard - EN 659: Protective gloves	

SECTION 6: Accidental release measures	SECTION 6	6: Accidental release measures
--	-----------	--------------------------------

6.1. Personal precautions, protective ec	guipment and emergency procedures
For non-emergency personnel	: Act in accordance with local emergency plan.
	Stay upwind.
	See section 8 of the SDS for more information on personal protective equipment
For emergency responders	: See section 5.3 of the SDS for more information.
6.2. Environmental precautions	
	Try to stop release.
6.3. Methods and material for containm	ent and cleaning up
	Ventilate area.
6.4. Reference to other sections	
	See also sections 8 and 13.

	SAFETY DATA SHEET	Page : 4/11		
<b>O</b> Air Liquide		Revised edition no : 4.0		
Hirtiquide		Revision date : 2023-01-23		
		Supersedes version of : 2021-07-		
Arcal F10, Arcal F2, Formiergas		NOAL_1016 UFI: E7T2-K05N- G00U-PTUA		
		Country : DK / Language : EN		
SECTION 7: Handling and st	torage			
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 goo procedures.	od industrial hygiene and safety		
	Only experienced and properly instructed persons sh Consider pressure relief device(s) in gas installations	<b>e</b> .		
	Ensure the complete gas system was (or is regularily Do not smoke while handling product.	<ul> <li>r) checked for leaks before use.</li> </ul>		
	Use only properly specified equipment which is suita and temperature. Contact your gas supplier if in doul Avoid suck back of water, acid and alkalis.			
	Assess the risk of potentially explosive atmospheres equipment.	and the need for explosion-proof		
	Purge air from system before introducing gas.			
	Take precautionary measures against static discharg	je.		
	Keep away from ignition sources (including static dis			
	Consider the use of only non-sparking tools.			
	Ensure equipment is adequately earthed.			
afe handling of the gas receptacle		: Refer to supplier's container handling instructions. Do not allow backfeed into the container.		
	Protect containers from physical damage; do not dra	a roll slide or drop		
	When moving cylinders, even for short distances, us	-		
	designed to transport cylinders.			
	Leave valve protection caps in place until the contair	ner has been secured against either a		
	wall or bench or placed in a container stand and is re	-		
	If user experiences any difficulty operating valve disc			
	Never attempt to repair or modify container valves or	-		
	Damaged valves should be reported immediately to Keep container valve outlets clean and free from con			
	Replace valve outlet caps or plugs and container cap			
	is disconnected from equipment.			
	Close container valve after each use and when empt	ty, even if still connected to equipment		
		Never attempt to transfer gases from one cylinder/container to another.		
	-	Never use direct flame or electrical heating devices to raise the pressure of a container.		
	Do not remove or deface labels provided by the support	plier for the identification of the content		
	of the container. Suck back of water into the container must be prever	nted		
	Open valve slowly to avoid pressure shock.			
2.2. Conditions for safe storage, inc	cluding any incompatibilities			
	Observe all regulations and local requirements regar Containers should not be stored in conditions likely to			
	Container valve guards or caps should be in place.			
	Containers should be stored in the vertical position a	nd properly secured to prevent them		
	from falling over.			
	Stored containers should be periodically checked for Keep container below 50°C in a well ventilated place			
	Store containers in location free from fire risk and aw			
	Keep away from combustible materials.	,		
	Sogragate from evident gases and other evidents in			

Segregate from oxidant gases and other oxidants in store.

All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.

	SAFETY DATA SHEET	Page : 5/11
<b>Air Liquide</b>		Revised edition no : 4.0
		Revision date : 2023-01-23
		Supersedes version of : 2021-07-1
Arcal	l F10, Arcal F2, Formiergas	NOAL_1016 UFI: E7T2-K05N- G00U-PTUA
		Country : DK / Language : EN
7.3. Specific end use(s)		
	None.	
SECTION 8: Exposure co	ontrols/personal protection	
8.1. Control parameters		
DEL (Occupational Exposure Limi	its) : None available.	
ONEL (Derived-No Effect Level)	: None available.	
PNEC (Predicted No-Effect Conce	entration) : None available.	
8.2. Exposure controls		
3.2.1. Appropriate engineering of	controls	
	Product to be handled in a closed system. Systems under pressure should be regularily Gas detectors should be used when flammab Consider the use of a work permit system e.g	le gases/vapours may be released.
3.2.2. Individual protection meas	sures, e.g. personal protective equipment	
	A risk assessment should be conducted and or risks related to the use of the product and to s	
	The following recommendations should be co	nsidered <sup>.</sup>
	PPE compliant to the recommended EN/ISO	
Eye/face protection	: Wear safety glasses with side shields.	standards should be selected.
Eye/face protection Skin protection		standards should be selected.
	<ul> <li>Wear safety glasses with side shields.</li> <li>Standard EN 166 - Personal eye-protection - s</li> <li>Wear working gloves when handling gas cont</li> </ul>	standards should be selected. specifications. ainers.
Skin protection	<ul> <li>Wear safety glasses with side shields.</li> <li>Standard EN 166 - Personal eye-protection - s</li> <li>Wear working gloves when handling gas cont</li> </ul>	standards should be selected. specifications. ainers. nechanical risk, performance level 1 or higher.
Skin protection - Hand protection	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - s</li> <li>Wear working gloves when handling gas cont Standard EN 388 - Protective gloves against i</li> <li>Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spread</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher. safety clothing. ad materials.
Skin protection - Hand protection	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - s</li> <li>Wear working gloves when handling gas cont Standard EN 388 - Protective gloves against i</li> <li>Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spreas Standard EN 1149-5 - Protective clothing: Ele</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher. safety clothing. ad materials.
Skin protection - Hand protection	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - s</li> <li>Wear working gloves when handling gas cont Standard EN 388 - Protective gloves against i</li> <li>Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spread</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher. safety clothing. ad materials. ctrostatic properties.
Skin protection - Hand protection	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - s</li> <li>Wear working gloves when handling gas cont Standard EN 388 - Protective gloves against i</li> <li>Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spreas Standard EN 1149-5 - Protective clothing: Ele Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective</li> <li>Standard EN 137 - Self-contained open-circui</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher. safety clothing. ad materials. ctrostatic properties.
Skin protection - Hand protection - Other	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - s</li> <li>Wear working gloves when handling gas cont Standard EN 388 - Protective gloves against i</li> <li>Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spreas Standard EN 1149-5 - Protective clothing: Ele Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective Standard EN 137 - Self-contained open-circui face mask.</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher safety clothing. ad materials. ctrostatic properties. equipment - Safety footwear. t compressed air breathing apparatus with full atory Protective Equipment must be used. The (RPD) must be based on known or
Skin protection - Hand protection - Other	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - standard EN 388 - Protective gloves against in Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spreas Standard EN 1149-5 - Protective clothing: Ele Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective Standard EN 137 - Self-contained open-circui face mask.</li> <li>When indicated by a risk assessment, Respirat selection of the Respiratory Protective Device anticipated exposure levels, the hazards of the selected RPD. Self contained breathing apparatus is recomm</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher safety clothing. ad materials. ctrostatic properties. equipment - Safety footwear. t compressed air breathing apparatus with full atory Protective Equipment must be used. The (RPD) must be based on known or e product and the safe working limits of the mended, where unknown exposure may be
Skin protection - Hand protection - Other	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - standard EN 388 - Protective gloves against in</li> <li>Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spreas Standard EN 1149-5 - Protective clothing: Ele Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective Standard EN 137 - Self-contained open-circui face mask. When indicated by a risk assessment, Respiras selection of the Respiratory Protective Device anticipated exposure levels, the hazards of the selected RPD.</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher. safety clothing. ad materials. ctrostatic properties. equipment - Safety footwear. t compressed air breathing apparatus with full atory Protective Equipment must be used. The (RPD) must be based on known or e product and the safe working limits of the mended, where unknown exposure may be
Skin protection - Hand protection - Other	<ul> <li>Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection - standard EN 388 - Protective gloves against in Consider the use of flame resistant anti-static Standard EN ISO 14116 - Limited flame spreas Standard EN 1149-5 - Protective clothing: Ele Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective Standard EN 137 - Self-contained open-circui face mask. When indicated by a risk assessment, Respira selection of the Respiratory Protective Device anticipated exposure levels, the hazards of the selected RPD. Self contained breathing apparatus is recommer expected, e.g. during maintenance activities of</li> </ul>	standards should be selected. specifications. ainers. mechanical risk, performance level 1 or higher. safety clothing. ad materials. ctrostatic properties. equipment - Safety footwear. t compressed air breathing apparatus with full atory Protective Equipment must be used. The (RPD) must be based on known or e product and the safe working limits of the mended, where unknown exposure may be

specific methods for waste gas treatment.

(9)	Air	Lia	JÌd	e

# SAFETY DATA SHEET

Page : 6/11

Revised edition no : 4.0 Revision date : 2023-01-23

Supersedes version of : 2021-07-14

# Arcal F10, Arcal F2, Formiergas

NOAL\_1016 UFI: E7T2-K05N-G00U-PTUA

Country : DK / Language : EN

#### **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	: Odourless.
	Odour threshold is subjective and inadequate to warn of overexposure.
рН	: 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)	: Lighter or similar to air.
Water solubility	: Solubility in water of component(s) of the mixture :
	Hydrogen: 1.6 mg/l     Nitrogen: 20 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 hazard classes		
Explosive properties	: Not applicable.	
Oxidising properties	: Not applicable.	
9.2.2. Other safety characteristics		
Molar mass	: Not applicable for gas mixtures.	
Evaporation rate	: Not applicable for gases and gas mixtures.	
Other data	: None.	

# SECTION 10: Stability and reactivity 10.1. Reactivity No reactivity hazard other than the effects described in sub-sections below. 10.2. Chemical stability Stable under normal conditions. 10.3. Possibility of hazardous reactions Can form explosive mixture with air. May react violently with oxidants. Reactivity : This mixture contains components with the following reactivity : Can form explosive mixture with air. May react violently with oxidants.

	SAFETY DATA SHEET	Page : 7/11
Air Liquide		Revised edition no : 4.0
		Revision date : 2023-01-23
		Supersedes version of : 2021-07-1
Arcal	F10, Arcal F2, Formiergas	NOAL 1016
/	, ,	UFI: E7T2-K05N-
		G00U-PTUA
		Country : DK / Language : EN
10.4. Conditions to avoid		
	Keep away from heat, hot surfaces, sparks, open fla smoking. Avoid moisture in installation systems.	ames and other ignition sources. No
0.5. Incompatible materials		
	Air, Oxidisers. For additional information on compatibility refer to IS	GO 11114.
10.6. Hazardous decomposition	products	
	Under normal conditions of storage and use, hazard	lous decomposition products should not

#### **SECTION 11: Toxicological information**

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	: No toxicological effects from this product.
Skin corrosion/irritation	: No known effects from this product.
Serious eye damage/irritation	: No known effects from this product.
Respiratory or skin sensitisation	: No known effects from this product.
Germ cell mutagenicity	: No known effects from this product.
Carcinogenicity	: No known effects from this product.
Toxic for reproduction : Fertility	: No known effects from this product.
Toxic for reproduction : unborn child	: 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.
11.2. Information on other hazards	
Other information	: The substance/mixture has no endocrine disrupting properties.

<b>SECTION 12: Ecological informa</b>	ation
<u>12.1. Toxicity</u>	
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.
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 unlikely to cause ground or water pollution.
	Partition into soil is unlikely.
12.5. Results of PBT and vPvB assessme	ent
Assessment	: Not classified as PBT or vPvB.

	SAFETY DATA SHEET	Page : 8/11
<b>O</b> Air Liquide	OAI ETT DATA ONEET	Revised edition no : 4.0
Hir Liquide		Revision date : 2023-01-23
		Supersedes version of : 2021-07-14
Arcal F10,	Arcal F2, Formiergas	NOAL_1016 UFI: E7T2-K05N- G00U-PTUA
		Country : DK / Language : EN
2.6. Endocrine disrupting properties		
	The substance/mixture has no endocrine disrupting	g properties.
12.7. Other adverse effects		
Other adverse effects	: No known effects from this product.	
Effect on the ozone layer	: None.	
Effect on global warming	: Contains greenhouse gas(es).	
	tions.	
SECTION 13: Disposal considera		
13.1. Waste treatment methods		
_ist of hazardous waste codes (from Commi Decision 2000/532/EC as amended)	Contact supplier if guidance is required. Do not discharge into areas where there is a risk of Waste gas should be flared through a suitable burr Do not discharge into any place where its accumula Ensure that the emission levels from local regulation exceeded. Refer to the EIGA code of practice Doc.30 "Dispose http://www.eiga.org for more guidance on suitable of Return unused product in original container to supp ssion : 16 05 04 *: Gases in pressure containers (including substances.	ner with flash back arrestor. ation could be dangerous. ons or operating permits are not al of Gases", downloadable at disposal methods. olier.
13.2. Additional information		
13.2. Additional information	External treatment and disposal of waste should connected and regulations.	omply with applicable local and/or

14.1. UN number or ID number	
In accordance with ADR / RID / IMDG / IATA / ADN UN-No.	: 1954
14.2. UN proper shipping name	
Transport by road/rail (ADR/RID)	: COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Nitrogen)
Transport by air (ICAO-TI / IATA-DGR)	: Compressed gas, flammable, n.o.s. (Hydrogen, Nitrogen)
Transport by sea (IMDG)	: COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Nitrogen)
14.3. Transport hazard class(es)	
Labelling	2.1 : Flammable gases.
Transport by road/rail (ADR/RID)	
Class	: 2
Classification code	: 1F
Hazard identification number	: 23
Tunnel Restriction	: 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
Transport by air (ICAO-TI / IATA-DGR)	
Class / Div. (Sub. risk(s))	: 2.1

SAFETY DATA SHEET         SAFETY DATA SHEET         SAFETY DATA SHEET         Arcal F10, Arcal F2, Formiergas         Arcal F10, Arcal F2, Formiergas         Description of the set of t	Revised edition no : 4.0         Revision date : 2023-01-23         Supersedes version of : 2021-07-14         NOAL_1016         UFI: E7T2-K05N-         G00U-PTUA         Country : DK / Language : EN
Transport by sea (IMDG)         Class / Div. (Sub. risk(s))       £ 2.1         Emergency Schedule (EmS) - Fire       F-D         Emergency Schedule (EmS) - Spillage       £ S-U         14.4 Packing group         Transport by road/rail (ADR/RID)       £ Not established.         Transport by sea (IMDG)       £ None.         Transport by road/rail (ADR/RID)       £ None.         Transport by air (ICAO-TI / IATA-DGR)       £ None.         Transport by sea (IMDG)       £ None.      <	Supersedes version of : 2021-07-14 NOAL_1016 UFI: E7T2-K05N- G00U-PTUA
Transport by sea (IMDG)         Class / Div. (Sub. risk(s))       : 2.1         Emergency Schedule (EmS) - Fire       : F-D         Emergency Schedule (EmS) - Spillage       : S-U         14.4. Packing group         Transport by road/rail (ADR/RID)       : Not established.         Transport by air (ICAO-TI / IATA-DGR)       : Not established.         Transport by sea (IMDG)       : Not established.         Transport by sea (IMDG)       : Not established.         Transport by sea (IMDG)       : Not established.         14.5. Environmental hazards       : None.         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by sea (IMDG)       : None.         14.6. Special precautions for user       : None.	NOAL_1016 UFI: E7T2-K05N- G00U-PTUA
Transport by sea (IMDG)         Class / Div. (Sub. risk(s))       : 2.1         Emergency Schedule (EmS) - Fire       : F-D         Emergency Schedule (EmS) - Spillage       : S-U         14.4. Packing group         Transport by road/rail (ADR/RID)       : Not established.         Transport by air (ICAO-TI / IATA-DGR)       : Not established.         Transport by sea (IMDG)       : Not established.         14.5. Environmental hazards       :         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by sea (IMDG)       : None.	UFI: E7T2-K05N- G00U-PTUA
Class / Div. (Sub. risk(s)): 2.1Emergency Schedule (EmS) - Fire: F-DEmergency Schedule (EmS) - Spillage: S-U <b>14.4. Packing group</b> Transport by road/rail (ADR/RID): Not established.Transport by air (ICAO-TI / IATA-DGR): Not established.Transport by sea (IMDG): Not established. <b>14.5. Environmental hazards</b> Transport by road/rail (ADR/RID): None.Transport by sea (IMDG): None. <b>14.6. Special precautions for user</b>	Country : DK / Language : EN
Class / Div. (Sub. risk(s)): 2.1Emergency Schedule (EmS) - Fire: F-DEmergency Schedule (EmS) - Spillage: S-U <b>14.4. Packing group</b> Transport by road/rail (ADR/RID): Not established.Transport by air (ICAO-TI / IATA-DGR): Not established.Transport by sea (IMDG): Not established. <b>14.5. Environmental hazards</b> Transport by road/rail (ADR/RID): None.Transport by sea (IMDG): None. <b>14.6. Special precautions for user</b>	
<b>14.4. Packing group</b> Transport by road/rail (ADR/RID)       : Not established.         Transport by air (ICAO-TI / IATA-DGR)       : Not established.         Transport by sea (IMDG)       : Not established. <b>14.5. Environmental hazards</b> Transport by road/rail (ADR/RID)       : None.         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by sea (IMDG)       : None.         Transport by sea (IMDG)       : None.	
Transport by road/rail (ADR/RID)       : Not established.         Transport by air (ICAO-TI / IATA-DGR)       : Not established.         Transport by sea (IMDG)       : Not established. <b>14.5. Environmental hazards</b> Transport by road/rail (ADR/RID)       : None.         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by sea (IMDG)       : None.         Transport by sea (IMDG)       : None.         Transport by sea (IMDG)       : None.	
Transport by air (ICAO-TI / IATA-DGR)       : Not established.         Transport by sea (IMDG)       : Not established.         14.5. Environmental hazards	
Transport by road/rail (ADR/RID)       : None.         Transport by air (ICAO-TI / IATA-DGR)       : None.         Transport by sea (IMDG)       : None.         14.6. Special precautions for user	
Transport by air (ICAO-TI / IATA-DGR): None.Transport by sea (IMDG): None.14.6. Special precautions for user	
Packing Instruction(s)	
Transport by road/rail (ADR/RID):P200Transport by air (ICAO-TI / IATA-DGR)	
Special transport precautions       : Avoid transport on vehicles where the load s         compartment.       Ensure vehicle driver is aware of the potenti         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         - Ensure valve protection device (where pro       - Ensure valve protection device (where pro	ial hazards of the load and knows what to do in provided) is correctly fitted.
14.7. Maritime transport in bulk according to IMO instruments	
14.7. Manume transport in burk according to into instruments	

Not applicable.

#### SECTION 15: Regulatory information

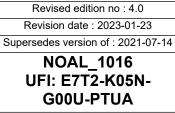
#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### **EU-Regulations** Restrictions on use : None. Contains no substance(s) listed on the REACH Candidate List National legislation : Ensure all national/local regulations are observed. Seveso Directive : 2012/18/EU (Seveso III) : Covered. National regulations Ensure all national/local regulations are observed. Germany Water hazard class (WGK) : WGK nwg, Non-hazardous to water (Classification according to AwSV, Annex 1) : [German regulations] BetriebssicherheitsV mit TRBSen insbesondere TRBS 3145 / TRGS National Rules and Recommendations 725 Ortsbewegliche Druckgasbehälter", TRBS 2141, BGRegel 500 Teil 2.33: "Umgang mit Gasen", GefahrstoffV mit Technischen Regeln Gefährliche Stoffe TRGS insbesondere TRGS 407 "Tätigkeiten mit Gasen - Gefährdungsbeurteilung", TRGS 400, 500, 510, 900." BGR 104, TRBS 2152.

<b>Air Liquide</b>
--------------------

# SAFETY DATA SHEET

Arcal F10, Arcal F2, Formiergas



Page : 10/11

Country : DK / Language : EN

Netherlands	
SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: None of the components are listed
SZW-lijst van reprotoxische stoffen –	: None of the components are listed
Vruchtbaarheid	
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: 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 this product.

SECTION 16: Other informatio	n
Indication of changes	: Safety data sheet in accordance with commission regulation (EU) No 2020/878.
Abbreviations and acronyms	<ul> <li>ATE - Acute Toxicity Estimate</li> <li>CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008</li> <li>REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006</li> <li>EINECS - European Inventory of Existing Commercial Chemical Substances</li> <li>CAS# - Chemical Abstract Service number</li> <li>PPE - Personal Protection Equipment</li> <li>LC50 - Lethal Concentration to 50 % of a test population</li> <li>RMM - Risk Management Measures</li> <li>PBT - Persistent, Bioaccumulative and Toxic</li> <li>vPvB - Very Persistent and Very Bioaccumulative</li> <li>STOT - SE : Specific Target Organ Toxicity - Single Exposure</li> <li>CSA - Chemical Safety Assessment</li> <li>EN - European Agreement concerning the International Carriage of Dangerous Goods by Road</li> <li>IATA - International Air Transport Association</li> <li>IMDG code - International Maritime Dangerous Goods</li> <li>RID - Regulations concerning the International Carriage of Dangerous Goods by Road</li> <li>WGK - Water Hazard Class</li> <li>STOT - RE : Specific Target Organ Toxicity - Repeated Exposure</li> <li>UFI : Unique Formula Identifier</li> </ul>
Training advice Further information	<ul> <li>Ensure operators understand the flammability hazard.</li> <li>Classification using data from databases maintained by the European Industrial Gases Association (EIGA). Data is maintained in EIGA doc 169 : 'Classification and Labelling Guide', downloadable at : http://www.eiga.eu.</li> <li>Classification in accordance with the procedures and calculation methods of Regulation (EC) 1272/2008 (CLP).</li> </ul>

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.

<b>O</b> Air Liquide	SAFETY DATA SHEET	Page : 11/11	
		Revised edition no : 4.0	
		Revision date : 2023-01-23	
		Supersedes version of : 2021-07-14	
Arcal F10, Arcal F2, Formiergas		NOAL 1016	
		UFI: E7T2-K05N- G00U-PTUA	
		Country : DK / Language : EN	
H221	Flammable gas.	Flammable gas.	
H280	Contains gas under pressure; may explode if he	Contains gas under pressure; may explode if heated.	
Press. Gas (Comp.)	Gases under pressure : Compressed gas	Gases under pressure : Compressed gas	
DISCLAIMER OF LIABILITY	: Before using this product in any new process compatibility and safety study should be carr Details given in this document are believed to	ied out.	

or damage resulting from its use can be accepted.

Whilst proper care has been taken in the preparation of this document, no liability for injury

End of document