

AUTOGAS

Ver. For	sion: m No:	1.0 582014	Preparation Date : Revision Date:	2/25/2016 2/25/2016
1.	IDENTI	FICATION OF	THE PRODUCT AND OF THE COMPANY/UNDERTAKI	NG
1.1	Product 1	dentifier		
	Produ	ct Name	AUTOGAS	
	Synon	y <i>ms</i>	Autogas, EN589, Auto LPG	
	SDS N	lo	582014	
	CAS N	lo	68476-85-7	
	EC No)	270-704-2	
	Defini	tion	Autogas in summer: Mixture of hydrocarbons consisting n-bi and iso-butane C_4H_{10} (70%), Propane C_3H_8 (30%) and other hydrocarbons such as propylene, butylene etc. Autogas in winter: Mixture of hydrocarbons consisting n-but iso-butane C_4H_{10} (50%), Propane C_3H_8 (50%) and other hydrocarbons such as propylene, butylene etc. Methanol up to 2000 mg/kg is allowed to add into autogas in for preparing the fuel to use (TS EN589). May contain odorizer ethyl mercaptan up to 50 ppm. It also c 1,3-butadiene less than 0,1 % w/w.	utane cane and winter contains
1.2	Relevant	Identified Uses	Of The Product And Uses Advised Against	
	Releva Uses	nt Identified	Used as fuel. For sale as autogas. Autogas is only used as a fuel for vehicles in the fuel stations supply this fuel.	which
	Uses A	dvised Against	See chapter 16 for a general overview	
1.3	Details O	f The Supplier	Of The Safety Data Sheet	
	Suppli	er	YILDIRIM PETROL TİCARET VE NAKLİYAT A.Ş.	
	(Manu	facturer)	exen@exengaz.com.tr	
	Addres	ss – Factory	19 Mayıs Cd. Nova Baran Plaza No: 4 Kat: 17 34360 Şişli - İstanbul	
	Teleph	one	0212 233 12 50	
	Fax		0212 233 12 97	
1.4	Informati	ion Providing A	uthority About Safety Data Sheet	
			Ali Aslan ÇAĞLI (<u>acagli@ipragaz.com.tr</u>)	
1.5	Emergen	cy Telephone N	lumber	
	Сотра	any Emergency	0212 233 12 50	
	Call C	enter	444 3936, 444 EXEN, TR/EN	
	Emerg	ency	+90 216 337 83 83 (Msdsmarket)	
	Inform	ation	<u>bilgi@msdsmarket.com</u>	
2.	HAZARD	S IDENTIFICA	ATION	
2.1	Classif	ication Of The	Product	

2.1.1 Classification According to Regulation (EC) No 1272/2008

- Flam. Gas 1, H220 •
- Liq. Gas, H280 •



Version: Form No	: 1.0 o: 582014		Preparation Date Revision Date	: 2/25/2016 e: 2/25/2016
2.2 L	abel elements			
2.2.1.	Labeling Acco	ording to Regulation	n (EC) No 1272/2008 [CLP ¹ /GHS ²]	
	Product Identif	ïer		
	Hazard	Component for Labe	eling	
	• Petroleu	ım gases, liquefied		
	Hazard Pictogr	ams		
	Signal Word			
	· DANGE	CR		
	Hazard Stateme	ents		
	H2	20 Extremely flam	ımable gas	
	H2	80 Contains gas u	under pressure; may explode if heated	
	Precautionary	Statements		
	General			
	P102	Keep out of reach o	of children.	
	Preventi	ion		
	P201	Obtain special instr	ructions before use.	
	P210	Keep away from he sources. No smokin	eat, hot surfaces, sparks, open flames and 1g.	l other ignition
	P243	Take precautionary	y measures against static discharge.	
	P280	Wear protective glo	oves/protective clothing/eye protection/fd	ice protection.
	Respons	e		
	P308+P313	IF exposed: Call a	POISON CENTER or doctor/physician.	
	<i>P377</i>	Leaking gas fire – a	do not extinguish unless leak can be stop	ped safely.
	P381	Eliminate all ignition	on sources if safe to do so.	
	Storage	D A H		
	P410+P403	Protect from sunlig	ght. Store in a well-ventilated place.	
	Disposa	l		
	-	Tan and Information		
	Supplemental F	Ma data angil	labla	
	Smaaigl Dulag I	NO aaia avaii For Supplemental I	abol Elomento For Cortain Mintures	
2.2.2.	None	or supplemental L	abel Elements For Certain Mixtures	
223	Additional Lab	olina		
2.2.J.	Not	Applicable		
23 Н	azard Identifica	Applicable		
2.3 1	Skin Contact			
2.3.1.	Skin Connect Skin con may pre. Liquid n	ttact with liquid gas sent a similar hazar 1ay form skin burns.	may give rise to frost-bite or cold burns d when gas is being withdrawn, due to th	and containers he cooling effect.



AUTOGAS

 2.3.2. Eye Contact Contact with liquid or cold vapor can cause freezing of Liquid may cause eye burns. 2.3.3. Ingestion Liquefied gases may be harmful to health upon ingestio 2.3.4. Inhalation Short exposure to very high concentrations of hydrocar asphyxia. It should be noted that before suffocation occ limit of LPG in air is exceeded; possibly causing both a explosive atmosphere. Exposure to concentrations high dizziness. Exposure to atmospheres containing 8-10% of unconsciousness without any symptoms so quickly that a each other or protect themselves. Lack of sufficient oxyginjuries or death. 2.3.5. Long term effects Precautions should be taken to minimize exposure. Prolonged exposure to vapor concentrations above the exposure standard may cause headache, dizziness, naus upper respiratory tract, mouth and digestive tract, card asphyxiation, unconsciousness and even death. 2.3.6. Adverse Environmental Effects No data available 2.4. Additional Information None 3.1 Description Of The Substance Autogas in summer: Mixture of hydrocarbons consisting n-iso-butane C4H₁₀ [CAS#75-28-5] (70%), Propane C3H₈ [C other hydrocarbons such as propylene [CAS#115-07-1], bi Autogas in winter: Mixture of hydrocarbons consisting n-b (50%), Propane C3H₈ (50%) and other hydrocarbons such 	tissues. tissues. ton gases does t trs, the lower j n oxygen-deficie r than 10% may r less oxygen may the individuals c en may cause s	not cause flammability ent and y cause ay cause cannot help erious			
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No data available 2.4. Additional Information · None 3. COMPOSITION/INFORMATION ON INGREDIENTS 3.1 Description Of The Substance · Autogas in summer: Mixture of hydrocarbons consisting n- iso-butane C ₄ H ₁₀ [CAS#75-28-5] (70%), Propane C ₃ H ₈ [C other hydrocarbons such as propylene [CAS#115-07-1], bu · Autogas in winter: Mixture of hydrocarbons consisting n-b (50%), Propane C ₃ H ₈ (50%) and other hydrocarbons such · Methanol up to 2000 mg/kg is allowed to add into autogas fuel to use (TS EN589).					
 2.4. Additional Information None 3. COMPOSITION/INFORMATION ON INGREDIENTS 3.1 Description Of The Substance Autogas in summer: Mixture of hydrocarbons consisting n-iso-butane C4H10 [CAS#75-28-5] (70%), Propane C3H8 [C other hydrocarbons such as propylene [CAS#115-07-1], bit Autogas in winter: Mixture of hydrocarbons consisting n-b (50%), Propane C3H8 (50%) and other hydrocarbons such Methanol up to 2000 mg/kg is allowed to add into autogas fuel to use (TS EN589). 	No data available				
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1,3-butadiene [CAS#106-99-0] less than 0,1 % w/w	outane[CAS#10 AS# 74-98-6] (3 tylene [CAS#10 ttane and iso-bi as propylene, bi n winter for pre	16-97-8] and 30%) and 16-98-9] etc. utane C4H ₁₀ utylene etc. eparing the o contains			
NAME FINECS NO CAS NO CONTENT	o 50 ppm. It also	SIFICATION			
Data laura casas liguest ed 270 704 2 69476 95 7 100	50 ppm. It also CLASS	CID			
Petroleum gases, liquefied 2/0-/04-2 684/6-85-/ <100	50 ppm. It also %) CLASS Flam. Gas 1,	H220			

None •



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4 F1	RST AID MEASURES			
4.1 D	escription of first aid measure Community for the second second	ures		
4.1.1	General information	sumptoms are observed act medical advi		
112	Eollowing inhalation	symptoms are observed, get medical davi	ce.	
4.1.2	Following innalation			
	Kemove to fresh air.			#
	<i>Keep warm and at rest.</i> If the easualty is stupore	ous some physical restraint may be needed	same to provent	
	in initial ini	sus, some physical restraint may be neces	sary to prevent	10. 11
	If breathing but unconse	cious place in the recovery position		
	If breathing has stopped	l apply artificial respiration		
	If heartheat absent give	external cardiac compression		
	Monitor breathing and i	pulse_OBTAIN MEDICAL ATTENTION	IMMEDIATELY	
4.1.3	Following skin contact			
	Drench affected parts w	ith water.		.
	Remove contaminated c	lothing, rings, watches, etc. if possible - I	DO NOT attempt	
	to do so if they are adhe	ring to the skin.		
	Do not attempt to rehea	t the affected parts rapidly -reheat slowly	·.	
	Cover with a sterilized c	lressing.		
	Do not apply ointments	or powders.		
	Note that contaminated	clothing may cause a fire hazard.		
	Contaminated clothing s	should be soaked with water before being	removed.	
	It must be laundered bef	fore reuse.		
4.1.4	Following eye contact			
	Flush eye with copious d	quantities of water.		0
	Cover eye with a steriliz	zed dressing.		
	Obtain medical attention	n immediately.		
4.1.5	Following ingestion			
	In the unlikely event of i	ngestion, obtain medical attention immed	liately.	*
4.1.6	Self-protection of the fi	rst aider		
	First aid assistant: Pay	attention to self-protection!		
4.1.7	Notes for the doctor			
	· Symptoms: Headach	e, dizziness, drowsiness, loss of consciou	sness (fainting), c	and
	respiratory obstruct	ion (suffocation) state	• 0,	
	• Treat symptomatical	lly.		
5. FI	RE-FIGHTING MEASU	URES		
51 (
5.1 (reneral Information and	Flammable Properties	loughton (
	Extremely flammabl	e, nign nazara. Liquia can release consid	ierable vapor at	
	temperatures below	ambient which reaally form flammable m	uxtures.	

Use firefighting procedures suitable for surrounding area.



According To Regulation (EC) No 1907/2006 (REACH)

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• If safe to do so, remove containers from path of fire.

5.2 Extinguishing media:

- Shut off supply.
- If not possible and no risk to surroundings, let the fire burn itself out under controlled conditions.
- Dry chemical powder Extinguisher can be used for small fires.
- Water fog should be used to assist the approach to the source of the fire.
- All containers subject to fire or to radiant heat should be cooled by spraying with water.
- Water fog or spray, to cool fire-exposed (e.g. containers) and to protect personnel, should only be used by personnel trained in fire-fighting.

5.3 Unsuitable extinguishing media

None

5.4 Special hazards arising from the product

- Combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.
- The vapor is heavier than air, spreads along the ground and distant ignition is possible.
- Sustained fire attack on vessels may cause a Boiling Liquid Expanding Vapor Explosion (BLEVE).
- Contents are under pressure and can explode when exposed to heat or flames.
- Vapors settle at ground level and may reach, via drains and other underground passages, ignition sources remote from the point of escape.
- Static discharge; material can accumulate static charges which may cause an incendiary electrical discharge.
- Smoke, and carbon monoxide may be formed in the event of incomplete combustion.

5.5 Advice for fire-fighters

• Proper protective equipment including breathing apparatus for fire-fighting personnel exposed to fumes or smoke must be worn when approaching a fire in a confined space.

5.6 Additional information

- · Intervention Actions-General
- Keep upwind. Put on protective equipment before entering danger area.
- Intervention Actions-Fire (involving the substance)
- *Do not approach near to hot container(s).*
- *Keep container(s) cool with water spray.*
- Avoid unnecessary run-off of extinguishing media which may cause pollution.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- *Refer to protective measures listed in section 7 and 8.*
- Avoid contact with skin, eyes, and clothing.
- Take off immediately all contaminated clothing.
- Note that contaminated clothing may be a fire hazard.
- Contaminated clothing should be soaked with water before being removed.
- It must be laundered before reuse.



According To Regulation (EC) No 1907/2006 (REACH)

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	•	Test atmosphere for vapors to ensure safe working cond allowed into the area (Gas dedectors can be used). Local authorities should be advised if significant spillag Observe all relevant local and international regulations	litions before other pe ges cannot be contain s.	ersonnel are ed.
6.2 E	Enviro	onmental precautions		
	•	Prevent the material from entering drains or water courses Spillages or uncontrolled discharges into watercourses Environmental Agency or other appropriate regulatory	rses. must be alerted to the body.	2
6.3 M	Aetho E	ods and material for containment and cleaning up		
0.3.1		Control personal contact by using protective equipment Take up contaminated material and pass on for further Contain for disposal according to local / national regul	as required processing. ations.	
6.3.2	For	· cleaning up		
	•	Control personal contact by using protective equipment Small Spillages: Allow to evaporate. Large Spillages: Attempt to disperse the vapor or to dir example by using fog sprays.	t. vect its flow to a safe lo	ocation, for
633	Oth	Conect wastes in seared containers for disposal.		
0.3.3		Dispose of waste material according to local state and	federal regulations	
6.4 R	Refere	ence to other sections	jeaerai regulations.	
		Dispose of contaminated material as waste in accordan See Section 13.	ce with section 13.	
7. H	AND	LING AND STORAGE		
7.1.1	Pr	ecautions for safe handling		
7.1.2	Pro	tective measures		

Personal preventions

- Wear personal protection equipment. Refer to chapter 8. Do not eat, drink, smoke or sneeze at the workplace.
- Dangerous areas must be delimited and marked with appropriate warning and safety signs.
- In the immediate working surroundings there must be: Emergency spray installed provide eye wash and label its location conspicuously.
- Use in a well-ventilated area.
- Provide sufficient washing facilities.
- *Fill only into labeled container.*
- Instruction on the hazards and the protective measures using instruction manual are required with signature.
- Always wash hands with soap and water after handling.
- Working areas must be arranged in such a manner that they can be cleaned at all times.
- This product is intended for use in closed systems only.
- Do not use in confined areas.



 When using do not eat, drink or smoke. Do not breathe spray, fumes or mists. Take precautionary measures against static discharges. Instruct personnel "handling LPG about potential hazard them in safe handling and emergency procedures" Fire preventions See section 5. Environmental precautions: Dispose of waste material according to local, state and feee 1.3 Advice on general occupational hygiene Use good occupational work practice. Comply with the health and safety at work laws. Remove contaminated clothing and protective equipment 2 Conditions for safe storage, including any incompatibilities Store only in purpose designed pressure vessels or cylind. Store outdoors or in adequately ventilated storerooms. Locate tanks away from heat and other sources of ignition. 	ds and precautions, ederal regulations. before entering eat lers. n. ressed oxygen.	and train
 Do not breathe spray, fumes or mists. Take precautionary measures against static discharges. Instruct personnel "handling LPG about potential hazard them in safe handling and emergency procedures" Fire preventions See section 5. Environmental precautions: Dispose of waste material according to local, state and feeese of waste material according to local, state and feeese of waste material according to local, state and feeese of waste material according to local, state and feeese of waste material work practice. Use good occupational work practice. Comply with the health and safety at work laws. Remove contaminated clothing and protective equipment Store only in purpose designed pressure vessels or cylind Store outdoors or in adequately ventilated storerooms. Locate tanks away from heat and other sources of ignition Do not store in the vicinity of cylinders containing comprised with adapted for a figure of the storage areas should be provided with adapted for a figure of the storage areas should be provided with adapted for a figure of the storage areas should be provided with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted for a figure of the storage areas should be previded with adapted figure of the storage areas should be previded with adapted for a figure of the storage areas should be	ds and precautions, ederal regulations. before entering eat lers. n. ressed oxygen.	and train
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 Locate tanks away from heat and other sources of ignition Do not store in the vicinity of cylinders containing compr All storage grass should be provided with adapted first 	n. ressed oxygen.	
• Do not store in the vicinity of cylinders containing compr • All storage grass should be provided with adapted fine f	essed oxygen.	
. All storage grads should be provided with adaquate time t	<i>n</i> 1 1 <i>n n n n n n n n n n</i>	
Au siorage areas snouia de providea with adequate fire-f	fighting facilities.	
• Store in original containers.		
Avoid contact with incompatible materials		
• Avoid physical damage to containers.		
The design of pressure vessels (-40°C Minimum 50°C Max operating procedures must comply with national legislati of good practice. Small containers for example cylinders sealed an in good condition, should be stored outdoors of at no lower than ground level, and must be quickly remov Eliminate all sources of ignition from the storage area Load/Unload Temperature: Ambient	re at ambient tempe eximum) safety devic ion and with recogn of approved design r in well ventilated wable in an emergen	eratures. ces and the nized codes p, properly storerooms ncy.
 Product Transfer: Electrostatic charges may be generated electrical continuity by bonding all equipment. Avoid con the risk of cold burns. Do not use compressed air for fillin Take precautionary measures against static discharge. Ke and emptying securely closed when not in use. Ensure that of suitable pressure rating are used. Ensure that the perm product is not exceeded. Tank Cleaning: Cleaning, inspection and maintenance of operation that requires the implementation of strict proceed include issuing of work permits, gas-freeing of tanks, usin and wearing air-supplied breathing apparatus. Prior to e underway, the atmosphere within the tank must be monitod explosimeter. Recommended Materials: For containers or container line. 	d during pumping. A atact with equipmen ng, discharging or l Teep all connections at only containers / nissible filling ratio f storage tanks is a edures and precauti ng a manned harnes entry and whilst clea ored using an oxyge nings, use mild stee	Ensure t in view of handling. for filling equipment for the specialist ions. These ss, lifelines, aning is en meter an el or stainle



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STC	ORAGE INCOMPATIBILITY		
•	Keep/Store only in original container.		
•	Protect against: Strong oxidizing agents		
7.1 Advi	ce on common storage		
•	See also instructions on the label.		
•	Store in a cool, dry, well-ventilated area.		
•	Keep away from food, drink and animal f	feeding stuffs.	
•	Store away from incompatible materials	and foodstuff containers.	
•	Protect containers against physical dama	ige.	
7.2 Specif	fic precautions on storage Keep container tightly closed. Keep conta	niner in a cool, well-ventilated area	
B. EXPOS	SURE CONTROLS / PERSONAL PROT	TECTION	
3.1 Contro	ol parameters		
Pre	ventive industrial and medical examination	ons must be carried out according to	o the
app betv	lication area. Engineering controls are u veen the worker and the hazard.	used to remove a hazard or place a l	parrier
Wel	ll-designed engineering controls can be h	ighly effective in protecting workers	and will
typi	cally be independent of worker interactio	ns to provide this high level of prote	ection.
8.1.1 Occ	cupational exposure limits		
Ne	o data available.		
8.2 Exposi	ure controls Adequate ventilation should be used du	ring processing.	
8.2.1 App	propriate engineering controls:		
СО	Provide exhaust ventilation or other e ncentrations of vapors below their respec	engineering controls to keep the airl ctive threshold limit value.	porne
loc	Ensure that eyewash stations and safe cation.	ety showers are proximal to the wor	k-station
•	Keep away from food, drink and anim	al feeding stuffs.	
	Use personal protective equipment ac	ccording to EN ³ standards.	
•	The level of personal protection and t	he types of controls necessary will w	vary
de	pending on exposure conditions.		
•	Select controls based on a risk assess	ment of local circumstances.	
	<i>Use sealed systems as far as possible.</i> <i>See Section 7</i>		
8.2.2 Per	sonal protection equipment		
3.2.2.1 Eye	e / Face protection:		
	Use monogoggles or full face shield aga	inst gas leakage.	
8.2.2.2 Ski	n protection		
Har	nd protection		
	Use neoprene or nitrile rubber gloves. Glatmospheric boiling point of this product.	loves must maintain flexibility down	to the



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•	Impervious gloves should be used at LF used when handling the tube.	PG delivery , leather gloves should be	
E	Rody protection		
-	Use chemical resistant safety shoes or b natural fibres.	boots, overalls made of cotton or other	R
0	Other protection		<u> </u>
	Handle in accordance with good indust	rial hygiene and safety practice.	
8.2.2.3 K	espiratory protection		
	If engineering controls do not maintain which is adequate to protect worker he equipment suitable for the specific cond legislation.	airborne concentrations to a level alth, select respiratory protective litions of use and meeting relevant	
	Where air-filtering respirators are unsu high, there is a confined space or a risk pressure breathing apparatus.	uitable (e.g. where airborne concentrati of oxygen deficiency) use appropriate p	ons are positive
	Where air-filtering respirators are suite and filter, select a filter suitable for org	able, select an appropriate combination canic gases and vapours (boiling point >	of mask >65 ⁰ C).
8.2.3 E	Environmental exposure controls		
•	Minimize release to the environment. Legislation for the protection of the env	ironment must be met in full.	
9. PHY	SICAL AND CHEMICAL PROPERTIE	S	
9.1 Appe	parance		
	Form/Physical state	Liquefied gas under pressure	

Form/Physical state	Liquefied gas under pressure
Color	Colorless (both liquid and gas phase)
Odor	While normally odorless, scented with specific mercaptans to detect gas leak in supply plants.
	Value
pH (30 % aq. solution)	Not applicable
Boiling Point (°C) 760 mmHg	-13
Freezing Point, (°C)	-153
Vapor Pressure	2,50 bar @ 15°C 8,12 bar @ 50°C
Flash point , $^\circ\!C$	-74
Density @ 15°C	0,560 kg/lt (Liquid) 1,86 kg/m ³ (Gas) 1,55 (By air)
Autoignition point ($^{\circ}C$)	Not applicable
Solubility in water	Negligible
Solubility in solvents	Soluble in organic solvents
Lower/Upper Explosion Limits, %(V/V) (LEL)/(UEL)	1,9-9



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Auto-I	gnition Temperature, $^{\circ}C$	400	
Oxidiz	ing property	It is not oxidizing	
V	n D = 4 -	1 liter of liquid LPG produces 248 liters of	
vapou	vapour Kate	vapor at atmospheric pressure.	
0.1		Critical Pressure: 39 bar	
Other		Critical Temperature: 135°C	
N			

<u>Note</u>: The above features were determined according to prescribed methods at the Classification, Packaging and Labeling of Hazardous. Substances Regulation Section A-3 or a method comparable to the other.

10. STABILITY AND REACTIVITY

10.1 Reactivity

- 10.2 Chemical stability
 - Stable under recommended storage and handling conditions. (See section 7.)

10.3 Possibility of hazardous reactions

• There is no known hazardous reaction.

10.4 Conditions to avoid:

- Heat, open flames, sparks and flammable atmospheres, static charges
- Keep away from heat sources, open flames and other sources of ignition.
- Ground all process equipment.

10.5 Incompatible materials:

- Strong oxidizing agents.
- Avoid contact with strong oxidants, air, halogens (fluorine, chlorine, bromine, iodine) and HNO₃),

10.6 Hazardous decomposition products:

Combustion products are; CO, CO₂, hazardous vapors and gases

10.7 Hazardous polymerization:

Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

11.1 General Information

- Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.
- High gas oncentrations will displace available air; unconsciousness and death may occur suddenly from lack of oxygen. Rapid release of gases which are liquids under pressure, may cause frost burns of exposed tissues (skin, eye) due to evaporative cooling.

11.2 Acute toxicity

LC50(Inhalation) >5mg/l/4h (rat)

11.3 Skin corrosion/irritation and Eye damage/irritation:

Not irritating. Liquid causes cold burns.

11.4 CMR effects (Carcinogenity) :

1,3-butadiene content of the butane propellant less than 0.1 %m/m. Other components are not known to be associated with carcinogenic effects.



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11.5	CMR effects (Mutagenia	ity and Toxicity for reproduction) :	
	Not considered to co	use mutagenic hazards.	
	Not considered to be	e toxic to reproduction.	
11.6	Other Toxicological Effe	ects:	
	Allergic Effects	No data available.	
1	Effects on Repeated Doses	Exposure to skin may cause irritation, dermatitis and	l skin burns.
	Chronic Exposures	Precautions should be taken to minimize exposure.	
	Sensitization	Not expected to be a skin sensitizer.	
	Developmental Toxicity (Teratogenicity)	No data available	
	Fertility	No data available	
11.7	STOT-single/repeated ex	cposures:	
	STOT-single exposure	No data available	
	STOT-repeated exposure	No data available	
11.8	Symptoms related to the p	hysical, chemical and toxicological characteristics:	
	In case of inhalation	If there is a strong concentration of exposure to the p effect on the central nervous system (headache, dizzi drowsiness, etc.) or severe narcotic effects (loss of co due to decrease the concentration of oxygen in the at be observed. Exposure to 10% concentration of the p environment, by inhalation for 2 minutes, it may caus (anesthetic effect). Short exposure to very high concentrations of hydrood does not cause asphyxia. It should be noted that befo occurs, the lower flammability limit of LPG in air is possibly causing both an oxygen-deficient and explose atmosphere. Exposure to atmospheres containing 8- oxygen may cause unconsciousness without any symp quickly that the individuals cannot help each other o themselves. Lack of sufficient oxygen may cause series death.	voauci, mita ness, msciousness mosphere) can product in the se dizziness carbon gases re suffocation s exceeded; sive 10% or less ptoms so r protect ous injuries or
	In case of skin contact	Skin contact with liquid gas may give rise to frost-bit and containers may present a similar hazard when g withdrawn, due to the cooling effect. Liquid may form skin burns.	e or cold burns as is being
	In case of eye contact	Contact with liquid or cold vapor can cause freezing Liquid may cause eye burns.	of tissues.
	In case of ingestion	Liquid form can not be swallowed. Liquefied gases may be harmful to health upon inges	tion.
11.9	Additional Toxicologica	Information:	
	• Toxicological classi	fications are based on available knowledge and infor	mation

The special effects to health are considered by taking into account the information in • section 3.



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12. E	COLOGICAL INFORMATION			
10.1				
12.1	Ecotoxicity:			
	No data available			
12.2	Photo degradation			
	• No data available.			
12.3	Effects on Waste Water Treatment Plants			
	• Not determined.			
12.4	Mobility			
	Liquefied gas			
	Solubility in water: Negligible	•1 6	D: .11 .	•
	Evaporates extremely rapialy from we	iter or soil surfaces.	Disperses rapialy ii	i air.
	Water threat class	No data available		
	Clean Water Impact	No data available		
Kno	we or predicted environmental distribution	No data available		
12 5	P asults of PBT and vPvP assessment	No auta avallable		
IZ.J Riot	tic			
Dill	Ready biodearadability:	No data available		
Abi	Ready biodegradability.			
ADIC	Hydrobysis as a function of nH :	No data available		
	Photohysis as a function of p11.	No data available		
	Atmospheria oridation:	No data available		
	Almospheric oxidation.	No adia available		
· P	Persistence and degradability:			
Deco	omposition Potential of the products	Inherently biodegro	idable.	
The <i>k</i>	half-life of degradation	No data available		
Poter	ntial degradation of product content in the			
evalu	uation of wastewater treatment plants	no aala avallable		
· B	Bioaccumulation Potential :			
Biolo poter	ogical environment (biota) accumulation ntial	Does not bioaccum	ulate.	
Poter	ntial - nutrients pass through	No data available		
Refer	rence Values - Log Kow , Sw and BCF	No data available		
12.6	Additional information			
	• Aquatic toxicity: Product is expected	to be practically non	-toxic to aquatic org	ganisms.

- In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.
- See the sections 6, 7, 13, 14 and 15.

13. DISPOSAL CONSIDERATIONS

13.1 Product / Packaging disposal

• Note that properties of a material may change in use, and recycling or reuse may not always be appropriate



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- When recycling of the product is not possible, disposal to landfill or incineration in accordance with all applicable government laws and regulations is recommended.
 Contact waste disposal services
- This product contains hazardous ingredients listed in Section 2.
- Collect and dispose of it at an authorized disposal facility, in conformance with national and local regulations, and accordance with EEC Directives on hazardous waste.
- Do not pollute soil, water or environment with the waste product.
- In LPG tanks, always flammable products present, so LPG containers must be transported authorized distribution companies.
- Refusal cylinder should be returned back to seller.
- Welding on the container must be done only by authorized personnel

13.2 Contaminated packaging

• If there is product residue in the emptied container, follow directions for handling on the container's label.

13.3 Disposal Methods

- Dispose of chemicals waste or in accordance with local regulations.
- Follow all applicable local laws, rules and regulations regarding the proper disposal of this material.
- If this product has been altered or contaminated with other hazardous materials, appropriate waste analysis may be necessary to determine proper method for disposal.
- Collect the waste separately. Waste disposal according to EC-regulations 75/442/EEC
- and 91/689/EEC in the corresponding versions, covering waste and dangerous waste.
 Dispose of waste according to applicable local, state, and federal regulations.

14. TRANSPORT INFORMATION

UN 1965 HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Autogas), 2.1, (B/D)

	ADR ⁴ /RID ⁵	ADNR	IMDG ⁶	ICAO ⁷ /IATA ⁸
TRANSPORTATION	Road	River	Marine	Airways
PROPER SHIPPING NAME	UN 1965 HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Autogas), 2,1, (B/D)			
UN/ID No.	1965	1965	1965	1965
SYMBOL	2		2	
CLASS	2	2	2	2
PACKAGING GROUP	-	-	-	-
LABELLING NO	2.1	2.1	2.1	2.1
CLASSIFICATION CODE	2F			
HAZARD NO (HIN NO)	23			
EmS			F-D;S-U	
MARINE Pollutant			-	
Tunnel restrictions: Passage forbidden through tunnels of category B/D				
Road Transport Notes: This product is regulated as an hazardous material.				



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15. R	REGULATORY INF	ORMATION			
15.1	Safety, Health And	l Environmental Regulat	ions / Legislation Specific For The	Substance	
15.2	Chemical Safety A	ssessment ble			
15.2	2.1 HAZARD				
	CLP classificatio · Flam. Ga · Lia. Gas.	n according to Annex VI s 1, H220 H280	of CLP (Regulation (EC) No 1272/2	008)	
15.3	INTERNATIONA	L REGULATIONS			
	• This safety 1907/2006 and IS GHS/CLP.	datasheet complies with O 11014:2009. This prod	the requirements of Regulation (EC) uct is classified according to EU Dir) No. rective	
<i>16. (</i>	OTHER INFORMA	TION			
16.1	Other information				
	 For additional in A.Ş. products ple 	formation regarding YIL ease contact Ali Aslan ÇA	DIRIM PETROL TÌCARET VE N. ĞLI (<u>acagli@ipragaz.com.tr</u>)	AKLİYAT	
	 The above inform cases of potentia 	ation complies with the I l poisoning supportive the	907/2006 Directive and its amendmerapy is of the utmost importance.	ents. In all	
16.2	Related Person				
	 Doruk Chemical Prepared by: Ch 	Management Systems, Er emical Engineer Rabia N	ngineering, Technology & Consultar ur KANPARA	ıcy Inc. Co.	
	(<u>rabianur.kanpar</u>	<u>ca@doruksistem.com.tr</u>)			
	 Specialist Accred 	litation No: TURKAK/NB	C GBF-01.65.16 / 04.12.2015		
160	www.MsdsMarke	<u>et.com</u> ; <u>info@doruksister</u>	<u>n.com.tr</u> ; 02163378383		
16.3	Revision Date, Ver	sion and SDS no			
•	Date : February 2	5, 2016			
•	Version: 1.0	1			
16 A	MSDS NO: 36201 Reason of rejssue	4			
10.4	. Compiling ac	cording to Regulation (FC	$(2) N_{0} 1272/2008$		
16 5	Rolovant H - and H	Ulung to Regulation (EC	d full tort).		
10.5	H220	Fytremely flammable of			
	H220	Contains gas under pr	us essure: may explode if heated		
16.6	Legal disclaimer	comunis gus unuer pro	συστο, πων επρισάς η πεάτεα		
10.0	• The purpose of and safety requ	<i>the above information is trements.</i>	to describe the products only in terr	ns of health	
	• The informatio properties or a	n given should not, theref s specification	fore, be construed as guaranteeing s	pecific	
	· Customers sho	uld satisfy themselves as a	to the suitability and completeness o	f such	

information for their own particular use.



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Form No:	 n: 1.0 Preparation Date : 2/25/2016 Revision Date : 2/25/2016 Revision Date : 2/25/2016 The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Due to the many factors outside our control when using this product we cannot accept liability for any injury accident loss or damage caused 			
	<u>through its use.</u>			

¹ CLP:Classification Laballing and Packaging

- ⁴ ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- ⁵ RID: Regulations Concerning the International Transport of Dangerous Goods by Rail
- ⁶ IMDG: International Maritime Code for Dangerous Goods
- ⁷ ICAO: International Civil Aviation Organization
- ⁸ IATA: International Air Transport Association

² GHS:Global Harmonised System

³ EN Standards: Personal Protective Equipment Standards Determined by CEN (European Committee for Standardization)