SAFETY DATA SHEET

legal basis:
COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council (REACH)

CADAC

Creation date	11th June 2024		
Revision date		Version	1

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

1.1. Product identifier — CADAC

Substance / mixture — mixture

UFI — 5200-U0CW-500W-Q8N0

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

Mixture's intended use

Fuel.

Main intended use

PC-FUE-OTH — Other fuels

Mixture uses advised against

The product should not be used in ways other than those referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name	INKO-TIME
Address	Strumykowa 10a, Łupowo, 66-450 Poland
Phone	+48 95 737 52 18
E-mail	biuro@inkotime.pl

Competent person responsible for the safety data sheet

Name	INKO-TIME
E-mail	biuro@inkotime.pl

1.4. Emergency telephone number

+48 34 359 21 65 (8-16)
European emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Flam. Gas 1A, H220
Press. Gas (compressed gas), H280

Most serious adverse physico-chemical effects

Contains gas under pressure; may explode if heated. Extremely flammable gas.

2.2. Label elements

Hazard pictogram

Signal word

Danger

Hazard statements

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 In case of leakage, eliminate all ignition sources.

P410+P403 Protect from sunlight. Store in a well-ventilated place.

Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger.

2.3. Other hazards

Explosive mixtures can form at ambient temperature due to gas-air mixing. Heating a sealed gas in a sealed vessel can lead to an explosion. It is mildly irritating, slightly narcotic and asphyxiating as oxygen is displaced from the surrounding air. Direct contact with liquefied gas can cause frostbite. The endocrine-disrupting properties of the mixture have not been studied. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7 Registration number: 01-2119474691-32	butane	90	Flam. Gas 1A, H220 Press. Gas (compressed gas), H280	1, 2, 3
Index: 601-004-00-0 CAS: 75-28-5 EC: 200-857-2 Registration number: 01-2119485395-27	isobutane	10	Flam. Gas 1A, H220 Press. Gas (compressed gas), H280	1, 3

Notes

1 Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

2 Note K: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w 1,3-butadiene (Einecs No 203-450-8). If the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P210-P403 should apply. This note applies only to certain complex oil-derived substances in Part 3.

3 Note U (Table 3): When put on the market gases have to be classified as “Gases under pressure”, in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.)
Press. Gas (Liq.)
Press. Gas (Ref. Liq.)
Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air.

If on skin

Remove contaminated clothes. Do not remove clothes if it adheres firmly to the skin. Warm up affected parts of the body if frostbite is apparent. In case of major frost injuries, please contact your doctor.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes.

If swallowed

Rinse out the mouth with clean water. In the event of issues, find medical help.

4.2. Most important symptoms and effects, both acute and delayed

If inhaled

Excessive exposure to vapors may cause respiratory irritation. After inhalation, drowsiness, shortness of breath, rapid breathing and breathing difficulties, headaches, dizziness and tachycardia may occur. At high vapor concentrations (oxygen concentration ≤19%) confusion, nausea, vomiting and loss of consciousness may occur.

If on skin

Not expected.

If in eyes

Not expected.

If swallowed

Not expected.

4.3. Indication of any immediate medical attention and special treatment needed

The physician, after assessing the condition of the injured person, makes a decision regarding the course of action.

More information

Other relevant information is not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water jet.

5.2. Special hazards arising from the substance or mixture

If there are hazardous decomposition products, they are listed in section 10.6. Danger of bursting (explosion) when heated. In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leakage, eliminate all ignition sources.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. Contains gas under pressure; may explode if heated. Extremely flammable gas. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8.

6.2. Environmental precautions

Prevent uncontrolled release.

6.3. Methods and material for containment and cleaning up

Dilute vapors (if accumulated) with water spray. Thoroughly ventilate the spill area. Stop leak if possible. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. No smoking. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Do not store with comburents, self-flammable or self-heating substances, organic peroxides, oxidising agents, pyrophoric solids or liquids and explosives. Read section 10 for information on incompatible materials before using the product. Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight.

7.3. Specific end use(s)

Apart from the already mentioned guidelines, it is not necessary to follow any specific recommendations for the use of this product.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains no substances for which occupational exposure limits are set.

8.2. Exposure controls

Ensure proper ventilation or exhaust system in areas with high vapor concentrations. Do not use in poor ventilation. Ensure workplace is equipped with a safety shower and eye wash station. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed) according to EN 166.

Skin protection

Use barrier creams for skin protection, they should, however, not be applied once exposure has occurred. Hand protection: Protective gloves product resistant in accordance with EN ISO 374-1. In an explosion hazard area, both outerwear and footwear should be able to dissipate electrostatic charges. Other protection: protective work- and footwear, according to EN 344. Contaminated skin should be washed thoroughly.

Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

Flammable product, avoid contact with hot surfaces, sources of fire and high temperatures. Danger of bursting (explosion) when heated.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	gas
Colour	colourless
Odour	without fragrance
Melting point/freezing point	-138.3 °C (1013 hPa)
Boiling point or initial boiling point and boiling range	-0.5 °C (1013 hPa)
Flammability	extremely flammable
Lower and upper explosion limit	
bottom	1.4 %
upper	9.4 %
Flash point	-60 °C (1013 hPa)
Auto-ignition temperature	365 °C
Decomposition temperature	not determined
pH	gas
Kinematic viscosity	not applicable
Solubility in water	slightly soluble (61,2 mg/l; 25°C)
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	<1300 kPa at 70 °C

	Density and/or relative density	
	Density	0.57 g/cm³ at 25 °C
	Relative vapour density	not determined
	Particle characteristics	not applicable
9.2.	**Other information**	
	Content of organic solvents (VOC)	100%

SECTION 10: Stability and reactivity

10.1. Reactivity

When used in the standard way, there is not any dangerous reaction with other substances.

10.2. Chemical stability

Product is stable under normal conditions of use, storage, and transportation.

10.3. Possibility of hazardous reactions

Contact with sources of ignition makes product set on fire.

10.4. Conditions to avoid

Keep away from flames, sparks, overheating, electrostatic charge and other sources of ignition. Avoid creating mixtures of vapors or sprayed liquid with air. The product is stable and no degradation occurs under normal use.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

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

No toxicological data is available for the mixture. Excessive inhalation of fumes can lead to adverse health effects. It does not meet the criteria for classification as a CMR category 1A or 1B substance, according to point 1.3.1 of Annex I to Regulation (EC) No 1272/2008 (CLP).

Acute toxicity

Based on the available data, the criteria for classification of the mixture are not met.

butane						
Route of exposure	Parameter	Value	Exposure time	Species	Sex	Value determination
Inhalation	LC_{50}	658 mg/l	4 hours	Rat		Literary studies
Inhalation	LC_{50}	276000 ppm	4 hours	Rat		Literary studies

isobutane						
Route of exposure	Parameter	Value	Exposure time	Species	Sex	Value determination
Inhalation	LC_{50}	658 mg/l	4 hours	Rat		Literary studies
Inhalation	LC_{50}	276000 ppm	4 hours	Rat		Literary studies
Inhalation	LC_{50}	1237 mg/l		Mouse		

Skin corrosion/irritation

Based on the available data, the criteria for classification of the mixture are not met.

Serious eye damage/irritation

Based on the available data, the criteria for classification of the mixture are not met.

Respiratory or skin sensitisation

Based on the available data, the criteria for classification of the mixture are not met.

Germ cell mutagenicity
Based on the available data, the criteria for classification of the mixture are not met.

Carcinogenicity
Based on the available data, the criteria for classification of the mixture are not met.

Reproductive toxicity
Based on the available data, the criteria for classification of the mixture are not met.

Toxicity for specific target organ - single exposure
Based on the available data, the criteria for classification of the mixture are not met.

Toxicity for specific target organ - repeated exposure
Based on the available data, the criteria for classification of the mixture are not met.

Aspiration hazard
Based on the available data, the criteria for classification of the mixture are not met.

11.2. Information on other hazards
The endocrine-disrupting properties of the mixture have not been studied.

SECTION 12: Ecological information

12.1. Toxicity
Based on the available data, the criteria for classification of the mixture are not met.

Acute toxicity

isobutane					
Parameter	Value	Exposure time	Species	Environment	Value determination
LC_{50}	27.98 mg/l	96 hours	Fish		Estimated value, QSAR
EC_{50}	16.33 mg/l	48 hours	Aquatic invertebrates		Estimated value, QSAR
EC_{50}	8.57 mg/l	96 hours	Algae		Estimated value, QSAR

12.2. Persistence and degradability
Data for the mixture are not available.

Biodegradability

butane				
Parameter	Value	Exposure time	Environment	Result
				Easily biodegradable

isobutane				
Parameter	Value	Exposure time	Environment	Result
	50 %	3,1 days		Easily biodegradable

12.3. Bioaccumulative potential
Data for the mixture are not available.

butane					
Parameter	Value	Exposure time	Species	Environment	Temperature [°C]
Log Kow	<4				

isobutane					
Parameter	Value	Exposure time	Species	Environment	Temperature [°C]
BCF	27				
Log Pow	2.76				
Log Kow	<3				

12.4. Mobility in soil

There are no ecotoxicological data available for the product.

butane				
Parameter	Value	Environment	Temperature	Source
Oberflächenspannung	<0.10		0°C	N/m

isobutane				
Parameter	Value	Environment	Temperature	Source
Napięcie powierzchniowe	<0.10		0°C	N/m
Koc	35			

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

The endocrine-disrupting properties of the mixture in aqueous environment have not been studied.

12.7. Other adverse effects

Unknown.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Pojemnik bez pozostałości produktu można traktować jako odpad nie stanowiący zagrożenia. Do not puncture, cut or weld empty packaging. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not dispose unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

UN 2037

14.2. UN proper shipping name

RECEPTACLES, SMALL, CONTAINING GAS

14.3. Transport hazard class(es)

2 Gases

14.4. Packing group

not relevant

14.5. Environmental hazards

Product is not an environmental hazard according to the criteria of the UN Model Regulations.

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

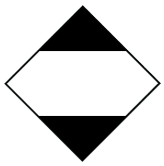
Not applicable - not intended for bulk transportation.

Additional information

Hazard identification No.	
UN number	2037
Classification code	5F
Safety signs	2.1

Road transport - ADR

Limited quantities	1 L
Sign	



Tunnel restriction code	(D)

Marine transport - IMDG

EmS (emergency plan)	F-D, S-U
MFAG	620

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

For mixtures, a chemical safety assessment is not required.

More information

Seveso Directive 2012/18/EU (Seveso III): P2 FLAMMABLE GASES

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

Guidelines for safe handling used in the safety data sheet

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381	In case of leakage, eliminate all ignition sources.

P410+P403	Protect from sunlight. Store in a well-ventilated place.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC_{50}	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC_{50}	Lethal concentration of a substance in which it can be expected death of 50% of the population
log Kow	Octanol-water partition coefficient
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
Press. Gas (Comp.)	Gas under pressure: compressed gas
Press. Gas (Diss.)	Gas under pressure: dissolved gas
Press. Gas (Liq.)	Gas under pressure: liquefied gas
Press. Gas (Ref. Liq.)	Gas under pressure: refrigerated liquefied gas
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative

Flam. Gas	Flammable gas
Press. Gas	Gases under pressure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

Uses advised against: Any type of use not listed in this Safety Data Sheet.

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available.

The changes (which information has been added, deleted or modified)

Version 1.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.