

**SAFETY DATA SHEET**

according to Regulation (EC) № 1907/2006 (REACH), ANNEX II

**Calibration gas mixture 2,53% CH<sub>4</sub> (methane) - 97,47% (air)**


Date: 19.05.2023

Version 1.0

**1. IDENTIFICATION OF THE PRODUCTS AND OF THE COMPANY**

<b>1.1 Product identifier</b>	
Trade name:	Calibration gas mixture 2,53% CH <sub>4</sub> (methane) - 97,47% (air)
Molecular formula:	Not applicable. Mixture
<b>1.2 Relevant identified uses of the products and uses advised against</b>	
Identified uses:	Laboratory tests
Uses advice:	Apply calibration gas mixture for its intended purpose and according to the recommendation
<b>1.3 Details of the manufacturer/supplier of the safety data sheet</b>	
Manufacturer:	SE "Ukrmetrteststandart"
Address:	4, Metrologichna str. 03143. Kyiv, Ukraine.
Communication tools:	+38 050 3344 205 Email: V.holevchuk@gmail.com
<b>1.4 Emergency telephone number</b>	
+38 050 3344 205	

**2. HAZARDS IDENTIFICATION**

<b>2.1 Classification of product according to Regulation (EC) No 1272/2008 [CLP/GHS]</b>	
Gases under pressure, H280	
<b>2.2 Label elements</b>	
Hazard pictograms:	
Signal word:	<b>Warning</b>
Hazard statements:	H280 Contains gas under pressure; may explode if heated
Precautionary statements:	Absent
Measures for safe handling:	Absent
Safe storage conditions:	P410+P403 Protect from sunlight. Store in a well-ventilated place
Additional labeling requirements:	Absent
<b>2.3 Other hazards</b>	
Calibration gas mixture does not meet the criteria for PBT or vPvB	

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>3.2 Mixture</b>				
Name	CAS	EINECS	Classification (CLP/GHS)	Weight (%), content (or range)
Air	132259-10-0	630-461-9	Gases under pressure, H280	97,47
Methane	74-82-8	200-812-7	Flammable gases 1, H220 Gases under pressure, H280	2,53

**4. FIRST AID MEASURES**

<b>4.1 Description of first aid measures</b>	
General measures:	Product is safe if you follow the instruction for its application.
In case of eye contact:	No side effects are expected from this product. In case of eye irritation: rinse immediately with plenty of water. See an ophthalmologist if irritation persists.
In case of skin contact:	No side effects are expected from this product.
In case of ingestion:	As this product is a gas, refer to the inhalation section.
In case of inhalation:	Remove victim to fresh air and maintain comfortable breathing.
<b>4.2 Most important symptoms and effects, both acute and delayed</b>	
Acute symptoms:	See Section 2 and / or Section 11.
<b>4.3 Indication of any immediate medical attention and special treatment needed</b>	

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Treatment: symptomatic treatment		
<b>5. FIREFIGHTING MEASURES</b>		
<b>5.1 Extinguishing media</b>		
Suitable extinguishing media:	Use fire-extinguishing equipment that meets local conditions and the environment.	
Unsuitable extinguishing media:	There are no restrictions on the choice of conventional fire extinguishing agents	
<b>5.2 Special hazards arising from the product</b>		
Contains gas under pressure. In a fire or if heated, a pressure increase will occur, and the container may burst. Decomposition products may include Carbon Oxides		
<b>5.3 Advice for firefighters</b>		
Use standard firefighting procedures and consider the hazards of other involved materials. <i>Special protective equipment:</i> wear protective clothing. In case of dangerous vapors use respiratory apparatus.		
<b>6. ACCIDENTAL RELEASE MEASURES</b>		
<b>6.1 Personal precautions, protective equipment and emergency procedures</b>		
Remove all incompetent people from the territory. Avoid breathing vapors. Ensure adequate ventilation.		
<b>6.1.1 For non-emergency personnel</b>	Inform the appropriate service	
<b>6.1.2 For emergency responders</b>	Use protective equipment in accordance with section 8.	
<b>6.2 Environmental precautions</b>		
Does not pose a danger to the environment with proper use and disposal.		
<b>6.3 Methods and material for containment and cleaning up</b>		
Stop the leak		
<b>6.4 Reference to other section</b>		
Information about personal precautions - see Section 8. Information about waste disposal - see Section 13.		
<b>7. HANDLING AND STORAGE</b>		
<b>7.1 Precautions for safe handling</b>		
<i>Protective measures:</i> avoid contact with eyes, skin, inhalation. Use in well-ventilated place. Use personal protective equipment. <i>Environmental precautions:</i> adhere to the technological regime and the rules of storage and transportation of the product. Effective work of ventilation systems. <i>Advice on occupational hygiene:</i> comply with the rules of personal hygiene		
<b>7.2 Conditions for safe storage, including any incompatibilities</b>		
Storage conditions:	Storage temperature – 30°C - + 35°C. Avoid direct sunlight	
Special requirements for packaging:	Hermetically sealed container intended for storing gases under pressure	
Requirements for storage rooms:	Cool, closed well ventilated premises	
Additional information on storage requirements:	Do not store near explosive substances	
<b>7.3 Specific end use(s)</b>		
None		
<b>8. EXPOSURE CONTROLS / PERSONAL PROTECTION</b>		
<b>8.1 Control parameters</b>		
Maximum permissible concentrations of harmful substances in the air of the working zone	Methane	OEL – 7000 mg/m <sup>3</sup>
<b>8.2 Exposure controls</b>		
The information in this section contains generic advice and guidance.		
<b>8.2.1 Appropriate engineering controls</b>		
Provide the mechanization and automation of production processes. Production facilities must be equipped with general exhaust and local ventilation. Conduct periodic monitoring of methane in the air of the working area		
<b>8.2.2 Individual protection measures, such as personal protective equipment</b>		
Respiratory protection:	Not required when used appropriately	
Hands protection:	Working gloves	

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Eye protection:	Protective goggles
Skin cover protection:	Closed protective clothing
<b>8.2.3 Environmental exposure controls</b>	
Measures to prevent exposure:	Equipment sealing
<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>	
<b>9.1 Information on basic physical and chemical properties</b>	
Appearance	Gas
Colour	Colorless
Odour	Odorless
Melting point/freezing point, °C	Not applicable
Boiling point or initial boiling point and boiling range, °C	No data available
Flammability	No data available
Lower and upper explosion limit	No data available
Flash point, °C	Not applicable
Auto-ignition temperature, °C	No data available
Decomposition temperature, °C	Not applicable
pH	Not applicable
Kinematic viscosity, mm <sup>2</sup> /s	Not applicable
Solubility	No data available
Partition coefficient n-octanol/water (log value)	No data available
Vapor pressure	No data available
Density and/or relative density	Not applicable
Relative vapor density	No data available
Particle characteristics	Not applicable
<b>9.2 Other information</b>	
<b>9.2.1 Information with regard to physical hazard classes</b>	
Pseudo-critical temperature	-143,2 °C
<b>9.2.2 Other safety characteristics</b>	
None	
<b>10. STABILITY AND REACTIVITY</b>	
<b>10.1 Reactivity</b>	Not reactive under conditions of storage and transportation
<b>10.2 Chemical stability</b>	Stable under regular storage and transportation conditions
<b>10.3 Possibility of hazardous reactions</b>	Subject to conditions of storage and transportation of dangerous reactions does not occur
<b>10.4 Conditions to avoid</b>	Avoid direct sunlight
<b>10.5 Incompatible materials</b>	Absent
<b>10.6 Hazardous decomposition products</b>	Carbon oxids
<b>11. TOXICOLOGICAL INFORMATION</b>	
<b>11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008</b>	
Clinical performance of acute poisoning	No toxicity
The most affected organs, tissues, systems	Does not affect
Acute toxicological indication	Methane - LC50 (15 min) – (1442,738-1443) g/m <sup>3</sup> air (rat)
Skin corrosion/irritation	Does not irritate the skin
Serious eye damage/eye irritation	Does not irritate the eyes
Respiratory or skin sensitization	Not sensitizing
Germ cell mutagenicity	Not expected to be a germ cell mutagen
Carcinogenicity	Not expected to cause cancer
Reproductive toxicity	No toxicity
STOT - single exposure	No adverse effects expected

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STOT - repeated exposure	No adverse effects expected			
Aspiration hazard	Not classification			
<b>11.2 Information on other hazards</b>				
Endocrine disrupting properties	None			
Other information	None			
<b>12. ECOLOGICAL INFORMATION</b>				
<b>12.1 Toxicity</b>				
Ecotoxicity	The contamination of the environment is possible: air as a result of releases, process flow disruption, incompliance with storage or transportation regulations, the emergency situations and accidents			
Ecotoxicity values:				
Acute toxicity to fish:	Methane - LC50 (4 day) – (24,1-147,54) mg/L			
Toxicity to aquatic invertebrates:	Methane - LC50 (48 h) – (14,22-69,43) mg/L			
Toxicity to aquatic algae and cyanobacteria:	Methane - EC50 (4 day) – (7,71-16,5) mg/L			
Toxicity to microorganisms:	No data available			
<b>12.2 Persistence and degradability</b>				
Abiotic Degradation	No data available			
Biodegradation	No data available			
<b>12.3 Bioaccumulative potential</b>				
Not determined				
<b>12.4 Mobility in soil</b>				
No data available				
<b>12.5 Results of PBT and vPvB assessment</b>				
Product is not PBT or vPvB				
<b>12.6 Endocrine disrupting properties</b>				
None				
<b>12.7 Other adverse effects</b>				
None				
<b>13. DISPOSAL CONSIDERATIONS</b>				
<b>13.1 Waste treatment methods</b>				
Proper disposal / product	Waste disposal must be carried out in strict accordance with the requirements of national, regional and local waste disposal legislation.			
Waste Norms / waste categories by European Waste Catalogue EWC / AVV	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.			
Proper disposal / packaging	Packaging must be disposed of in accordance with national, regional and local regulations.			
<b>14. TRANSPORT INFORMATION</b>				
The product is transported:	By railway (RID)	By road (ADR)	By marine transport (IMDG)	By air transport (IATA/ICAO)
14.1 UN number	1956			
14.2 UN proper shipping name	COMPRESSED GAS, N.O.S.			
14.3 Transport hazard class(es)	2			
14.4 Packing group	Not applicable			
14.5 Environmental hazards	No hazards identified			
14.6 Special precautions for user	No special precautions required			
14.7 Maritime transport in bulk according to IMO instruments	Not applicable, packaged goods			
<b>15. REGULATORY INFORMATION</b>				

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<b>15.1 Safety, health and environmental regulations/legislation specific for the product</b>	
1. Regulation (EC) No 1272/2008 2. Regulation (EC) No 2020/878 3. Regulation (EC) No 1907/2006	
<b>15.2 Chemical Safety Assessment</b>	
Chemical safety assessment has not been carried for the product	
<b>16. OTHER INFORMATION</b>	
Assignment of safety data sheet	Safety Data Sheet informs downstream users about the hazards of product and ways to prevent its adverse effects on human health and the environment. Safety Data Sheet can be used during custom control, transportation of goods, emergency operations, waste management, development of emergency response plan, briefing, development of special teaching programs, staff qualification, labeling, also can be used as pictorial information and agitation, or product advertising.
Safety Data Sheet usage	During the development of normative documents concerning occupational safety requirements and environmental protection; as the basis for medical and ecological activities during manufacture, use, storage and transportation of the product, during organization of manufacture and hygienic assessment of working conditions, when importing or exporting as part of support documentation.
Training instructions	Read carefully the Safety Data Sheet before using this product.
Uses advised against when using product	Information applies to a specific product. It may be invalid in case this product is used together with any other materials or in any other production process. A consumer of products is responsible for the consequences of its use in specific purposes.
Abbreviations	OEL – occupational exposure limit; LC50 - average lethal concentration; EC50 - effective concentration; PBT or vPvB - persistent bioaccumulative or very persistent very bioaccumulative substance.
Information sources	Hazardous Substances Database (HSDB) of the US National Library of Medicine. ECHA database of registered substances. GESTIS database of environmental substances.

General director

D.A.Sabatovych