

Appendix 1 (Specification)附录 1(规范)

Detailed product description 产品详细说明 Quality standard:

GOST 6824-96 质量标准: GOST 6824-96

COMMODITY (PRODUCT) : Glycerol (glycerin) Grade : D-98

商品(产品):丙三醇 ,等级: D-98

HS CODE: 2905450000.103 Glycerol (glycerin) (Chemicals that need to be declared only for industrial purposes and not for food additives without quarantine requirements)

商品编码: 2905450000.103 丙三醇(甘油) (需申报仅用于工业用途不用于食品添加剂无检疫要求的化学品)

QUANTITY: 500 t

数量: 500 公吨。

Batch No. 151222D

批号 151222D

ORIGIN OF GOODS AND LOADING PORT:原产地和装船港

ORIGIN: RUSSIA/RUSSIA FEDERATION 原产地:俄罗斯/俄罗斯联邦

Loading port: Vostochny Port (Wrangel Bay), RUSSIA

装运港口: 东方港 (弗兰格尔湾), 俄罗斯

Shipping Method: By Container

Certificate of Analysis (COA)分析证书 (COA)

MAIN INDICATORS AND CHARACTERISTICS 主要指标及特点

No	Characteristic name 特征名称	Norm according to GOST 6824-96 符合 GOST 6824-96 标准	Test result 测试结果	Test method 测试方法
1	Appearance 外貌	Transparent 透明的	Transparent 透明的	GOST 7482-96 cl. 4.3
2	Odor 气味	Lack of odor (No smell), which is not characteristic of glycerin when heated to 100 degrees C 缺乏气味(没有气味), 这不是甘油加热到 100°C时的特征	Lack of odor (No smell), which is not characteristic of glycerin when heated to 100 degrees C 缺乏气味(没有气味), 这不是甘油加热到 100°C时的特征	GOST 7482-96 cl. 4.4
3	color 颜色, mg12/100g	5	1	GOST 7482-96 cl. 4.2
4	Relative Density at 20 ° C, g / cm3 相对密度在 20°C 相对于相同温度的水	1,2584	1,2632	GOST 7482-96 cl. 4.5
5	Density at 20 ° C, g / cm3 20°C时的密度, g/cm3	1,255	1,261	GOST 7482-96 cl. 4.5
6	The reaction of glycerol, 0.1 mol / dm3 of a solution of HCL or KOH, cm3 甘油的反应, 0.1 mol / dm3 的盐酸或氢氧化钾溶液, cm3	1, 5	0, 14	GOST 7482-96 cl. 4.6
7	Mass fraction of pure glycerin,%	98	99, 9	GOST 7482-96

	纯甘油的重量百分比, %			c1.4.7.2
8	Mass fraction of ash,%灰分重量百分比, %	0,14	0,004	GOST 7482-96 c1.4.8
9	Saponification coefficient (esters), mg KOH per 1 g of glycerol 皂化系数(酯类), mg 氢氧化钾/ 1g 甘油	0,7	0,2	GOST 7482-96 c1.4.9
10	Chlorides 氯化物	footprints 脚印	Lack of 没有	GOST 7482-96 c1.4.10
11	Sulfate compounds (sulfitess)硫酸盐化合物 (亚硫酸盐)	footprints 脚印	Lack of 没有	GOST 7482-96 c1.4.13
12	Carbohydrates,%碳水化合物, %	Lack of 没有	Lack of 没有	GOST 7482-96 c1.4.14
13	Protein substances,%蛋白质物质, %	Lack of 没有	Lack of 没有	GOST 7482-96 c1.4.16
14	Acrolein and other reducing substances 丙烯醛和其他还原性物质	Lack of 没有	Lack of 没有	GOST 7482-96 c1.4.15
15	Refractive Index(n20/D) 折射率(n20 / D)	Not standardized 不规范	1,4735	GOST 18995.2-73
16	pH	Not standardized 不规范	7,2	GOST 7482-96 c1.4.3
17	Mass fraction of water,%水的重量百分比, %	Not standardized 不规范	0,01	GOST 7482-96 c1.4.3

Packing: In Evropac Flexitanks , Contract CIF China Ports No. EY-AM-7-M dd 25.05.2023

for freight forwarding of liquid cargo.kg 22000 -23000(Weight netto)

包装: Evropac Flexitanks, 合同 CIF 中国港口编号 EY-AM-7-M dd 25.05.2023

用于液体货物的货运.kg 22000 -23000(净重)

<https://evropac.ru/zh/运输和载货服务/灌装货物在集装箱液袋中的运输/>

<https://evropac.ru/en/transport-and-cargo-services/transportation-of-liquid-cargo-in-flexitanks/>

Process for the production of glycerol: Natural crude glycerin extracted from vegetable rapeseedoil, purified by distillation.生产甘油的方法: 从植物菜籽油中提取的天然粗甘油, 经蒸馏提纯而得

MATERIAL SAFETY DATA SHEET

1. Product / Manufacturer Information

Trade name: Glycerin distilled, grade PK-94, D-98

Name according IUPAC: propan-1, 2, 3 – triol

Reference document: GOST 6824 «Distilled glycerin. Technical specification»

Application area: chemical, textile, paper making, food, cosmetic and other industries

Manufacturer: “Glycerin Solution” Ltd.
Russia, Moscow region, Pushkinskiy district, work settlement
Sofrino, Pobeda str., building 10, 3rd floor, room 302

Emergency phone number subject to a time limit: 7 (495) 993-46-46

2. Hazards Identification

Classification according GHS: not classified

3. Composition/ Information on Ingredients

Identifier	CAS number	EU number	Content, %
propan-1, 2, 3 - triol	56-81-5	200-289-5	94-100

4. First Aids

First aids measures to a victim:

After inhalation: remove victim and get fresh air, keep at rest

After skin contact: wash thoroughly with plenty of water

After eye contact: rinse eyes thoroughly with running water for few minutes, in case of use of contact lenses, remove them and continue to flush eyes with running water. Seek medical advice if necessary.

Ingestion: immediately rinse mouth with water, seek medical advice. Do not induce vomiting!

5. Fire-fighting Measures

General description of fire hazards: combustible substance, flashpoint in a closed cup 198 ° C, ignition temperature 203 ° C, autoignition temperature 370 ° C, concentration limits of flame propagation 2.6-11.3% vol.

Extinguishing media: sprayed water, carbon dioxide, air-filled foam, powder fire extinguishers. Do not use water in the form of high-pressure solid jets.

Special hazards: thermally sensitive, long-term heating produces easily-flammable toxic substances (acrolein, acetone); When using high-pressure solid jet of water, a strong vaporization can occur; when spilling, a slippery surface is formed.



Combustion products: carbon oxides (CO and CO₂), acrolein, acetone

Protection during firefighting: protective fire-fighting clothing, self-contained breathing apparatus.

Additional instructions: cool containers at a maximum distance.

6. Preventive Measures Emergency Plans

Necessary general actions in accident and emergency situations: notify the local authorities and the territorial service of Russian Agency for Health and Consumer Rights. Isolate the contaminated area. Suspend traffic, except for special transport units. Remove strangers and personnel not involved in the elimination of the accident. Keep windward side, avoid low places. In the accident zone, use the personal protective equipment. Give first help to injured people or Seek medical advice. Do not let product to enter the wastewater streams and soil.

Individual protective means in emergency cases: For emergency teams – self-contained protective suite of type KIH-5 complete with oxygen-breathing protective mask. When in fire – protective fire-fighting clothing or fire-fighting suit complete with portable breathing apparatus SPI-20. Means of protection: protective glasses with side shields, chemically resistant gloves, protective overgarment, special protective shoes. Use a respirator with a filter box, in case of forming vapor.

Environmental precautions: Prevent leakage or product spilling on soil or in surface and groundwater. In case of leakage, localize the filling site. If possible, transfer the contents into a working container. Do not allow product to enter basements, sewers. Protect the spill site with an earthen shaft, cover it up with sand or fresh soil, remove the cuts of contaminated soil in special containers and take them out for disposal in places agreed with the local bodies of Russian Agency for Health and Consumer Rights. Remove small spill areas using absorbent material.

7. Handling and Storage

Information on safe handling:

Special precautions are not required.

Avoid direct contact of the product with eyes and skin, avoid vapors' inhalation. Avoid contact with the hot product. When handling the product, protective clothes, safety shoes, individual protection equipment should be used. It is prohibited to smoke, drink or take food when handling the product. Wash hands thoroughly after handling. Observe the rules of personal hygiene. It is prohibited to use open fire in production and storage facilities.

Storage:

Store in tightly closed containers, in a dry, cool, well-ventilated place. Avoid strong heating, exposure to sunlight and atmospheric precipitation. Materials of container: aluminum, stainless steel, fiberglass.

Incompatible substances: strong oxidizing agents

8. Exposure Controls and Personal Protection



Measures to ensure the content of harmful substances within exposure levels: supply and exhaust ventilation of industrial premises, hermetic sealing of equipment, control the level of harmful substances in the air of the workplace.

Personal protective equipment: goggles, chemically resistant protective gloves. Under normal conditions, respiratory protection is not required, with the formation of an aerosol - respirator.

9. Physical and Chemical Properties

Appearance: odorless, colorless, transparent viscous liquids
Colority: type D-98 up to 5 mg J₂/100 cm³
type PK-94 up to 0 mg J₂/100 cm³
Density at 20 °C: type D-98 more than 1,255 gr/ cm³
type PK-94 more than 1,244 gr/ cm³
Flammability point: 198 °C (closed cup)
Boiling range : 290 °C
Melting point : 18 °C
Steam density at 50 °C: 0,003±0,001 mmHg
Miscibility with water: mixed in any proportion

10. Stability and Reactivity

Chemical stability: stable under normal conditions, hygroscopic

Reactivity: high reactivity with strong oxidants, reacts with strong metals and bases, strong reducing agents

Conditions to avoid: contact with strong oxidants, overheating of the product; contact with open flames, sources of ignition, contact with water and moist air.

11. Toxicity information

Information concerning particular hazards:

Contact with the product may cause mild eye and skin irritation, ingestion may cause vomiting, abdominal pain, diarrhea; in severe cases - headache, dizziness, drowsiness. Inhalation of an aerosol can cause irritation of the upper respiratory tract.

Route of exposure: inhalation, peroral, skin and eye contact

Targeted organs, tissues and human systems:

Central nervous and respiratory systems, gastrointestinal tract, liver, kidneys, gonads

Acute toxicity:

DL₅₀ >10000 mg/kg, intragastrically, rats;

DL₅₀ >10000 mg/kg, epidermal, rabbits;

Sensitization: not applicable

Mutagenic effect: not applicable

Cancerogenic action: not applicable

Reproductive toxicity: not applicable

Specific target organ toxicity: not applicable

Aspiration: no



12. Ecological information

General description: low aquatic toxicity, has low bioaccumulation potential

Means of affecting the environment: improper storage, improper handling, informal waste disposal, discharges into water bodies and onto terrain

Indexes of environmental toxicity:

EC₅₀ > 10000 mg/l, 96 hours, *Oncorhynchus mykiss* (rainbow trout)

EC₅₀ > 10000 mg/l, 8 days, *Pseudokirchneriella subcapitata* (green algae)

Biodegradation in water: easily biodegrades

13. Disposal information

Dispose in accordance with all applicable National environmental laws and regulations.

14. Transport information

UN number: Not applicable

The types of transports applied: transported by all modes of transports, in accordance with shipping rules, which are valid in this mode of transport.

Hazard classification of the cargo as per UN Recommendation on the Transport of Dangerous Goods: is not classified as dangerous cargo

Hazard classification of the cargo as per GOST Standard 19433: is not classified as dangerous cargo

Packing group: not applicable

15. Regulatory information

Federal Act #7-FA of 10.01.2002 «On protection of environment»;

Federal Act #52-FA of 30.03.1999 «On Sanitary and Epidemiologic Well-Being of the Population»

16. Other information

The above information is based on the data currently available to us and thus does not guarantee certain properties. Consumers of our products must take responsibility for compliance with existing laws and regulations.

Date of: 15.01.2018

