MANUAL

№ /2021
on the use of
Sorbent Biomirogel® BMG-P1

Brands BMG-P1-01,
BMG-P101-01, BMG-P102-01

BIOMICROGEL®

Yekaterinburg, 2021

The manual was developed in “SPC BioMicroGel”, LLC on the basis of TU 2020.59.59-007-20629059-2018 “Sorbent Biomicrogel®. Technical specifications”.

1. General information

1.1 Sorbent Biomicrogel® BMG-P1 is produced according to TU specifications 20.59.59-007-20629059-2018. It is a dark brown powder.

1.2 The sorbent is used to collect oil (petroleum) films from the water surface, localize oil (petroleum) leaks in water column, and purify solid surfaces from oil (petroleum).

1.3 Sorption capacity is more than 50.

1.4 Operating-temperature range from -7°C to +70°C.

1.5 The sorbent hydrogen index (pH) is 3.5-4.0.

1.6 By the degree of exposure to the human body, the sorbent is a low-hazard product that belongs to substances of hazard class IV in accordance with GOST 12.1.007.

1.7 The sorbent is harmless to a human body if properly stored and used.

1.8 The sorbent does not have allergic and cumulative properties. It is non-toxic.

1.9 In case of emergency situations, personal protective equipment should be used: boots, rubber gloves, a respirator. In case of fire outbreak – fire-resistant suit in a set with a self-contained self-rescue device SPI-20 or its analog.

1.10 In case of ignition of a polymer container, finely-pulverized water, chemical or air-mechanical foam, sand, and all types of fire extinguishers should be used to stop fire spreading.

1.11 The sorbent is ecofriendly.

1.12 Use a sealed container to collect wastes or contaminated product and then dispose of them as Class 5 Hazardous Wastes.

2. Method of application

2.1 The coagulant is used as an aqueous solution in combination with an Activator. To obtain 1.0-2.0% aqueous solution, a dry sorbent is dissolved in demineralized water by stirring with a static mixer or any other mixing device until a homogeneous solution is obtained.

2.2 The reagent consumption is determined individually and on average is 1 part of the reagent per 50 parts of petroleum products in contaminated water.

2.3 The prepared solution should be used within 14 days.

2.4 A spray device is used to apply an aqueous sorbent solution to the water surface. Then the gelled contaminations are removed from the water surface by any available tools (fine-mesh net, mesh shovel, scoops, and etc.).
The sorbent breaks the surface layer of petroleum products and encapsulates the petroleum products inside the shell during water purification. Encapsulation occurs due to a change in the charge of an electric double layer on the surface of petroleum products. The oil contamination is enclosed in a shell that firmly holds the contamination inside.

2.5 The sorbent is not used in everyday life.

3. Safe handling measures

3.1 In case of contact with the eyes or skin, rinse thoroughly with plenty of water, in case of contact with the stomach (by oral route), give plenty of liquid to drink, activated charcoal, and salt laxative.

3.2 Use protective glasses and rubber gloves when working with the sorbent. If the work wear is dirty, it must be washed with a laundry detergent.

4. Manufacturer's warranty

4.1 The manufacturer guarantees the quality of the product in compliance with the requirements of operation, storage and transportation.

4.2 The guaranteed shelf life of the packaged product is 24 months as from the date of production.

4.3 After the warranty period expired, the product is analyzed for compliance with the requirements of current technical specifications and, if compliance is established, it is used for the purpose specified.

5. Transportation and storage

5.1 The sorbent is transported in its original package by rail, road, sea, river, and air transport in accordance with the requirements applicable to this type of transport.

5.2 A manipulation mark "Protect from moisture" is applied to the package according to GOST 14192.

5.3 The sorbent is not classified as a hazardous cargo according to GOST 19433.

5.4 The coagulant is stored in the manufacturer's package in sheltered storage facilities protected from direct sunlight at a relative humidity of no more than 75% in conditions that exclude precipitation and dust penetration.

5.5 Storage near open flame is not allowed. All protective packaging should be retained.