

GLYCERINE WATER

Production

This substance is generated in refineries as a result of plant oil processing or biodiesel production if potassium hydroxide is applied as catalyst. This substance is called glycerine or glycerol / water mixture - see chemical characteristics.

Application

Glycerine is widely used, e.g. in cosmetics, as a moisturiser, lubricant, softener or antifrost agent. It is also applied for manufacturing plastic materials, microchips, paints, in medicines and as an additional co-substrate in biogas installations where it increases the growth of bacteria.

Chemical Characteristics of Water Glycerine

Composition

Glycerine	up to 52 – 55 %
Water	up to 45 – 47 %
Sulphur acid	up to 0,5 %
Fat acids	up to 0,2 %
Sodium and potassium hydroxide	up to 0,15 %
Plant oil	up to 0,5 %
Other components	up to 0,2 %

The product is a water fraction obtained during the production of fat acids. It contains no hazardous substances in amounts dangerous to the environment or humans. The above composition includes the basic components of the product and its pH value is 6 – 8. The pH value depends only on the acid content.

Basic Dangers

The product is caustic, because it contains minimal quantities of sulphur acid and fat acids. Category C , R – 3H. It may lead to skin irritation and allergies.

Other Dangers

The smell of the liquid resembles the smell of plant liquids. Its colour varies from light brown to dark brown. It may be poisonous if swallowed, however, the risk is low because of its characteristic smell. If swallowed, it may cause vomiting, gastric influenza or stomach ache. It evaporates only at temperatures above 70 degrees Celsius and its vapour is not toxic.

First Aid

1. In case of swallowing
 - provoke vomiting
 - drink plenty of liquids, preferably milk
 - call an emergency doctor

2. In case of skin contact
 - wash skin with warm water and soap
3. In case of eye contact
 - rinse with plenty of water
 - consult an optician

Chemical and Physical Characteristics

Consistency - light or dark brown liquid with a characteristic smell of rancid plant oil
pH value - 6 – 8 PH
Boiling point - above 90 degrees Celsius
Ignition point - none
Explosive characteristics - none
Oxidation characteristics - none
Solubility - only in water in any conditions
Other characteristics - it coagulates in temperature – 31 grade Celsius
Sulphur acid content up to 0.9 %

Fire Characteristics

The product is not flammable. However, at temperatures above 100 degrees, if the water has evaporated, glycerine itself may burn.

TECHNICAL SUPPORT:

In case of failures, breakdown or simply if you want to ask questions concerning the operation and maintenance of the installation, we will be happy to provide you with our technical support.

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