

Nizhnekamskneftekhim USA. **Material Safety Data Sheet**  
In accordance with EEC 91/ 115 Act  
Trade name  
Synthetic butyl rubber

### **1. Material and company information**

1.1. Trade name Butyl rubber BK-1675H  
Chemical name: (IUPAC) 2-Methylpropene -1 polymer with 2-methylbutadiene -1,3  
1.2 Producer Nizhnekamskneftekhim Inc., 423554 Nizhnekamsk,  
423554, Republic of Tatarstan, Russia  
1.3 Contact: Nizh USA, 92 Front Street, Hempstead, NY 11550 USA  
516-542-0500

### **2. Product composition**

Chemical characterization: 2-Methylpropene-1 polymer with 2-methylbutadiene1,3  
(copolymer of isobutylene with isoprene)  
Empiric formula:  $(C_4H_9)_n (C_5H_8)_m$   
Physical state: Solid non - volatile matter  
Color From white to amber yellow  
Odor None  
Impurities data None  
Identification number:  
CAS № 9010-85-9

### **3. Harmful effects**

Impact on human health: No toxic or irritant action on respiratory organs under normal industrial usage  
Eye contact: When being crushed small rubber particles may scratch eye surface and cause mechanical irritation.  
Skin contact: Not dangerous under normal industrial usage. Contact with hot product could result in thermal burns.  
Hygienic requirements MAC for rubber bales is not defined.

### **4. First aid measures**

General recommendations Call a physician if in doubt.  
Inhalation (In case of contact with inflamed product or products of thermal destruction). Use respiratory protection means and remove victim from the area of adverse action to fresh air. In case of respiratory arrest artificial respiration should be performed. Call a physician.  
Skin contact If hot product got onto the skin it should be immediately washed with plenty of cold water. Apply a clean gauze bandage or a cotton sheet bandage. Call a physician .  
Eye contact This is the solid product of inert nature. If it gets to the eye (during the process of rubber crushing) it should be removed by some clean object. The particles may scratch the eye surface and cause mechanical irritation. The product is non- hazardous under normal usage.  
Ingestion Ingestion is unlikely.

### **5. Fire and explosion safety measures**

Fire extinguishing means: Water, foam, sand, CO<sub>2</sub>  
Prohibited fire extinguishing means None  
Special hazard: Combustion materials - CO, CO<sub>2</sub> if incompletely burnt, thermal destruction – alcohols, aldehydes, ketones, carbon oxides.  
Protective outfit for firemen: Respiratory apparatus, eye protection, fireproof clothes.

Miscellaneous: Use water spray for cooling down closed containers and surface exposed to fire and for personnel protection.

Harmful decomposition products during product burning Isobutylene

### **6. Measures for removal of accidentally scattered product**

The product is solid and has no flow properties. Collect the scattered product and put it in the appropriate containers for disposal or usage. Any residue shall be removed in accordance with local regulations ( laws).

### **7. Storage and handling procedure**

#### **7.1. Product handling:**

When handling the product any contact of hot product with skin or eye should be minimized.

#### **7.2.Storage**

The product is stored indoors at ambient temperature at a distance from the heat sources beyond reach of fire sources, direct sunshine and the elements. The indoor temperature should not exceed 40 °C. The storage rooms should be equipped with lighting and explosion-proof ventilation. The product is non-hazardous material and no special precautions shall be envisaged for its handling and storage.

Warranty storage period shall be 1 year from the manufacture date.

### **8. Safety precautions**

8.1 When working with product equipment requirements should be observed as well as regulations of transportation and storage, plenum and exhaust ventilation should be provided.

8.2 Personal safety measures and means

Hand protection Thermal proof gloves if the product is hot

Eye protection Safety goggles for open systems (during crushing process)

Protection of respiratory organs Under normal operating conditions protection means shall not be required. In emergencies when the product is burning gas- mask, type A, BKF is used.

Special precautions No special precautions required.

### **9. Physical and chemical properties**

#### **9.1 Product property**

Aggregative state Solid polymer in bale form

Color From white to amber yellow

Odor None

#### **9.2 Fire hazard and other characteristics**

Chemical reactivity Destruction and structurization (crosslinking) under O<sub>2</sub> , accelerating under the action of light and heating.

Solubility Soluble in hydrocarbons and chlorine derivatives. Non-soluble in water and fats.

#### **9.2. Fire hazard and other characteristics**

Flash point 187 °C

Self-ignition temperature 402 °C

Combustion heat 47040 kJ/kg

### **10. Stability and chemical activity**

Stability Thermal stability up to 250 °C

Thermal decomposition products Alcohols, aldehydes, ketones, carbon oxides

Avoid contact with such materials Strong oxidizers

as:

### **11. Toxicity**

Toxicity DL<sub>50</sub>- more than 10000 mg/kg, intraventricular, rats

Acute toxicity CL<sub>50</sub> – non-attainable

Doses ( concentration) of minimum toxic action Aqueous extracts from polyisobutylene, intraventricular, 12 months, rats donot have an effect of generic toxic, pyrogenic

	or cytotoxic nature
Cumulative	Low level
Clinical presentation of acute toxic exposure	No evidence

Dermal resorption effect	Not defined
Sensibilizing action	Data not available
Embriotropic action	Data not available
Gonadotropic action	Data not available
Teratogenic action	Data not available
Mutagenic action	Data not available
Carcinogenic action: human-being	Data not available
animals	Data not available

## **12. Environmental effect**

Biological dissimilation: Data not available

MAC for water reservoirs The content of suspended solids should not increase by more than 0,25 mg/dm<sup>3</sup> (for centralized and non- centralized supply of household and potable water as well as for water supply to food enterprises); 0,75 mg/m<sup>3</sup> –in the water pools intended for bathing, sports and recreation of people as well as for water reservoirs within the populated areas. For all suspended matters at a rate of more than 0,4 mm/sek for circulating water reservoirs and at a rate of 0,2 mm/sec for water storage shall be prohibited for discharge

In the environment	No transformation
Products of transformation	None

## **13. Utilization and disposal of wastes**

Product residues that are not useable shall be incinerated in conformance with local regulations ( laws).

## **14. Transportation rules**

Transportation of the product shall be accomplished by any kind of transport inside the covered transport facilities in conformity with the Rules in force for transportation of cargo. Rubber bales are not classified as the hazardous cargo (References of Unites nations organization and the International Marine Code for transportation of hazardous cargo do not classify the rubber bales as the hazardous cargo.

## **15. International and national legislation**

National legislation: There are no special limitations in the Russian federation and republic of Tatarstan relating to the use or restrictions on fire hazard or hazard aquatic environment or health hazard for personnel which shall be applied to butyl rubber. Based on recommendations for transportation of hazardous goods, 11-th revised edition, New York, United Nations Organization. Geneva butyl rubber produced in bales shall not be referred to as hazardous freight.

Head of Technical Department

V. Shamansky