



## KRASNOYARSK SYNTHETIC RUBBERS PLANT JSC

### SAFETY DATA SHEET

According to 1907/2006/EC, article 31 (REACH)

### NITRILE BUTADIENE RUBBER (NBR)

Version: 2.1

Created: 19/12/2011

Regulation: EC No 1272/2008

<b>SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING</b>	
<b>1.1 Product identifier</b>	
<b>Name of Substance:</b>	Poly(acrylonitrile- <i>co</i> -butadiene) Butadiene-acrylonitrile copolymer
Name of IUPAC	Poly(prop-2-enenitrile - <i>co</i> -buta-1.3-diene)
Synonyms	Butadiene-acrylonitrile rubber
PRODUCT NAME, GRADES	NBR 1840 (17-20% bound acrylonitrile) NBR 1845 (17-20% bound acrylonitrile) NBR 1850 (17-20% bound acrylonitrile) NBR 1855 (17-20% bound acrylonitrile) NBR 1860 (17-20% bound acrylonitrile) NBR 2630 (27-30% bound acrylonitrile) NBR 2635 (27-30% bound acrylonitrile) NBR 2640 (27-30% bound acrylonitrile) NBR 2645 (27-30% bound acrylonitrile) NBR 2650 (27-30% bound acrylonitrile) NBR 2655 (27-30% bound acrylonitrile) NBR 2660 (27-30% bound acrylonitrile) NBR 2665 (27-30% bound acrylonitrile) NBR 2670 (27-30% bound acrylonitrile) NBR 2675 (27-30% bound acrylonitrile) NBR 2680 (27-30% bound acrylonitrile) NBR 2685 (27-30% bound acrylonitrile) NBR 2690 (27-30% bound acrylonitrile) NBR 3330 (31-35% bound acrylonitrile) NBR 3335 (31-35% bound acrylonitrile) NBR 3340 (31-35% bound acrylonitrile) NBR 3345 (31-35% bound acrylonitrile) NBR 3350 (31-35% bound acrylonitrile) NBR 3355 (31-35% bound acrylonitrile) NBR 3360 (31-35% bound acrylonitrile) NBR 3365 (31-35% bound acrylonitrile) NBR 3370 (31-35% bound acrylonitrile)



	NBR 3375 (31-35% bound acrylonitrile) NBR 3380 (31-35% bound acrylonitrile) NBR 3385 (31-35% bound acrylonitrile) NBR 3390 (31-35% bound acrylonitrile) NBR 4040 (36-40% bound acrylonitrile) NBR 4045 (36-40% bound acrylonitrile) NBR 4050 (36-40% bound acrylonitrile) NBR 4055 (36-40% bound acrylonitrile) NBR 4060 (36-40% bound acrylonitrile) NBR 4065 (36-40% bound acrylonitrile) NBR 4070 (36-40% bound acrylonitrile) NBR 4075 (36-40% bound acrylonitrile) NBR 4080 (36-40% bound acrylonitrile) NBR 4085 (36-40% bound acrylonitrile) NBR 4090 (36-40% bound acrylonitrile)
TRADE NAMES:	NITRILE BUTADIENE RUBBER (NBR)
Registration #:	
for 1.3-butadiene (CAS #106-99-0; EC #203-450-8) <i>Index No(CLP): 601-013-00-X</i>	01-2119471988-16-0034
for acrylonitrile (CAS #107-13-1; EC #203-466-5) <i>Index No(CLP): 608-003-00-4</i>	01-2119474195-34-0017

## 1.2 Relevant identified uses of the substance

Most common technical function of NBR: production of technical rubber parts/technical rubber goods

## 1.3 Details of the supplier of the safety data sheet

### Only representative

Company name: Gazprom Marketing and Trading France  
Address: 68 avenue des Champs-Élysées, 75008, Paris, France  
Contact phone: +33 1 42 99 73 50  
Fax: +33 1 42 99 73 99  
Email address: Yury.severinchik@gazprom-mt.com

### DISCLAIMER

*This product is a polymer and is not classified as dangerous under criteria of Directives No 67/458/EEC, No 1999/45/EC and Regulation (EC) No 1272/2008 (Regulation CLP). This polymer does not contain substances classified as dangerous under Article 59.2 Regulation (EC) No 1272/2008, namely:*

- in an individual concentration of  $\geq 1$  % by weight for non-gaseous mixtures posing human health or environmental; or
- in an individual concentration of  $\geq 0.1$  % by weight for non-gaseous mixtures that is carcinogenic category 2 or toxic to reproduction category 1A, 1B and 2, skin sensitiser category 1, respiratory sensitiser category 1, or has effects on or via lactation or is persistent, bioaccumulative and toxic (PBT) in accordance with the criteria set out in Annex XIII or very persistent and very bioaccumulative (vPvB) in accordance with the criteria set out in Annex XIII; or
- a substance for which there are Community workplace exposure limits.

*In accordance with mentioned above, this product does not require and official e-SDS as per Regulations (EC) No 1907/2006 (articles 31.1; 31.2) and Commission Regulation (EU) No 453/2010.*

*This e-SDS is developed in good faith to provide a customer with sufficient information allowing to take necessary measures to comply with relevant HSE requirements.*



### Suppliers

Company name: Krasnoyarsk Synthetic Rubbers Plant JSC  
Address: Kauchukoviy side street, 6, Krasnoyarsk, Krasnoyarsk region, 660027, Russian Federation  
Phone: +7 391 262-09-30  
Fax: +7 391 262-78-73, 262-78-88  
Email address: KSRP@ktk.ru  
Emergency phone: +7 391 262-78-83 (office time only, GMT+7);  
+7 391 262-09-30 (round the clock)

**Emergency phone in the country of delivery:** 112 (Please note that emergency numbers may vary depending upon the country of delivery though 112 remains valid as universal number)

## SECTION 2. HAZARDS IDENTIFICATION

### Classification

#### ANNEX I OF DIRECTIVE 67/548/EEC:

Physical/Chemical Hazards:

None.

Health Hazards:

None.

Environmental hazards:

None.

#### EU CLP 2008:

Physical / Chemical Hazards:

None.

Health Hazards:

None.

Environmental hazards:

None.

The product has not been classified as dangerous chemical preparation.

### Specific hazard:

No significant health hazard in normal industrial use conditions.

Under normal industrial use conditions the product causes no acute respiratory intoxication.

The product contains no volatile components, emits no volatile substances during processing.

Combustible substance.

Combustion and thermal destruction may cause emission of substances toxic for human health.

Contact of melted/heated product may cause thermal burns.





Burning and thermal destruction may cause emissions of toxic substances hazardous for human health: carbon and nitrogen oxides, hydrogen cyanide, soot.

**Extinguishing media:**

Use water or water spray, foam, dry chemical, carbon dioxide, chalk, sand.

**Special fire fighting procedures:**

Keep away from sources of ignition - no smoking.

**Unusual fire & explosion hazards:**

None.

**Protective measures in fire:**

Wear full protective clothing and MSHA/NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:**

See section 8.

**Environmental precautions:**

Take precautionary measures against discharges into the environment.

**Spill clean up methods:**

Sweep spilled substance into containers. Avoid generating dusty conditions and provide ventilation. All equipment must be grounded.

**SECTION 7. HANDLING AND STORAGE**

**Usage precaution:**

Wash thoroughly after handling. Avoid contact with eyes and skin. Do not ingest or inhale. Minimise dust generation and accumulation. Remove all sources of ignition. All equipment must be grounded.

**Storage precautions:**

Store in a cool, dry, well-ventilated area away from direct sunlight and incompatible substances in a closed container. Keep away from source of open fire.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure limits:**

None listed.

**Protective equipment:**

Protective gloves, safety goggles and protective clothing.

**Respiratory equipment:**



Wear positive pressure self-contained breathing apparatus if warranted by workplace conditions.

**Hand protection:**

Wear approved protective gloves.

**Eye protection:**

Wear approved safety goggles.

**Hygiene measures:**

Wash at the end of each work shift and before eating, drinking, smoking or using the toilet.

**Skin protection:**

Wear protective clothing.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state at 20°C and 1013 hPa	elastic solid
Odour	peculiar
Colour	light yellow to brown
pH value	not applicable, insoluble
Melting point	211-398 °C
Flash point	224.8-350 °C
Ignition temperature	269-454 °C
Auto-ignition temperature	313-514 °C
Decomposition temperature	≈ 430 °C
Relative density	0.94- 1.0 g/cm <sup>3</sup>
Solubility	insoluble in water and fats. soluble in ketones, ethyl acetate, chloroform
Viscosity according to Muni	30-120 conv.units (at 100°C)
Explosive properties	non explosive
Granulometry	not applicable substance is not marketed or used in granular form.

**SECTION 10. STABILITY AND REACTIVITY**

**Chemical stability:**

Stable under recommended storage and handling conditions.

**Reactivity:** undergoes oxidation, chloration, hydrogenation vulcanization.

If heated over 150°C gets solid quickly.

Texturized during oxidation.

At ≈ 430 °C decomposed emitting hydrogen cyanide.



**Conditions to avoid:**

Avoid high temperatures. Avoid naked flame. Avoid long term exposure of direct sun beams. Avoid contact with incompatible substances.

**Hazardous decomposition products:**

Products of combustion and thermal destruction: carbon monoxide, carbon dioxide, hydrogen cyanide nitrous oxides, soot.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**General:**

LD 50 (oral, mice, rats): > 10 000 mg/kg (Russian Register of Potentially Hazardous Chemical and Biological Substances /FBEPH).

**Inhalation:**

Poly(acrylonitrile-co-butadiene) has no local irritating effect on the gastrointestinal tract when inhaled.

**Ingestion:**

Not applicable.

**Skin contact:**

There is no irritant effect on skin.

There is no skin-resobtive and sensitizing effect on skin.

**Eye contact:**

There is no irritant effect on eyes.

**SECTION 12. ECOLOGICAL INFORMATION**

**Aquatic toxicity:**

Russian Register of Potentially Hazardous Chemical and Biological Substances /FBEPH:

LC50 (96 h): >100 mg/L (*Oncorhynchus mykiss*)

LC50 (48 h): >100 mg/L (*Daphnia Magna*)

LC50 (48 h): >100 mg/L (*Scenedesmus quadricauda*)

**Ecotoxicity:**

The product is poorly biodegradable but does not pose a hazard to the environment.

**Water hazard classification:**

According to the German VwVwS: WGK- 0 (not classified).

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General information:**

Place into a suitable closed container for disposal.

**Disposal methods:**

Dispose of in accordance with local and national regulations.



## SECTION 14. TRANSPORT INFORMATION

### General:

The product is not covered by international regulations on the transport of dangerous goods.

UN: none.

## SECTION 15. REGULATORY INFORMATION

### REGULATORY

**Chemical Safety Report has been performed for monomers:** 1.3-butadiene (CAS #106-99-0; EC #203-450-8) and acrylonitrile (CAS #107-13-1; EC #203-466-5).

## SECTION 16. OTHER INFORMATION

### 16.1 Indication of changes

VERSION	Date of change	Section	Description of changes
Version: 1.0	22/03/2010		First edition created according to recommendations of Regulations (EC) #1907/2006 (Article 31.1).
Version: 2.0	07/02/2011	1.1, 2	Section 1.1, 2 was updated
Version: 2.1	19/12/2011	1.1; 1.2; 2; 3; 5; 9; 10; 11; 12; 15; 16	1. Product name SKN and grade's names were renamed into NBR. 2. Index No (CLP) was added to Section 1.1 3. Name of IUPAC was changed in Section 1.1 4. DISCLAIMER was added on the second page 5. Specific hazard subsection was fully updated in Sections 2 and 5. 6. LD 50 was added in Section 11. 7. LC50 was added in Section 12. 8. Sections 1.2, 3, 9, 10; 15, 16 were fully updated.

### 16.2 Relevant R-phrases, Hazard- and EU Hazard-statements

**Labelling:** none.

**R-phrases:** none.

### Safety Advice (S-phrases):

S 16 Keep away from sources of ignition - no smoking  
S 41 In case of fire and/or explosion do not breathe fumes  
S 43.2 In case of fire use water or powder mixtures  
S 47 Keep at temperature not exceeding 30°C





### 16.3 Abbreviations and acronyms

LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
PBT	Persistent, bioaccumulative, toxic chemical
vPvB	Very Persistent, Very Bioaccumulative
UN	United Nations
WGK	Wassergefährdungsklasse ( <i>German: Water Hazard Class</i> )

### 16.4 Key literature references and sources

#### EU DIRECTIVES

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Regulations. Commission regulation (EU) no 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances.

COMMISSION DECISION of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes (notified under document number (2001/118/EC).

#### NATIONAL REGULATIONS (GERMANY)

Major Accident Hazard Legislation 82/501/EWG.

Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH). NITRILE BUTADIENE RUBBER (NBR). Dossier of potentially hazardous chemical and biological substance # BT 000686, 1995, Ministry of Health of the Russian Federation.

#### DISCLAIMER

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