

## TOGLIATTIKAUCHUK LLC

### SAFETY DATA SHEET

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

### ISOPRENE RUBBER (IR) GRADES IR SKI-3, IR SKI-3 NST

Version: 2.1

Created: 22/12/2011

Regulation: EC No 1272/2008

#### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

##### 1.1. Product identifier

<b>Name of Substance:</b>	Polyisoprene
Name of IUPAC	Poly-2-methyl-butadiene-1,3
Synonyms	cis-1,4-polyisoprene
CAS	26702-92-1
PRODUCT NAME, GRADES	IR SKI-3, IR SKI-3 NST
TRADE NAMES:	Isoprene Rubber (IR), grades IR SKI-3, IR SKI-3 NST
Registration: # for isoprene (CAS #78-79-5; EC #201-143-3) <i>Index No(CLP): 601-014-00-5</i>	01-2119457891-29-0001

##### 1.2 Relevant identified uses of the substance

Most common technical function of Polyisoprene: tyre production, technical rubber parts (profiles, hoses, shoe soles, belt production, technical rubber goods), rubber compound, medical production.

#### 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.*

### 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, Paris, 75008, France  
Contact phone: +33 1 42 99 73 50  
Fax: +33 1 42 99 73 99  
Email address: yury.severinchik@gazprom-mt.com

#### Suppliers

Company name: Togliattikauchuk LLC \*  
Address: Novozavodskaya str. 8, 445007, Togliatti\*, Samara Region, Russian Federation  
Phone: +7 8482 29-91-51; 23-11-04; 29-32-69  
Fax: +7 8482 22-14-41; 70-15-18  
E-mail Address: officetk@tltk.ru; office@tltk.ru  
Emergency phone: +7 8482 29-91-51 (round the clock)

\*Other valid translation of the city name is Tolyatti, therefore the plant name "Tolyattikauchuk" is also valid.

## 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.

#### Specific hazard:

No significant health hazard in normal industrial use conditions.  
Contact with melted/heated product may cause thermal burns.  
Processing vapours, which can irritate eyes and respiratory tract, may form when product is heated to high temperatures.  
Combustible solid.  
Products of thermal decomposition – toxic.

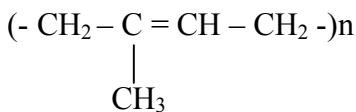


### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Grade IR SKI-3 is a synthetic rubber, consisting of at least 98.0% polymerised isoprene. It contains 0.15-0.4% antioxidant (CAS#793-24-8; EC#212-344-0) and 0.6-1.4% stearic acid (EC#200-313-4; CAS#57-11-4).

Grade IR SKI-3 NST is a synthetic rubber, consisting of at least 98.0% polymerised isoprene. It contains 0.2-1.3% antioxidants (CAS#128-37-0 /EC#204-881-4 or CAS#119-47-1/ EC# 204-327-1) and 0.5-1.5% stearic acid (EC#200-313-4; CAS#57-11-4).

FORMULA (iC<sub>5</sub>H<sub>8</sub>)<sub>n</sub>



Component	Conc. %	CAS / EC #	Classification EC# 67/548/EEC and EC#1272/2008 (CLP)
Polyisoprene	≥98.0	26702-92-1/ none	none

The product does not contain impurities or additives that could affect product's labelling and classification according to Regulation (EC) No 67/548/EEC and Regulation (EC) No 1272/2008 (CLP) in the concentration ranges specified.

### SECTION 4. FIRST-AID MEASURES

#### General information:

Spontaneous penetration of Polyisoprene rubber into human organism is impossible.

Polyisoprene rubber at normal conditions is non-volatile, causes no exhaustive effects. Inhalational poisoning is not probable.

Contact with eyes may cause mechanical damage, irritation and conjunctivitis were not observed.

Contact with skin causes no irritation.

If the product has a high temperature, contact with skin causes burn.

#### Inhalation:

If decomposition or thermal destruction products are inhaled:

Move an exposed person to fresh air at once. Keep warm and at rest. If there is respiratory distress give oxygen. If respiration stops or shows signs of failing, apply artificial respiration. Get medical attention.

#### Ingestion:

In case of accidental swallowing:

Rubber particles in case of accidental penetration of the airways may cause mechanical irritation of respiratory tract, cough. In this case the following actions are to be taken.

Wash out mouth with water and give plenty of water to drink, provided person is conscious. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have the exposed person lean forward. Get medical aid.



**Skin contact:**

After contact with hot product immediately wash skin with large volume of cold water. Get medical attention.

**Eye contact:**

Rinse immediately eye with plenty of low pressure water for at least 15 minutes.  
Remove contact lenses. Get medical attention.

**SECTION 5. FIRE-FIGHTING MEASURES**

**Specific hazards:**

Combustion generates irritating and toxic fumes.  
Burning causes emission of carbon dioxide and water.

**Extinguishing media:**

The substance is flammable. Use water or water spray, foam, dry chemical, carbon dioxide, or water spray.

**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**

**Protection against fire and explosion:**

Observe fire safety rules.  
Use extract and input ventilation.  
Use antistatic and intrinsically safe equipment.  
Assure air tightness of equipment and communications.

**Usage precaution:**

Avoid inhaling vapors and fumes from hot rubber.



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

**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**

Appearance	elastic solid (briquette)
Colour	white to yellow (for IR SKI-3 NST); dark grey (for IR SKI-3)
Odour	peculiar
pH value	not applicable, insoluble in water
Ignition temperature	305 °C
Auto-ignition temperature	325 °C
Specific gravity	0.92 g/cm <sup>3</sup>

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Glass transition temperature	28-40 °C
Viscosity according to Muni	65-85 conv.units (at 100°C)
Solubility	insoluble in water soluble in aromatic solvent
Explosive properties	non explosive
Granulometry	not applicable substance is not marketed or used in granular form

## SECTION 10. STABILITY AND REACTIVITY

### **Stability:**

The rubber is stable provided there is the antioxidant and the storage conditions are followed. High temperatures may cause emissions of isoprene.

### **Reactivity:**

Lack of antioxidant causes hydration, halogenation, cyclization, isomerization, oxidation, oxidative destruction.

### **Materials to avoid:**

Strong oxidising agents, alkalis, acids.

### **Conditions to avoid:**

Avoid high temperatures, naked flames, sparks, long term exposure to direct sunlight, contact with incompatible materials.

### **Hazardous decomposition products:**

Hazardous substances of thermal destruction: spirits, aldehydes, ketones, carbon oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

### **General:**

DL<sub>0</sub> (oral, rats): 1000 mg/kg (Russian Register of Potentially Hazardous Chemical and Biological Substances /FBEPH)

### **Inhalation:**

Polyisoprene rubber has no local irritating effect on the gastrointestinal tract when inhaled, conjunctiva, skin-resorptive and sensitizing effect.

### **Ingestion:**

Not applicable.

### **Skin contact:**

There is no irritant effect on skin.

### **Eye contact:**

There is no irritant effect on eyes.

## SECTION 12. ECOLOGICAL INFORMATION

### 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:** isoprene (CAS #78-79-5; EC #201-143-3).

## SECTION 16. OTHER INFORMATION

### 16.1 Indication of changes

VERSION	Date of change	Section	Description of changes
Version: 1.0	19/02/2010		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	22/12/2011	1.1; 3; 4; 5; 7; 9; 10; 11; 15; 16	1 Product name SKI-3 and SKI-3S were renamed into IR SKI-3, IR SKI-3 NST accordingly. 2. Index No (CLP) was added to Section 1.1 3. CAS # was added to Section 1.1 4. DISCLAIMER was added on the first page 5. Подраздел «Specific hazard» was fully updated in Sections 5. 6. DL <sub>0</sub> was added in Section 11. 8. Sections 3, 4; 7; 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 40°C

## 16.3 Abbreviations and acronyms

DLo            Lethal Dose to 100% of a test population  
LC50          Lethal Concentration to 50 % of a test population  
PBT            Persistent, bioaccumulative, toxic chemical  
vPvB          Very Persistent, Very Bioaccumulative  
UN             United Nations  
WGK          Wassergefährdungsklasse (*German: Water Hazard Class*)

## 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).





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NATIONAL REGULATIONS (GERMANY)  
Major Accident Hazard Legislation 82/501/EWG.

Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH).  
Poly-2-methyl-1,3-butadiene (cis-1,4-polyisoprene). Dossier of potentially hazardous chemical and biological substance # BT 000686, 1995, Ministry of Health of the Russian Federation.

#### *DISCLAIMER*

*This information is based on our current level of knowledge. This information may be subject to revision as new knowledge and experience becomes available, and SIBUR makes no warranties and assumes no liability in connection with any use of this information. Since SIBUR cannot be aware of all aspects of your business and the impact the REACH Regulation has for your company, SIBUR strongly encourages you to get familiar with the REACH Regulation in order to comply with its requirements and timelines.*