

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

**Trade name:** *Polypropylene*

**Date of development:** 2010-12

**Date of revision:** 2017-11

**Issue:** 2.2 instead of v.2.1 from 2016-03

## 1. Identification of Substance / Preparation Identification of Company / Undertaking

### 1.1 Identification of Substance / Preparation:

*Polypropylene*

**REACH Registration Number:**

Propylene (monomer):**01-2119447103-50-0061**

Ethylene (monomer): **01-2119462827-27-0010**

Butene-1 (monomer): **01-2119456615-34-0049**

**Synonyms:**

Polypropylene, propene-1 homopolymer, copolymer of propylene and ethylene, block copolymer of propylene and ethylene, copolymer of propylene and butene-1, copolymer of propylene, ethylene, and butene-1

**Molecular formula:**

- homopolymer
- copolymer of propylene and ethylene
- copolymer of propylene and butene-1
- copolymer of propylene, ethylene, and butene-1

$[-CH_2CH(CH_3)-]_n$   
 $[-CH_2CH(CH_3)-]_n [-CH_2CH_2-]_m$   
 $[-CH_2CH(CH_3)-]_n [-CH_2-CH(CH_2CH_3)-]_m$   
 $[-CH_2CH(CH_3)-]_n [-CH_2CH_2-]_m [-CH_2-CH(CH_2CH_3)-]_l$

**1.2 Use:**

Manufacture of tubes, fittings, sheets, sleeve films, flat-die films, bimodal films, fibers, non-woven fabrics, monofilaments, tape yarns, packaging materials, industrial, household, and medical articles, articles for contact with food, toys

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

## **1.3 Producer/importer/distributor:**

Supplier/producer

Address

Telephone/fax

MSDS prepared by:

PJSC Nizhnekamskneftekhim

RF, Tatarstan, 423574, Nizhnekamsk

PJSC Nizhnekamskneftekhim

+7(8555)377445

e-mail: ...nknh@nknh.ru...

[ShuvalovaOV@nknh.ru](mailto:ShuvalovaOV@nknh.ru),

[BayazitovaLH@nknh.ru](mailto:BayazitovaLH@nknh.ru)

## **Special representative:**

Designation

Address

Telephone/fax

e-mail:

Oy Nizhex Scandinavia Ltd

Wavulinintie 10

HELSINKI 00210

Finland

Jari Taipale

+35 896824700

[jari.taipale@nizhex.fi](mailto:jari.taipale@nizhex.fi)

Emergency telephone number:

- product recipient country

- country of origin

To be specified in each country by the consumer. See Section 16 of this SDS

+7 (8555) 37-72-07, (8555) 37-78-30,

+7 (8555) 37-72-65, (8555) 37-74-45

8.00 am – 5.00 pm in workdays

## **2. Hazard Identification**

**2.1 Classification:** This product **is not** classified as hazardous according to the Directive 67/548/EC, 1999/45/EC and Provision (EC) №1272/2008 (CLP). Non-hazardous, nontoxic substance. Has no harmful action on human organism at room temperature.

### **Specific hazards for human health and environment:**

Hazardous physico-chemical effects: none

Negative influence on human health and its symptoms:

Eyes

If polypropylene pellets enter eyes, they may damage the eyeball surface and cause mechanical irritation. In the course of processing, contact with hot or melted material may cause serious injury, leading to blindness.

Skin

Pelleted polymer is not hazardous, it doesn't cause irritation. In case of skin contact with hot or melted polymer, redness, pain, or burns may occur.

Inhalation

Poisonous vapours, harmful for the respiratory system, are formed only during processing or incineration of polymer at high temperatures, at excess of 150 °C, and may cause irritation of mucous membranes of the upper respiratory tract, pulmonary oedema, shortness of breath.

Aspiration and introduction into lungs of fine polymer dust may cause slow fibroid changes in the lungs.

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

Ingestion Low risk of ingestion. Symptoms of poisoning are not established. After ingestion may cause irritation of the gastrointestinal tract, as any foreign matter.

Environmental impact: non-hazardous for environment

**2.2 Label elements** not applicable

**2.3 Other hazards:** transforms in the environment under long-term atmospheric exposure (atmospheric precipitations, solar radiation, cold, high temperatures)

## 3. Composition / Ingredients Information

### 3.1 Substance information:

Chemical name	EC number	REACH number	Index	CAS number	Content (%)	Classification according to Regulation (EC) № 1272/2008 [CLP]	
						Hazard classes /categories	Hazard identifications
Polypropylene Polymer of propene-1 and ethene Polymer of propene-1 and butene-1 Polymer of propene-1, ethene and butene-1	none	not subject to registration	none	9003-07-0 9010-79-1  29160-13-2  25895-47-0	> 99	Not classified	
Additives: antioxidants, nucleators, stabilizers, dispersants, and antistatic blends	none	not subject to registration	none	none	< 1	Not classified	

Chemical additives are added to different grades of polypropylene in order to enhance its application properties. These polymer additives in total concentration of less than 1 % do not present any hazard during processing and usage in articles, as the concentration of harmful substances in these additives, evolving at thermal decomposition, is negligibly low and does not exceed MAC limits.

## 4 First Aid Measures

### 4.1 Description of first aid measures

General information: Low hazardous substance. Poisoning after introduction into human body was not established and is unlikely.

Inhalation: Does not cause any effects at room temperature. In case of inhalation of the thermal decomposition and incineration products, move the suffered person to fresh air, give oxygen, and perform artificial resuscitation, if necessary.

Skin contact: Does not cause any effects at room temperature. Wash with water and soap. Hot polymer may cause burns, in this case seek for medical advice.

Eye contact: Wash with large amount of water until removal of the product from eyes.

Ingestion: Does not cause any effects. Ingestion of small quantities of polymer pellets does not require any measures to be taken.

### 4.2 Most important symptoms and effects, both acute and delayed

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

Eyes	If polypropylene pellets enter eyes, they may damage the eyeball surface and cause mechanical irritation. In the course of processing, contact with hot or melted material may cause serious injury, leading to blindness.
Skin	Pelleted polymer is not hazardous, it doesn't cause irritation. In case of skin contact with hot or melted polymer, redness, pain, or burns may occur.
Inhalation	Poisonous vapours, harmful for the respiratory system, are formed only during processing or incineration of polymer at high temperatures, at excess of 150 °C, and may cause irritation of mucous membranes of the upper respiratory tract, pulmonary oedema, shortness of breath. Aspiration and introduction into lungs of fine polymer dust may cause slow fibroid changes in the lungs.
Ingestion	Low risk of ingestion. Symptoms of poisoning are not established. After ingestion may cause irritation of the gastrointestinal tract, as any foreign matter.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Consult a doctor. Burns, caused by hot product, should be treated as thermal burns. The ingested product passes the gastrointestinal tract without any damage to it.

## 5. Fire Fighting Measures

### 5.1 Extinguishing media

Recommended fire extinguishing media:	Fire extinguishers of any type, water, steam, fire extinguishing foams, inert gases, sand, asbestos sheets.
Prohibited fire extinguishing media:	No prohibited fire extinguishing media.

### 5.2 Special exposure hazards arising from the substance or mixture

The product may decompose at heating, evolving carbon monoxide (CAS №124-38-9), formaldehyde (CAS №50-00-0), acetaldehyde (CAS №75-07-0), acetic acid (CAS №64-19-7), polypropylene aerosol. Carbon oxides decrease the oxygen (O<sub>2</sub>) concentration in the ambient air, may cause toxic effect on cells, interrupting tissue respiration. Formaldehyde is an irritating gas with general toxic effect, causes strong effect on the central nervous system (T,C; R:23/24/25,34-43; Carc. cat. 3). Acetaldehyde vapours cause irritation of mucous membranes of the upper respiratory tract, shortness of breath, brassy cough, bronchitis, pneumonia (Xi; R:12,36/37,40; Carc. cat. 3). Vapours of the acetic acid are irritative to skin and mucous membranes of the upper respiratory tract (C; R:10,35). Polymer dust may form explosive mixtures with air.

### 5.3 Advice for fire fighters

Use fire protective clothing and self-contained breathing apparatus. Clear fire area of all non-emergency personnel.

## 6. Accidental Release Measures

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

<b>6.1 Personal safety measures</b>	Use fire protective clothing and self-contained breathing apparatus in case of fire. Use sealed equipment and containers; ventilate the working areas.
<b>6.2 Environmental protection measures</b>	Use grounded equipment, explosion-proof lighting, sparkless tools. Prevent contamination of water basins and soil.
<b>6.3 Neutralization, disposal and clean-up methods</b>	Sweep the polypropylene pellets and put into an appropriate container for disposal or recovery.
<b>6.4 Additional advice</b>	none

## 7. Handling and Storage

### 7.1 Handling

Advices on safe handling:

**Safety measures** Use input / exhaust and local ventilation. Use sealed production equipment. Grounding of equipment is obligatory to avoid electrostatic discharge, keep relative humidity below 50 %, working places should be equipped with rubber mats. Polymer dust may form explosive mixtures with air.  
Use personal protective equipment. Remove all ignition sources.  
Polypropylene pellets, dispersed over the floor, may present the danger of slippage. The product should be swept and collected with a scoop or a vacuum cleaner into a clean container.

**Incompatible substances** Do not store with oxidants, acids, and alkalies.

**Measures to prevent aerosol and dust generation** Arrange for input / exhaust and local ventilation.  
Use only in well-ventilated areas.

**Environment protection measures:** Decrease of polypropylene losses during storage and transportation, exclusion of discharges in water basins and sewerage

**Industrial health:** Use of personal protective equipment. After working with the product should be washed.

### 7.2 Conditions for safe storage

**Safety measures to prevent ignition and explosion:** Exclude any open flame sources. Grounding of equipment is obligatory to avoid electrostatic discharge. Use sparkless tools.

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

Technical measures and storage conditions:	Polypropylene should be stored in a closed, dry area, excluding exposition to the direct sunlight, on the shelves or on the pallets, with elevation over the floor level of >5 cm, distance to the heating appliances >1 m, storage temperature below 30 °C, and relative humidity below 80 %.
Packing materials:	- polyethylene bags
Requirements for storage rooms and vessels:	Room temperature shall not exceed 30 °C.
Other information on storage conditions:	Do not store with oxidants, acids, and alkalies. Shelf life – 1 year max.
<b>7.3 Specific end uses: no</b>	

## 8. Exposure control and individual protection means

<b>8.1 Allowable exposure limits</b>	Due to its physical and chemical properties and low toxicity, the pelleted polypropylene does not require health standards to be established. Volatile products of the thermo-oxidative decomposition may be evolved during the processing of polypropylene: MAC <sub>working area, PP aerosol</sub> 10 mg/m <sup>3</sup> , Hazard class 3 MAC <sub>working area, formaldehyde</sub> 0.5 mg/m <sup>3</sup> , Hazard class 2 MAC <sub>working area, acetaldehyde</sub> 5.0 mg/m <sup>3</sup> , Hazard class 3 MAC <sub>working area, carbon monoxide</sub> 20 mg/m <sup>3</sup> , Hazard class 4
<b>8.2 Occupational exposure control</b>	Keep the concentration of the hazardous substances in permissible limits by using input / exhaust ventilation in the areas of maximum air contamination.
Personal protection equipment	Use protective cotton clothes, anti-slipage boots.
Respiratory protection:	In normal working conditions – not required. In emergency conditions – filter masks, respirators.
Hands protection:	Cotton gloves, heat-protective gloves for operations with hot product.
Eyes protection:	Safety glasses for operations with melted product.
Dermal protection	Protective cotton clothes.
Environmental exposure control	Measurements of the contaminant concentrations during thermal processing.
Consumer exposure control:	The pelleted polypropylene is not used in everyday life.

## 9. Physical / Chemical Properties

### 9.1 Information on basic physical and chemical properties

Appearance	Solid white pellets
Odour	No odour or slight sweet odour
Odour threshold	Not established
pH	Not applicable

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

Softening temperature	118 °C
Melting point	> 157 °C
Flash point	Not established
Ignition point	325 °C (for aerogel)
Auto-ignition point	345 °C (for aerogel)
Vapour pressure	Not applicable
Density	0.9-0.92 g/cm <sup>3</sup> at 20 °C (for polypropylene homopolymer) ~ 1 g/cm <sup>3</sup> at 20 °C (for polypropylene copolymers)
Solubility in water	Not soluble
Solubility in other solvents	At elevated temperatures soluble in benzene, carbon tetrachloride, ether
Vapour density (air = 1)	Not applicable
<b>9.2 Other information</b>	none

## 10. Stability and Reactivity

Contains stabilizer.

<b>10.1 Activity</b>	It reacts with strong oxidizing agents such as chlorosulfonic acid, nitric acid, halogens, oleum.
<b>10.2 Stability</b>	Extremely stable at normal conditions.
<b>10.3 Possibility of dangerous reactions</b>	Upon contact with an open flame is lit smoky flame
<b>10.4 Conditions, inducing hazardous reactions</b>	Heating above 150 °C
<b>10.5 Materials, inducing hazardous reactions</b>	Strong oxidants, acids, alkalies
<b>10.6 Hazardous products of decomposition</b>	Carbon oxides, formaldehyde, acetaldehyde, acetic acid

## 11. Toxicological Information

### 11.1. Information on toxicological effects

Acute oral toxicity	For polypropylene aerosol: DL50 >5000 mg/kg, intragastric, rats, mice
Acute dermal toxicity	Non-toxic
Acute inhalation toxicity	LC50 is not reached
Skin irritation	Not irritating
Eye irritation	Not irritating
Respiratory irritation	Not irritating
Sensitisation	No
Repeated dose toxicity	No
Mutagenicity	No
Carcinogenicity	No

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

Reproductive and developmental toxicity - No

## 12. Ecological Information

<b>12.1 Ecotoxicity:</b>	Pelleted, stabilized polymer presents no hazard for the environment in the normal conditions of use, transportation, and storage.
<b>12.2 Persistence / degradability:</b>	Stable at normal application conditions. Undergoes transformation in the environment at durable atmospheric exposure (atmospheric precipitations, solar irradiation, cold, high temperatures).
<b>12.3 Bioaccumulation:</b>	Does not accumulate
<b>12.4 Mobility:</b>	Loose product: may spread out over the surface of soil, floats on the surface of water.
<b>12.5 PBT/vPvB:</b>	Does not meet criteria.
<b>12.6 Other negative effects:</b>	Not established

## 13. Disposal Considerations

### 13.1 Methods of waste (residue) disposal

Solid wastes of polypropylene processing are not toxic, do not need decontamination, and are subject to processing. Wastes, not suitable for processing, are incinerated in appropriate sites.

Waste code

07 02 99 wastes from the MFSU of synthetic rubber (not otherwise specified)

S61 – avoid release into the environment

Polymeric package is subject to further processing.

## 14. Transport Information

<b>ADR/ RID</b>	Not classified
<b>IMDG</b>	Not classified
<b>IATA</b>	Not classified
<b>IMO</b>	Not classified
Class	Not classified
Packaging group	-
Classification code	-
Hazard identification number	-
UN number	Not classified
Proper shipping name	Polypropylene



# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

## 15. Regulatory Information

National legislation:

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

## 16. Other information

Information sources:

ESIS – European Chemical Substances Information System (European Chemicals Bureau).  
Hazardous Substance Data Bank (HSDB) – U.S. National Library of Medicine, 2001-1  
ECHA – European Chemical Agency

Changes in SDS:

Revision 2.1: all sections are revised in accordance with EU / 830/2015

Revision 2.2: Amendments to Section 14 in the IMO Classification

### National emergency telephone numbers:

Country	Phone number
Austria	+43 1 406 43 43 Poison Control Centre
Belgium	070 245 245 Centre antipoisons
Bulgaria	+35 929 154 233 Национален токсикологичен информационен център
Croatia	(+385 1) 23-48-342 Poison Control centre
Cyprus	+35 7 22405611 Department of Labour Inspection
Czech Republic	+420 224 919 293, +420 224 915 402 Toxikologické informační středisko
Denmark	82121212 (round-the-clock) AKUTHJAELP VED FORGIFTNING
Estonia	16662 (круглосуточно), (+372) 626 93 90 Poisoning Information Centre
Finland	09 471977, 094711 (round-the-clock) Poison Information Centre
France	+33 0145425959 (round-the-clock) ORFILA (INRS)
Germany	+ 49 231 9071 2971 BAuA Information Centre
Greece	No information
Hungary	(1-800)201-199 (round-the-clock) Az Egészségügyi Toxikológiai Tájékoztató
Iceland	+354 543 2222 Eitrunarmiðstöð
Ireland	01 8092566 , 01 8379964 National Poisons Information Centre

# MATERIAL SAFETY DATA SHEET



Pursuant to the Regulation (EC) No 1907/2006 of the Parliament and of the European Council (REACH), EU /830/2015

Italy	+39 06 59 94 37 33 Telephone (for technical and scientific issues)
Latvia	+371 67042473 National emergency telephone
Liechtenstein	No information
Lithuania	+370 52 20 5236, +370687 53378 Neatidėliotina informacija apsinuodijus
Luxembourg	070 245 245 Centre antipoisons
Malta	21243314 – Florianna, 22563000 – Rabat, 22695701/2 – Mosta.
Netherlands	030-2748888 Just for the information of the medical staff in cases of acute intoxication
Norway	22 59 13 00 (round-the-clock) Giftinformasjonen
Poland	No information
Portugal	808 250 143
Romania	No information
Slovakia	No information
Slovenia	No information
Spain	+ 34 91 562 04 20
Sweden	112 – ask poisons
United Kingdom	No information

## Legend of abbreviations

№ CAS – registry number of the substance in Chemical Abstracts Service

№ EC – EINECS and ELINCS Number

CLP – Classification, Labelling and Packaging

PBT – Persistent, Bioaccumulative and Toxic substance

vPvB – very Persistent, very Bioaccumulative substance

DNEL – Derived No Effect Level

DMEL – Derived Minimum Effect Level

PNEC – Predicted No Effect Concentration

LD-50 – Lethal Dose to 50% of a test population (Median Lethal Dose)

LC-50 – Lethal Concentration to 50 % of a test population

NOAEC – No observed Adverse Effect Levels

EC-50 – half maximal Effective Concentration

ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road

RID – Regulations concerning the International Carriage of Dangerous Goods by Rail

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG – International Maritime Dangerous Goods

IATA – International Air Transport Association

IMO – International Maritime Organization

SU – Sector of Use

PROC – Process Category

The information in this MSDS is based on our current knowledge and applicable legislation and is intended to describe the principles of safe work with this product. The product shouldn't be used in the purposes, different from described in Section 1. It is the responsibility of the user to meet all requirements of the local norms and regulations. This information should not be construed as guaranteeing the quality of the product.