

ZAPSIBNEFTEKHIM LLC

SAFETY DATA SHEET

According to Regulations (EC) 1907/2006 (REACH), (EC) 1272/2008 (CLP) & (EU) 2015/830

POLYPROPYLENE (PP)

GRADES PP:

PP H030 GP/3; PP H031 BF/3; PP H033 FF/3; PP H120 GP/3;

PP H250 GP/3; PP H253 FF/3; PP H270 GP/3; PP H270 FF/3;

PP H350 GP/3; PP H350 FF/3

Version: 1.4

Created: 19/09/2019

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1. Product identifier

Name of Substance

Polypropylene

Name of IUPAC

Poly (prop-1-ene)

Synonyms

Polypropylene homopolymer

Trade name

PP H030 GP/3; PP H031 BF/3; PP H033 FF/3;
PP H120 GP/3; PP H250 GP/3; PP H253 FF/3;
PP H270 GP/3; PP H270 FF/3; PP H350 GP/3;
PP H350 FF/3

Registration # for propene

(CAS # 115-07-1; EC # 204-062-1)

01-2119447103-50-0195

Index No(CLP):601-011-00-9

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Identified use(s)

Use in production of articles for technical and domestic purposes (sheets, films, strips, fibres, pipes, fittings, filaments, tape yarn, wrappings, nonwoven fabric), technical goods for medical and food industry and for consumer use.

1.2.2. Uses advised against

Uses other than those given in section 1.2.1 are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

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 ≥ 1 % by weight for non-gaseous mixtures posing human health or environmental; or*
- in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures that is carcinogenic category 2 or toxic to reproduction category 1A, 1B and 2, skin sensitizer category 1, respiratory sensitizer 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 an 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 taking necessary measures to comply with relevant HSE requirements.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name: ZapSibNeftekhim LLC
Address: Promzona, 626150, Tobolsk, Tyumen region, Russian Federation
Contact phone: +7 (3456) 398-056
Emergency phone: +7 (3456) 398-755; +7 (3456) 398-056 (office hours only)
Fax: +7 (3456) 266-449
Email Address: ZapSib2@sibur.ru; servicedbp@sibur.ru

1.4. 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

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)

Not classified as a hazardous substance.

2.2. Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 (CLP/GHS)

Not applicable.

2.3. Other hazards

No significant health hazard in normal industrial use conditions.

Contact with melted/heated product may cause thermal burns.

Granulated polypropylene at temperature lower than 150 °C does not emit into the air or environment any toxic substances and causes no harmful influence on human organism at direct contact at room temperature.

In the course of polypropylene processing, when heating it up to 150 °C and over, the emission of volatile products of thermal-oxidative degradation is possible (see section 10).

Products of thermal-oxidative degradation at long term inhalation cause generic toxic, irritating and allergic effects (see sections 8; 10).

Dust may irritate respiratory system, eye irritation.

Combustible solid.

Dust may form explosive mixes with air. Product may be charged electrostatically.

No other hazards identified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

According to CLP Regulation the product is a mixture of polypropylene and additives.

This product is a synthetic polymer consisting of at least 99.7% polymerized propene and additives: antioxidants, anticorrosion additives, nucleating agents and other functional additives in total < 0.3%.

FORMULA $(-\text{CH}_2-\text{CH}(\text{CH}_3)-)_n$

Name	EC #	CAS #	Content%	Classification EC#1272/2008 (CLP)
Polypropylene	None	9003-07-0	> 99.7	none

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

SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures

General information

Spontaneous penetration of granulated polypropylene into human organism is impossible.

Product at normal conditions is stable and non-volatile.

Warning before intervention: contact with hot oxidised product may cause severe thermal burns. Dust and/or thermal decomposition products inhalation may irritate respiratory system, eye irritation.

If eye/skin contact with hot product occurs, obtain immediate medical attention.

Following inhalation: No hazard in normal use of product.

Move any 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.

In case the molten substance vapours penetrate the respiratory airways, do the following:

Immediately 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.

Following Skin Contact: If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.

Following Eye Contact: Rinse the eye immediately with plenty of water (low pressure) for at least 15 minutes. Remove contact lenses. Get medical attention.

Following Ingestion: If swallowed, seek medical attention.

Do not induce vomiting unless directed to do so by medical personnel.

May cause gastrointestinal blockage. Do not give laxatives unless directed to do so by medical personnel.

Never give anything by mouth to an unconscious person.

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

Inhalation Symptoms: Dust and/or thermal decomposition products inhalation may irritate respiratory system, eye irritation.

Skin Contact Symptoms: Repeated and/or prolonged skin contact may cause irritation. Contact with hot product may cause serious burns.

Eye Contact Symptoms: Eye Contact may cause mechanical damage, irritation of eyes mucous. Contact with hot product may cause serious burns.

Ingestion/aspiration Symptoms: Ingestion/aspiration may cause irritation of digestive tract. May cause gastrointestinal blockage.

4.3. Notes for the doctor

If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water fog or fine spray, Dry chemical fire extinguishers, Carbon dioxide fire extinguishers, Foam.

Use only fine spray or water fog for extinguishing polypropylene dust.

Unsuitable extinguishing media: Do not use water jets. Direct water jets on the burning product could cause a steam explosion and spread of the fire.

Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.

5.2. Special hazards arising from the substance or mixture

May be combustible at high temperature.

Combustion products: Carbon oxides (CO and CO₂) and soot.

Combustion products may include thermo-oxidative degradation products: carbon oxides, formaldehyde, acetaldehyde, organic acids (acetic acid) and etc.

Combustion products may be toxic and/or irritating.

Polypropylene dust forms explosive mixtures with the air. Pneumatic conveying and other mechanical handling operations can generate combustible dust. Do not permit dust to accumulate to reduce the potential for dust explosions.

Low flammability limit for polypropylene dust is 32.7 g/m³.

5.3. Advice for firefighters

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Take precautionary measures against static discharges.

Ensure adequate ventilation.

Avoid dust generation. Avoid inhalation of dusts.

Spilled material may cause a slipping hazard.

In case of insufficient ventilation, wear suitable respiratory equipment.

For additional information, refer to Section 8, Exposure Controls and Personal Protection equipment.

6.2. Environmental precautions

Do not allow penetration of the product into water reservoirs, surface and ground water, sewer ducts and soil. Preventing disposal into water reservoirs of contaminated water without treatment.

Monitor content of hazardous substances in the air.

Provide sealing of process equipment.

Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.

Scattering of and its waste should be timely collected and disposed in specially designated areas.

Polypropylene wastes are non-toxic and are not to be neutralized.

6.3. Spill clean-up methods

Collect in suitable and properly labelled containers. Minimize generation of dust during clean-up.

Transfer to a container for disposal or recovery.

Provide ventilation. All equipment must be grounded.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition.

Provide input-extract and local ventilation of work zones to ensure that the occupational exposure limit is not exceeded. In case of insufficient ventilation, wear suitable respiratory equipment (See Section: 8).

Regularly control work zone air.

Take precautionary measures against static discharges. Provide thorough sealing and grounding of process equipment. Due to electrostatic properties of the material, grounding of silos and grounding of pneumatic transport equipment are obligatory.

Dust can be ignited by static discharge. Pneumatic conveying and other mechanical handling operations can generate combustible dust. Do not permit dust to accumulate to reduce the potential for dust explosions.

Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation.

Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin.

Do not ingest or inhale combustion or decomposition products.

Workers should be protected from the possibility of contact with molten product.

Avoid contact with heat and ignition sources and oxidising agents.

Warning: spilled granules will cause slipping and fall.

Do not eat, drink or smoke at the work place.

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with good manufacturing practices.

Keep away from heat, sparks and flame. Protect from direct sunlight.

Store in a dry, well-ventilated area at temperature not exceeding 30 °C and at relative humidity of 40-80%.

Keep away from sources of ignition - No smoking.

7.3. Specific end use(s)

Please check the identified uses given in Section 1.2 of this safety data sheet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational Exposure Limits

For Polypropylene (CAS: 9003-07-0): not established

Occupational Exposure Limits for the possible products of thermal-oxidative degradation (see section 10):

for acetaldehyde: International Limit Values¹⁾

SUBSTANCE Acetaldehyde CAS #75-07-0	LTEL 8 hr TWA ppm	LTEL 8 hr TWA mg/m ³	STEL ppm	STEL mg/m ³	Note
Austria	50	90	50	90	
France	100	180			
Germany (AGS)	50	91	50 (1) 100 (2)	91(1) 182 (2)	(1) 15 minutes average value (2) Ceiling limit value
Germany (DFG)	50	91	50 (1)(2)	91	(1) 15 minutes average value (2) A momentary value of 100 ml/m ³ (180mg/m ³) should not be exceeded
Hungary		25		25	
Latvia		5			
Poland		5		45(1)	(1) Ceiling limit value
Spain			25	46	

¹⁾ GESTIS International Limit values: http://bgia-online.hvbg.de/LIMITVALUE/WebForm_ueliste.aspx

for Acetic acid: International Limit Values¹⁾

SUBSTANCE Acetic acid CAS # 64-19-7	LTEL 8 hr TWA ppm	LTEL 8 hr TWA mg/m ³	STEL ppm	STEL mg/m ³	Note
Austria	10	25	20	50	
European Union	10	25			
France			10	25	
Germany (AGS)	10	25	20 (1)	50 (1)	(1) 15 minutes average value
Germany (DFG)	10	25	20	50	
Hungary		25		25	
Latvia	10	25			
Italy	10	25			
Poland		15		30	
Spain	10	25	15	37	

for Formaldehyde: International Limit Values¹⁾

SUBSTANCE Formaldehyde CAS #50-00-0	LTEL 8 hr, TWA ppm	LTEL 8 hr, TWA mg/m ³	STEL ppm	STEL mg/m ³
Austria	0.5	0.6	0.5	0.6
France	0.5		1	
Germany (DFG)	0.3	0.37	0.6	0.74
Hungary		0.6		
Latvia		0.5		
Poland		0.5		

for Dust (inhalable and respirable): International Limit Values¹⁾

SUBSTANCE Dust, inhalable (1); Dust respirable (2)	LTEL, 8 hr TWA ppm	LTEL, 8 hr TWA mg/m ³	STEL ppm	STEL mg/m ³	Note
Austria		10 (1) 5 (2)		20(1) 10(2)	(2) 15 minutes average value
France		10 (1) 5 (2)			
Germany (AGS)		10 (1) 3 (2)		20 (1) 1.5 (2)	15 minutes average value, insoluble particulates
Germany (DFG)		4 (1) 1.5 (2)			insoluble particulates
Hungary		10 (1) 6 (2)			
Spain		10 (1) 3 (2)			
OSHA		15 (1) 5 (2)			

8.1.2. DNEL/ PNEC values

DN(M)ELs for workers have not been derived.

DN(M)ELs for the general population have not been derived.

DNEL and PNECs for freshwater, saltwater, sediment and soil have not been derived.

8.2. Exposure controls

8.2.1. Technical safety measures

Provide adequate forced-air and exhaust ventilation in work zones to ensure that the occupational exposure limit is not exceeded.

Compulsory monitoring of air conditions in work areas.

Sealing and grounding of equipment and communications.

Usage of intrinsically safe equipment.

8.2.2. Personal protection equipment

Use of personal protective equipment must be consistent with good occupational hygiene practices.

Eye/Face protection

Wear goggles giving complete protection to eyes (BS EN 166).

Skin Protection (Hand and Body)

Wear approved protective gloves (Nitrile rubber BS EN 374)

If contact with hot product is anticipated, gloves should be heat-resistant and thermally insulated.

Wear insulating gloves BS EN407 (heat).

Wear apron or other protective clothing and antistatic boots.

Respiratory Protection

Not required (if is used workplace conditions).

In emergency or in case of increase of hazardous substances concentration at the workplace wear positive pressure MSHA/NIOSH-approved self-contained breathing apparatus (BS EN 14387:2004).

8.2.3. Environmental Exposure Controls

None specific.

Do not allow penetration of the product into water reservoirs, surface and ground water, sewer ducts and soil.

Preventing disposal into water reservoirs of contaminated water without treatment.

Monitor content of hazardous substances in the air. Content of dust in the air should be monitored.

Provide sealing of process equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Property	Value	Remarks
Physical state (at 20 °C and 1013 hPa)	solid (product is produced in the form of briquettes granulate)	visual method
Colour	white or colourless, non-transparent.	visual method
Odour:	odourless	sensory examination
pH (Value)	Not applicable, insoluble.	
Melting Point (°C) / Freezing Point (°C)	160-170	GOST 21553
Melt flow index (g/10 min)	2.5 – 3.5 (PP H030 GP/3) 2.7 – 3.3 (PP H031 BF/3) 2.7 – 4.0 (PP H033 FF/3) 10.0 - 15.0 (PP H120 GP/3) 20.0 – 30.0 (PP H250 GP/3) 22.0 – 28.0 (PP H253 FF/3) 23.0 – 30.0 (PP H270 GP/3) 25.0 – 30.0 (PP H270 FF/3) 30.0 – 40.0 (PP H350 GP/3) 29.0 – 37.0 (PP H350 FF/3)	ASTM D 1238

Property	Value	Remarks
Initial boiling point/boiling range (°C)	Not available.	
Ignition temperature (°C)	325-343	GOST 12.1.044
Evaporation rate	Not available.	
Flammability (solid, gas)	Does not ignite spontaneously, burn only upon entering into a source of fire.	
Upper/low flammability or Explosive limit ranges	Low flammability limit for dust 32.7 g/cm ³ .	GOST 12.1.044
Vapour Pressure (hPa)	Not available.	
Vapour Density (Air=1)	Not available.	
Bulk specific gravity (kg/m ³)	440 - 520	GOST 11035.1; ISO R60
Solubility (Water)	Insoluble.	
Solubility (Other)	Insufficiently plumps at room temperature in organic solvents (acetone, benzene, toluene). At 100 °C PP dissolves in toluene, benzene.	
Partition Coefficient n-Octanol/Water	Not available.	
Auto Ignition Temperature (°C)	325 – 388	GOST 12.1.044
Decomposition Temperature (°C)	Not available.	
Viscosity, kinematic (mm ² /s) @ 40°C	Not available.	
Explosive properties	Non explosive.	
Oxidising properties	Not available.	
Granulometry, mm	2-5	manufacturer`s SOP (TU 2211-001-93911504-2012)
Flexural modulus, mPa	≥ 1400 (PP H030 GP/3) ≥ 1550 (PP H031 BF/3) ≥ 1400 (PP H033 FF/3) ≥ 1550 (PP H120 GP/3) ≥ 1500 (PP H250 GP/3) ≥ 1500 (PP H253 FF/3)	ASTM D 790
	≥ 1400 (PP H270 GP/3) ≥ 1450 (PP H270 FF/3) ≥ 1400 (PP H350 GP/3) ≥ 1400 (PP H270 FF/3)	ISO 178

9.2. Other information

No information available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable under all ordinary circumstances at ambient temperatures, and if released into the environment.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Dust may form explosive mixture with air particularly in enclosed spaces.

10.4. Conditions to avoid

Avoid dust generation, which may cause formation of explosive concentration.

Avoid heating of product up to 300 °C.

Keep away from heat and sources of ignition.

10.5. Incompatible materials

Strong oxidising agents.

10.6. Hazardous decomposition products

None under normal conditions at ambient temperatures.

Decomposition products can include trace amounts of formaldehyde, carbon oxide, acetaldehyde, organic acids (acetic acid), etc.

SECTION 11: TOXICOLOGICAL INFORMATION

General information

No significant health hazard in normal industrial use conditions.

Property	Results
Routes of Exposure	At ambient temperature the product is a non-volatile solid. There is no potential for inhalation exposure. If the product is handled at elevated temperatures this makes thermal burns the greatest acute hazard.
Acute toxicity	
Oral	LD50: >5000 mg/kg bw (rat, mouse) FBEPH. BT#000764, 2007
Inhalation	Not classified. No data available.
Dermal	Not classified. No data available.
Irritation/Corrosivity	
Skin irritation/corrosion	Not classified. Skin contact with melted/heated product may cause serious thermal burns.
Eye irritation	Not classified. Solid or dust may cause irritation or corneal injury due to mechanical action. Dust and/or thermal decomposition products may cause irritation of eye. Eye contact with melted/heated product may cause serious thermal burns.
Respiratory tract	Not classified. Dust and/or thermal decomposition products inhalation may cause irritation of respiratory system.
Sensitization	
Skin sensitization	Not classified. No data available.
Respiratory system	Not classified. No data available.
Repeated dose toxicity	
Chronic oral toxicity	Not classified. No data available.
Chronic inhalation toxicity	Not classified. No data available.
Chronic dermal toxicity	Not classified. No data available.

Property	Results
Germ cell mutagenicity	
In vitro data	Not classified. No data available.
In vivo data	Not classified. No data available.
Carcinogenicity	Not classified. No data available.
Toxicity for reproduction	
Effects on fertility	Not classified. No data available.
Developmental toxicity	Not classified. No data available.
STOT - single exposure	Not classified. No data available.
STOT - repeated exposure	Not classified. No data available.
Other effects	none

SECTION 12: ECOLOGICAL INFORMATION

General information

At normal conditions polypropylene is a very stable product.

Product does not form toxic compounds with other substances in air and water.

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

Pollution of water ponds and soil with polymer flakes may occur only if production, handling and transportation rules are not followed, in case of effluent discharge without treatment, as a result of emergencies and accidents.

Property	Value	Remarks
Aquatic toxicity: Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.		
Fish:	Not classified. No data available.	
Aquatic invertebrates	Not classified. No data available.	
Sediment organisms	Not classified. No data available.	
Toxicity to soil macro-organisms/micro-organisms	Not classified. No data available.	
Toxicity to terrestrial plants	Not classified. No data available.	
Persistence and degradability	No specific ecological data are available for this product. This water-insoluble polymeric solid is expected to be inert in the environment. No appreciable biodegradation is expected.	t _{1/2} : 7-30 d high-stable FBEPH. BT#000764, 2007
Environmental distribution	No specific ecological data are available for this product.	
Bioaccumulation	Effects on nature due to bioaccumulation are not known.	
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.	
Other adverse effects	No information available.	

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal should be in accordance with local, state and national legislation.

Waste water containing polypropylene should be treated.

Packaging waste (paper bags) shall be collected and send for recycling. Plastic waste shall be removed to disposal.

13.2. Additional Information

European Waste Code (2001/118/EC): 07 02 13 – waste plastic; 20 01 39 – plastic

SECTION 14: TRANSPORT INFORMATION

General

The product is not covered by international regulations on the transport of dangerous goods. Polypropylene is transported by all modes of transport in covered vehicles in accordance with all rules of transportation for the transport mode.

UN: none.

SECTION 15: REGULATORY INFORMATION

15.1. EU regulations

Authorizations: Not applicable.

Restrictions on use: None.

15.2. National regulations

Unknown.

15.3. Chemical Safety Assessment

Chemical Safety Assessment (CSA) is not required for the substance since it is not subject to registration as a polymer according to the provisions of Article 2(9) of REACH.

Chemical Safety Report has been developed for propene (CAS # 115-07-1; EC # 204-062-1).

SECTION 16: OTHER INFORMATION

16.1. Indication of changes

VERSION	Date of change	Section	Description of changes
1.0	28/03/2019	All	Initial SDS.
1.1	17/04/2019	Title, 1, 9	Grade PP H120 GP/3 was added.
1.2	16/07/2019	Title, 1, 9	Grades PP H270 GP/3, PP H350 GP/3, PP H350 FF/3 were added.
1.3	04/09/2019	Title, 1, 9	Grade PP H253 FF/3 T was added. "T" index was added to all grades.
1.4	19/09/2019	Title, 1, 9	"T" index was removed from all grades.

16.2. Relevant Hazard-and EU Hazard-statements

Labelling: none

16.3. Abbreviations and acronyms

AGS	The German Committee on Hazardous Substances (Ausschuss für Gefahrstoffe – AGS)
DFG	Germany Research Foundation
DNEL	Derived No Effect Level
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LTEL	Long Term Exposure Limit
OSHA	Occupational Safety & Health Administration (USA)
PNEC	Predicted No Effect Concentration
PBT	Persistent, bioaccumulative, toxic chemical
vPvB	Very Persistent, Very Bioaccumulative
STEL	Short Term Exposure Limit
STOT	Specific Target Organ Toxicity
TWA	Time Weighted Average

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 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 labelling 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).

Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH).

POLY (PROP-1-ENE). Dossier of potentially hazardous chemical and biological substance BT# BT#000764, 2007. 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.

END OF SDS