



PETROCHEMISTRY

PRODUCT CATALOGUE
2018





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ABOUT US

Limited Liability Company Gazprom neftekhim Salavat is Russia's major petrochemical complex situated in the Republic of Bashkortostan in the town of Salavat.

Set up in 1948 as Industrial Complex No. 18, in 2011, the Company was integrated into the Gazprom system. On October 1, 2016, the Company was reorganized in the form of transformation into LLC "Gazprom neftekhim Salavat".

Gazprom neftekhim Salavat is one of the leading companies of Gazprom Group in oil refining, petrochemistry and mineral fertilizers production.

Gazprom neftekhim Salavat comprises the Oil Refinery, Gas & Chemical Plant and the Monomer Plant.

The Company carries out a full cycle of crude hydrocarbons processing and produces more than 100 different products, over 50% of which are bulk products including motor gasoline, gasoil, fuel oil, road bitumen, polystyrene, low density polyethylene, ammonia, urea etc.

The Company takes one of the leading positions in the domestic production of a range of products including butyl alcohols and plasticizers, styrene and styrene copolymers.

The products are exported to all the federal subjects of the Russian Federation. The export reach covers over 30 CIS and non-CIS countries including China, Brazil, the UK, Western European countries and the Baltic states.

PETROCHEMISTRY

Gazprom neftekhim Salavat is reputable for being a responsible producer and a reliable supplier of goods of its own production.

High quality of oil refining and petrochemical products and mineral fertilizers is confirmed by certificates of conformity to ISO 9001 and ISO 14001, the international standards of quality and environmental safety.

Petrochemistry is one of the main directions of Gazprom neftekhim Salavat development.

The Company's petrochemical sector is represented by the Monomer Plant with its ethylene/propylene facilities, plastics production units and alcohols and plasticizers production units.

According to its corporate strategy, Gazprom neftekhim Salavat adds value to its petrochemical sector by expanding its production range, increasing production and diminishing operating costs. The perspective development of the Company is targeted at increasing the capacity of high density polyethylene unit and EP-340 pyrolysis unit.

In 2017 the Acrylic Acid Plant was commissioned. Acrylic acid, butyl acrylate and glacial acrylic acid are released there. The Plant's capacity totals 195 thousand tons of production per year.

INDUSTRIAL N-BUTYL ALCOHOL

GOST 5208-2013

PRODUCTION

By oxo synthesis.

APPLICATIONS

As a solvent in paint and coatings industry, also in synthesis of various organic products, production of chemical reagents etc.

PROPERTIES

property	standard	
	grade A	
	Prime Grade	First Grade
Colour, Pt-Co, Hazen units, max	10	10
Density @ 20°C, g/cm ³	0.809–0.811	0.809–0.811
Butanol, wt %, min	99.4	99.0
Acidity, as acetic acid, wt %, max	0.003	0.005
Bromine Number, g Bromine per 100 g alcohol, max	0.02	0.05
Carbonyl compounds, as butyraldehyde, wt %, max	0.06	0.10
Fixed residue, wt %, max	0.0025	0.0025
Water, wt %, max	0.1	0.2

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3. Vapours are irritant to eyes and respiratory tract mucosa. In case of contact causes skin irritation. Highly flammable liquid.

TRANSPORT

Railway, in tank cars and tank containers

INDUSTRIAL ISOBUTYL ALCOHOL

GOST 9536-2013

PRODUCTION

By oxo synthesis.

APPLICATIONS

As a solvent in paint and coatings industry, in production of esters and other chemicals.

PROPERTIES

property	standard	
	Prime Grade	First Grade
Colour, Pt-Co, Hazen units, max	7	15
Density @ 20°C, g/cm ³	0.801–0.803	0.801–0.803
Isobutanol, wt %, min	99.3	98.5
Acidity, as acetic acid, wt %, max	0.003	0.005
Bromine Number, g Bromine per 100 g alcohol, max	0.02	0.10
Carbonyl compounds, as butyraldehyde, wt %, max	0.03	0.10
Fixed residue, wt %, max	0.0025	0.0030
Water, wt %, max	0.1	0.2

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3. Vapours are irritant to eyes and respiratory tract mucosa. In case of contact causes skin irritation. Highly flammable liquid.

TRANSPORT

Railway, in tank cars and tank containers

INDUSTRIAL 2-ETHYLHEXANOL

GOST 26624-2016

PRODUCTION

From n-butyl aldehyde, n-butyl alcohol, acetaldehyde.

APPLICATIONS

In production of plasticizers, stabilizers, lube oil additives and as a solvent.

PROPERTIES

property	standard	
	Prime Grade	First Grade
Colour, Pt-Co, Hazen units, max	10	10
Density @ 20°C, g/cm ³	0.831–0.833	0.830–0.833
2-ethylhexanol, wt %, min	99.0	98.0
2-ethyl-4-methylpentanol, wt %, max	0.5	1.5
Acid Value, mg KOH/g, max	0.03	0.05
Aldehydes & Ketones, as 2-ethylhexanal, wt %, max	0.05	0.1
Unsaturated compounds, as 2-ethylhexanal, wt %, max	0.02	0.05
Water, wt %, max	0.1	0.2

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3. Vapours are irritant to skin and eye and respiratory tract mucosa. Flammable liquid.

TRANSPORT

Tank trucks & rail tank cars.

SOLVENT (STILL RESIDUE OF BUTANOL RECTIFICATION)

TU 2421-101-05766575-2001

Amendments No. 1 – 3

PRODUCTION

By oxo synthesis in butyl alcohols production.

APPLICATIONS

As a chemical reagent in coal flotation, as a solvent to derive fuel compositions, in rust inhibitors production, for blending gasoline and diesel fuel or enhanced oil recovery.

PROPERTIES

property	value
Density @ 20°C, kg/m ³ , within	840–880
Distillation, °C	
– Initial boiling point, min	120
– Final boiling point, max	330
Water, wt %, max	0.3
C ₈ Alcohols, wt %, max	75
Incl. 2-ethylhexanol, wt %, max	45

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3. Vapours are irritant to skin and eye and respiratory tract mucosa. Flammable liquid.

TRANSPORT

Rail tank cars.

SOLVENT. HEAVY PRODUCT OF 2-ETHYLHEXANOL RECTIFICATION

TU 2421-120-05766575-2005

PRODUCTION

By rectification in 2-ethylhexanol production.

APPLICATIONS

For compounding of fuel oil (mazut) and as a solvent to derive fuel compositions.

PROPERTIES

property	value
Density @ 20°C, kg/m ³	840–900
Distillation, °C	
– Initial boiling point, min	120
– Final boiling point, max	350
Water, wt %, max	0.3
2-ethylhexanol, wt %	Not specified, specification required

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3. Vapours are irritant to skin and eye and respiratory tract mucosa.
Highly flammable liquid.

TRANSPORT

Rail tank cars.

SOLVENT. LIGHT N-BUTANOL DISTILLATE

TU 2421-111-05766575-2003

Amendment No. 1

PRODUCTION

By rectification in butyl alcohols production.

APPLICATIONS

As a solvent and for synthesis in chemical industry. Not for household use, not applied in paint and coatings industry.

PROPERTIES

property	value
Density @ 20°C, kg/m ³ , max	830
Distillation, °C	
– Initial boiling point, min	40
– Final boiling point, max	110
Water, wt %, max	2.0

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3. Has a polytropic action, may penetrate the damaged skin, irritant to eye mucosa.
Highly flammable liquid.

TRANSPORT

Rail tank cars.

STILL RESIDUE OF PHTHALIC ANHYDRIDE PRODUCTION

TU 38.602-22-59-97
Amendments No. 1, 2

PRODUCTION

In production of phthalic anhydride from orthoxylene.

APPLICATIONS

For scientific research, in production of rust inhibitors, plasticizers, resins and rubber goods.

PROPERTIES

property	value
Appearance	Flakes or lumps, light-brown to black
Phthalic Anhydride, wt %, min	70

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3. Irritant to skin, eyes and upper respiratory tract. Causes allergic response.
Flammable substance.

TRANSPORT

Trucks & railway.

DOP PLASTICIZER

GOST 8728-88

Amendment No. 1

PRODUCTION

By oxo synthesis.

APPLICATIONS

For plasticizing of vinyl resins and other polymers in the manufacturing of soft cable compounds, artificial leathers, rubber goods, polymer construction materials, floor cloths, film and sheet materials, packing films, PVC refrigerator gaskets, crown cap sealings and for other purposes.

PROPERTIES

property	standard		
	Prime Grade	First Grade	Second Grade
Appearance	Clear liquid without mechanical impurities		
Colour, Pt-Co, Hazen units, max	40	100	200
Density @ 20°C, g/cm ³ , within	0.982–0.986	0.982–0.986	0.982–0.986
Acid Value, mg KOH/g, max	0.07	0.07	0.10
Specific Volume Resistivity, Ohm*cm, min	1.0*10 ¹¹	1.0*10 ¹¹	1.0*10 ¹¹
Volatile substances, wt %, max	0.10	0.10	0.10
Saponification Number, mg KOH/g	284–290	284–290	284–290
Flash Point, °C, min	205	205	205

SAFETY REQUIREMENTS

Highly hazardous substance, hazard class 2 in terms of phthalic ester; moderately hazardous substance, hazard class 3 in terms of sebacate and adipate. Low-volatile, high boiling liquid.

TRANSPORT

Tank trucks & rail tank cars.

ETHYLENE

GOST 25070-2013

PRODUCTION

In pyrolysis of hydrocarbon feedstock.

APPLICATIONS

In manufacture of polyethylene, PVC, ethylene oxide, ethyl alcohol, ethyl benzene, acetic aldehyde and other organic products, for refrigerating units.

PROPERTIES

property	value
Ethylene, vol %, min	99.9
Propylene, vol %, max	0.005
Methane & Ethane, vol %, max	0.1
Acetylene, vol %, max	0.001
Diene hydrocarbons (propadiene & butadiene), vol %, max	0.0005
Carbon Dioxide, vol %, max	0.001
Carbon Oxide, vol %, max	0.0005
Methanol, vol %, max	0.001
Oxygen, in pipelines, vol %, max	0.0002
Sulphur, wt %, mg/m ³ , max	1
Water, wt %, max	
– in pipelines	0.001
– in tanks & vessels	0.02
Ammonia, vol %, max	0.0001

SAFETY REQUIREMENTS

Hazard class 4, marginally hazardous substance.

TRANSPORT

Pipelines.

PETROLEUM BENZENE

GOST 9572-93

PRODUCTION

By catalytic reforming of gasoline cuts, catalytic hydroalkylation of toluene and xylene and pyrolysis of petroleum feedstock.

APPLICATIONS

In production of synthetic fibers and rubbers, plastics, dyes and other organic synthesis products.

PROPERTIES

property	value			
	ultra-pure	pure	synthesis	
			Prime Grade	First Grade
Appearance & Colour	Clear liquid, no impurities or water, not darker than solution of 0.003 g of $K_2Cr_2O_7$ in 1 dm ³ of water.			
Density @ 20°C, g/cm ³ , within	0.878–0.880	0.878–0.880	0.878–0.880	0.877–0.880
Distillation range of 95%, °C, max (including pure benzene boiling point of 80.1°C)	–	–	0.6	0.6
Crystallizing Point, °C, min	5.40	5.40	5.35	5.30
Benzene, wt %, min	99.9	99.8	99.7	99.5
Impurities, wt %, max:				
N-heptane	0.01	0.06	0.06	–
Methyl Cyclohexane + Toluene	0.05	0.09	0.13	–
Methyl Cyclopentane	0.02	0.04	0.08	–
Toluene	–	0.03	–	–
Sulphuric Acid Wash Color, standard scale, max	0.1	0.1	0.1	0.15
Total Sulphur, wt %, max	0.00005	0.00010	0.00010	0.00015
Reaction of aqueous extract	neutral	neutral	neutral	neutral

SAFETY REQUIREMENTS

Toxic substance, hazard class 2. Fire & explosion dangerous, narcotic. Flash point, closed cup: minus 12°C.
Self-ignition temperature: 562°C.

TRANSPORT

Railway, in dedicated tank cars.

STYRENE SDEB GRADE

GOST 10003-90
Amendments No. 1, 2

PRODUCTION

In catalytic dehydrogenation of ethylbenzene.

APPLICATIONS

For production of polymers (polystyrene, ABS resin etc.) and synthetic rubbers.

PROPERTIES

property	value	
	Prime Grade	First Grade
Appearance	Clear uniform liquid without undissolved water or impurities	
Styrene, wt %, min	99.80	99.60
Phenylacetylene, wt %, max	0.01	0.02
Divinylbenzene, wt %, max	0.0005	0.0005
Carbonyl compounds, as benzaldehyde, wt %, max	0.01	0.02
Peroxide compounds, as active oxygen, wt %, max	0.0005	0.0005
Polymer, wt %, max	0.001	0.001
Colour, Pt-Co, Hazen units, max	10	10
Para-tert-butylpyrocatechol Stabilizer, wt %	0.0005–0.0010	0.0005–0.0010

SAFETY REQUIREMENTS

Highly flammable liquid with a peculiar faint smell. Hazard class 3, moderately hazardous substance.

TRANSPORT

Tank containers and dedicated rail tank cars.

HEAVY PYROLYSIS RESIDUE

TU 2451-183-72042240-2013

PRODUCTION

As a by-product by pyrolysis of hydrocarbon gases, gasolines or their blends on ethylene production units.

APPLICATIONS

As carbon black, coke, dark oil-polymer resins, concrete superplasticizing agents, as a boiler fuel component.

PROPERTIES

property	value	
	grade A	grade B
Density @ 20°C, g/cm ³ , min	1.04	1.00
Kinematic Viscosity @ 50°C, mm ² /sec, max	25	40
Distillation temperature of 3% vol, °C, min	180	120
Coking Capacity, %, max	12.0	16.0
Water, wt %, max	0.3	0.5
*Correlation Index on fraction composition, min	125	100
Sodium Ion, wt %, max	0.005	0.01
Potassium Ion, wt %, max	0.0008	0.0015
* for grade B max 1,0% if agreed with the customer		

SAFETY REQUIREMENTS

Flammable thick liquid with a peculiar smell, contains aromatic hydrocarbons (C₈ plus) incl min 15 % naphthalene and methyl naphthalene and polycyclic aromatic hydrocarbons. Does not react with water. Low-toxic substance, hazard class 4.

TRANSPORT

Rail tank cars.

BUTYLENE–BUTADIENE FRACTION

TU 2411-182-72042240-2011

Amendment No. 1

PRODUCTION

As a by-product in ethylene production by pyrolysis of hydrocarbon gases, gasolines, diesel fraction or their blends.

APPLICATIONS

As feedstock in synthetic rubber production.

PROPERTIES

property	value			
	Hydrogenated	Non-hydrogenated		
		A	B	V
C ₄ hydrocarbons, wt %, min	98	98	98	98
1,3-butadiene, wt %, min	35	40	30	20
Hydrocarbons up to C ₃ incl, wt %, max	1.5 total	0.7	1.5 total	2.0 total
Hydrocarbons C ₅ plus, wt %, max		0.5		
Acetylene hydrocarbons, wt %, max	1.0	-	-	-

SAFETY REQUIREMENTS

Flammable substance. Marginally hazardous, hazard class 4. In standard conditions, does not form toxic compounds with other substances in air or wastewater.

TRANSPORT

Pipelines and dedicated rail tank cars designed for pressure.

PENTANE–ISOPRENECYCLOPENTADIENE FRACTION

STO 05766575-136-2007

Amendment No. 1

PRODUCTION

As a by-product of ethylene production.

APPLICATIONS

For complex processing.

PROPERTIES

property	value
Appearance	Clear colorless or yellowish liquid
Hydrocarbons (lighter and heavier than C ₅) sum, wt %, max	10.0
– incl. benzene, %, max	2.0
C ₅ Hydrocarbons, wt %, min	90.0
incl.:	
– isoprene	10.0
– cyclopentadiene	6.0
Sulphides, as sulphur, wt %, max	0.01

SAFETY REQUIREMENTS

A mixture of low-boiling hydrocarbons, mainly C₅ with some C₄ and C₆. Vapours have narcotic effect. Moderately hazardous substance, hazard class 3.

TRANSPORT

Dedicated rail tank cars for liquefied gases.

INDUSTRIAL DIETHYLBENZENE

TU 2414-135-05766575-2007

Amendment No. 1

PRODUCTION

As a by-product of ethylbenzene production.

APPLICATIONS

For production of divinylbenzene (by dehydrogenation) and as feedstock for production of other petrochemicals.

PROPERTIES

property	value	
	grade A	grade B
Appearance	Clear liquid, colourless or light yellow	
Diethylbenzene Isomers, wt %, min	90	85
– including M-diethylbenzene, wt %, min	50	40
Total impurities (ethyltoluene, butylbenzene, triethylbenzene, etc.), wt %, max	10	15

SAFETY REQUIREMENTS

Highly inflammable liquid. Hazard class 3: moderately hazardous substance.
Maximum permissible concentration in the working area: 30/10 mg/m³.

TRANSPORT

Rail tank cars.

STILL RESIDUE OF STYRENE RECTIFICATION (KORS)

TU 2414-127-05766575-2005
Amendments No. 1, 2, 3

PRODUCTION

By styrene distillation in ethylbenzene & styrene production, during separation of hydrocarbon condensate.

APPLICATIONS

As a feedstock in a number of processes.

PROPERTIES

property	value
Appearance	Yellow-to-brown liquid
Solid residue, wt %, max	40
Kinematic Viscosity @ 20°C, mm ² /sec, max	7

SAFETY REQUIREMENTS

Thick flammable explosive toxic liquid. Characteristic odour. Moderately hazardous substance.
Maximum permissible concentration in the working area: 30/10 mg/m³.

TRANSPORT

Tank trucks.

STILL RESIDUE OF BENZENE RECTIFICATION (KORB)

STO 05766575-133-2007
Amendments No.1, 2, 3

PRODUCTION

As a by-product in benzene production. A mixture of alkylaromatic hydrocarbons (C₉ fraction admixed with benzene, toluene, styrene, diethylbenzene isomers mixture, naphthalene etc).

APPLICATIONS

Grade A (hydrated C₉ fraction) is used in motor fuels production.
Grade B is used as a dilutant of heavy resins and high-molecular still residues, in production of polymeric petroleum resin.

PROPERTIES

property	value	
	grade A	grade B
Appearance	Light-yellow liquid	Yellow-to-brown liquid
Density @ 20°C, g/cm ³ , within	0.750–1.070	0.750–1.070
Soluble gum, mg/100 cm ³ , max	50	2000
Kinematic Viscosity @ 50°C, mm ² /sec, max	–	20
Impurities, wt %, max	0.015	0.015
Water, wt %, max	0.2	0.2
Sulphur, wt %, max	0.2	0.2
Distillation temperature of 95% vol, °C, max	205	205

SAFETY REQUIREMENTS

Moderately hazardous substance, hazard class 3.

TRANSPORT

Rail tank cars.

GENERAL PURPOSE POLYSTYRENE GRADE PSM-E

STO 05766575-132-2014
Amendments No. 1, 2, 3

PRODUCTION

By bulk polymerization of styrene.

APPLICATIONS

For manufacture of thermal insulation boards and industrial-use products by extrusion.

PROPERTIES

property	value						
	PSM-E-01	PSM-E-02	PSM-E-03	PSM-P-01	PSM-P-02	PSM-P-03	PSM-P-04
Granules:							
– over 5 mm granules, wt %, max		1.0				20	
– up to 2.0 mm granules (dust), wt %, max		1.5				10	
– 2–5 mm granules, wt %, min		97.5				70	
Disks:							
– surface		clean and shiny				not specified	
– inclusions, 0.2–0.3 mm in diameter, within 10 cm ² area, mm, max		1				not specified	
– inclusions, 0.4–2.5 mm in diameter, within 10 cm ² area, mm, max		unacceptable				10	
– disc colour		clear				not specified	
Residual monomer (Styrene), wt %, max	0.20	0.12	0.12			2.0	
Water, wt %, max		0.1				0.1	
Melt Flow Index, g/10 min, within	3.0 – 4.8	4.9 – 7.0	7.1 – 9.0	2.0 – 7.9	8.0 – 11.9	12.0 – 19.0	19.1 – 25.0
Melt Flow Index variation within batch, %, max		±15				–	
Tensile Strength @ Break, kg(f)/cm ² , min	430	410	390			300	
Vicat Softening Point, °C, min	100	100	98			80	

SAFETY REQUIREMENTS

At room temperature: non-hazardous, non-toxic, non-explosive. Ignites on contact with fire. Marginally hazardous substance, hazard class 4.

TRANSPORT

All modes of covered transport

HIGH IMPACT POLYSTYRENE GRADE UPM-0508

GOST 28250-89

PRODUCTION

By copolymerization of styrene with rubber.

APPLICATIONS

For extrusion and die casting of industrial products and consumer goods.

PROPERTIES

property	value	
	Prime Grade	First Grade
Granules dimensions	Max. dimensions: 2–5 mm. Max 1% of 5–8 mm granules and 1% of 1.5–2 mm granules acceptable.	
Polymer Purity:	Clean disc surface. One 0.2–0.3 mm inclusion permissible as the area, cm ² :	
– Disc surface purity	10(20)	–
– Undissolved rubber (gel)	Unacceptable	Unacceptable
Residual monomer (Styrene), wt %, max	0.10	0.3
Water, wt %, max	0.1	0.1
Charpy Impact Strength, kJ ² /m (kg(f)·cm/cm ²), min	5.4(5.5)	4.9(5.0)
Melt Flow Index, g/10 min, within	4.0–7.0	2.0–8.0
Melt Flow Index variation within batch, %, max	(±10)	–
Elongation @ Break, %, min	25	20

SAFETY REQUIREMENTS

At room temperature: non-hazardous, non-toxic, non-explosive. Ignites on contact with fire. Explosive dust (20–70 microns).

TRANSPORT

Road transport & boxcars.

LOW DENSITY POLYETHYLENE GRADE 15803-020-S

STO 05766575-140-2013

Amendment No. 4

PRODUCTION

By high-pressure polymerization of ethylene with radical initiators in tubular reactors.

APPLICATIONS

LDPE is processed by all known methods for production of coloured and uncoloured, large and small technical products, films and film products, household goods, including products approved for food contact, medical products, toys. Polyethylene products can be used in rather wide temperature range.

PROPERTIES

property	value		
	Prime Grade	First Grade	Second Grade
Appearance:			
– granules dimensions in either direction, mm	2 – 5	2 – 5	2 – 5
– 5–8 mm granules, wt %, max	1.0	1.0	1.0
– over 8 mm granules, wt %, max	Unacceptable	Unacceptable	Unacceptable
– 1–2 mm granules, wt %, max	1.0	1.0	1.0
– adhered granules, wt %, max	1.5	1.5	1.5
– shapeless particles, wt %, max	1.0	1.0	1.0
– granules up to 1mm, dust and fibers, wt %, max	0.1	0.1	0.5
– gray and oxidized granules, wt %, max	Unacceptable	Unacceptable	0.5
– granules of other colour, wt %, max	Unacceptable	Unacceptable	0.1
Density @ 20°C, g/cm ³	0.917 – 0.921	0.917 – 0.921	0.917 – 0.921
Melt Flow Index, g/10 min	1.5 – 2.5	1.5 – 2.5	1.5 – 2.5
Melt Flow Index variation within batch, %, max	6	12	15
Inclusions:			
– up to 2 mm, pcs, max	2	8	40
– over 2 mm, pcs, max	Unacceptable	Unacceptable	Unacceptable
Process test for film appearances	B	B	C
Tensile Stress @ Yield, kg(f)/cm ² , min	95	95	95
Tensile Strength @ Break, kg(f)/cm ² , min	115	115	115
Elongation @ Break, %, min	600	600	600
Extractable substances, wt %, max	0.4	0.6	0.6
Odour and Taste of aqueous extracts, point, max	1	1	–

SAFETY REQUIREMENTS

At room temperature: non-hazardous, non-toxic, non-explosive. Ignites on contact with fire. Marginally hazardous substance, hazard class 4.

TRANSPORT

All modes of covered transport.

SNOLEN® SLURRY HIGH DENSITY POLYETHYLENE

Grade Index Interpretation:

SNOLEN® EP 0.26/51 N

○ SNOLEN® – is a word trademark identifying the high density polyethylene and subsequent items produced from it by Gazprom neftekhim Salavat (Certificate of Trademark No. 380910)

○ Processing Technique:
IM (Injection Molding)
EF (Extrusion film)
EP (Extrusion pipes)
EB (Extrusion Blow Molding)
EM (Extrusion monofibres)
EC (Extrusion cable)

○ Threshold value of Melt Index
@ 190°C, 5 kg, g/10 min

○ Threshold value of Density,
g/cm³ (hundredths and thousandths displayed,
e.g. 0.951 g/cm³).

○ Other:
HT – High Tensile
N – Natural
Y – Yellow
T – THT Catalyst
S – THS (Z501) Catalyst
E – THE Catalyst

BIMODAL GRADES

Pipe Grades:
SNOLEN® EP 0.26/51 N

Film Grades:
SNOLEN® EF 0.33/58

Blow Molding Grades:
SNOLEN® EB 0.41/53

UNIMODAL GRADES

Injection Molding Grades:
SNOLEN® IM 26/64
SNOLEN® IM 59/64
SNOLEN® IM 6/50
SNOLEN® IM 7.5/50

SNOLEN® SLURRY HIGH DENSITY POLYETHYLENE GRADE EP 0.26/51N

STO 00203521-001-2009
Amendments No. 1, 2, 3

PRODUCTION

By slurry polymerization using Hostalen technology by Basell Polyolefine GmbH.

APPLICATIONS

Extrusion pipe grades. Process pipes (incl. pressure pipes). Potable water pipes. Wear plates. Fittings.

FEATURES

Extra-high environmental stress crack resistance. High impact strength. High hydrostatic strength for PE grades. UV protection not required.

PROPERTIES

property	value
Density, g/cm ³	0.947–0.951
Melt Index @ 190°C / 5.0 kg, g/10 min	0.20–0.26
Melt Index @ 190°C / 21.6 kg, g/10 min	5.2–7.2
Melt Index Ratio MI _{21.6} /MI _{5.0} within	25–31

SAFETY REQUIREMENTS

Marginally hazardous substance, hazard class 4. Non-explosive, ignites on contact with fire.

TRANSPORT

All modes of transport.

SNOLEN® SLURRY HIGH DENSITY POLYETHYLENE GRADE IM 26/64

STO 00203521-001-2009
Amendments No. 1, 2, 3

PRODUCTION

By slurry polymerization using Hostalen technology by Basell Polyolefine GmbH.

APPLICATIONS

Containers. Components for machine building. Lids.

FEATURES

High hardness. Good flow characteristics. Low deformation.

PROPERTIES

property	value
Density, g/cm ³	0.960 – 0.964
Melt Index @ 190°C / 5.0 kg, g/10 min	20.0–26.0
Melt Index @ 190°C / 21.6 kg, g/10 min	6.0–10.0
Melt Index Ratio MI _{21.6} /MI _{5.0} , within	2.5–3.7
Volatile substances, wt %, max	0.3
Inclusions, pcs, max	15
Charpy Impact Strength, kJ/m ² , min	2.0

SAFETY REQUIREMENTS

Marginally hazardous substance, hazard class 4. Non-explosive, ignites on contact with fire.

TRANSPORT

All modes of transport.

SNOLEN® SLURRY HIGH DENSITY POLYETHYLENE GRADE IM 59/64

STO 00203521-001-2009
Amendments No. 1, 2, 3

PRODUCTION

By slurry polymerization using Hostalen technology by Basell Polyolefine GmbH.

APPLICATIONS

Medical equipment. Toys. Goods approved for contact with food.

FEATURES

Very good flow characteristics. High hardness. Low deformation.

PROPERTIES

property	value
Density, g/cm ³	0,960 – 0,964
Melt Index @ 190°C / 5.0 kg, g/10 min	45,0–59,0
Melt Index @ 190°C / 21.6 kg, g/10 min	13,0–21,0
Melt Index Ratio MI _{21,6} /MI ₅ , within	2,0–4,0
Volatile substances, wt %, max	0,3
Inclusions, pcs, max	15
Charpy Impact Strength, kJ/m ² , min	2,0

SAFETY REQUIREMENTS

Marginally hazardous substance, hazard class 4. Non-explosive, ignites on contact with fire.

TRANSPORT

All modes of transport.

SNOLEN® SLURRY HIGH DENSITY POLYETHYLENE GRADE EF 0.33/58

STO 00203521-001-2009
Amendments No. 1, 2, 3

PRODUCTION

By slurry polymerization using Hostalen technology by Basell Polyolefine GmbH.

APPLICATIONS

Bags. Bin bags. A multilayer film component.

FEATURES

High hardness. Good impact resistance by free-falling dart method (puncture resistance by falling weight test). Few gel inclusions. High drawdown rating.

PROPERTIES

property	value
Density, g/cm ³	0.954–0.958
Melt Index @ 190°C / 5.0 kg, g/10 min	0.23–0.33
Melt Index @ 190°C / 21.6 kg, g/10 min	6.0–10.0
Melt Index Ratio MI _{21.6} /MI ₅ , within	25–33

SAFETY REQUIREMENTS

Marginally hazardous substance, hazard class 4. Non-explosive, ignites on contact with fire.

TRANSPORT

All modes of transport.

SNOLEN® SLURRY HIGH DENSITY POLYETHYLENE GRADE EB 0.41/53

STO 00203521-001-2009
Amendments No. 1, 2, 3

PRODUCTION

By slurry polymerization using Hostalen technology by Basell Polyolefine GmbH.

APPLICATIONS

Containers. Cans

FEATURES

Good impact strength. Good environmental stress crack resistance.

PROPERTIES

property	value
Melt Index @ 190°C / 5.0 kg, g/10 min	0.29–0.41
Melt Index @ 190°C / 21.6 kg, g/10 min	7.5–11.5
Melt Index Ratio $MI_{21.6}/MI_{5.0}$, within	24–30

SAFETY REQUIREMENTS

Marginally hazardous substance, hazard class 4. Non-explosive, ignites on contact with fire.

TRANSPORT

All modes of transport.

SNOLEN® MODIFIED SLURRY HIGH DENSITY POLYETHYLENE

STO 05766575-155-2016

Amendment No. 1

PRODUCTION

By slurry polymerization.

APPLICATIONS

For production by die casting of items for machine–building industry, outfit for sports and recreation activities, and other needs of national economy.

PROPERTIES

property	value	
	Grade IM 6/50	Grade IM 7.5/50
Appearance of granules:		
– up to 2mm granules, wt %, max	0.5	0.5
– 5mm to 8mm granules, wt %, max	0.5	0.5
– over 8mm granules, wt %, max	0.5	0.5
Qualitative assessment of granules' appearance:		
– shape of granules, point, max	2	2
– contamination, point, max	2	2
– foreign particles,	Unacceptable	Unacceptable
– foreign granules of other colour	Unacceptable	–
Density @ 23°C, g/cm ³ , within	0.935 – 0.950	0.935 – 0.950
Melt Flow Index @ 190°C and 2,16 kg, g/10min, within	4.0 – 6.0	5.5 – 7.5
Tensile Stress @ Yield (100 mm/min), MPa, min	18.0	18.0
Elongation @ Break (100 mm/min), MPa	Not specified	–
Charpy Impact Strength @ 23°C, kJ/m ² , min	5,0	5,0
Volatile substances, wt %, max	0,05	0,05

SAFETY REQUIREMENTS

Marginally hazardous substance, hazard class 4. Non explosive, ignites on contact with fire.

TRANSPORT

All modes of transport.

CONTACTS

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Commercial Department, Monomer Plant

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+7 (3476) 39-34-95 – Domestic market

+7 (3476) 39-41-87 – Export

Sales of Polymer Products and Processing

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For up-to-date information, visit salavat-neftekhim.gazprom.com

INFORMATION FOR PARTNERS

In case you are interested in purchasing our refined products, please, send us an application listing the following:

1. Product name
2. Scope of delivery
3. Price / pricing conditions
4. Delivery basis
5. Delivery destination (railway station)
6. Delivery period
7. Transport
8. Payment terms

The application should be sent to the attention of Commercial Director, Gazprom neftekhim Salavat by fax: +7(3476) 39-21-04 or e-mail: marketing@snos.ru

The application should be signed by an authorized person and authenticated with the company seal.

Gazprom neftekhim Salavat reserves a right to disregard unduly executed applications submitted in any other form than written.

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