JSC MOZYR OIL REIFNERY

DEAR BUSINESS PARTNERS!

If you are interested in doing business with JSC Mozyr Oil Refinery, visit www.MNPZ.by to find out more about the company and the quality of th products.

CONTACT DETAILS

Marketing Department	Sales Department	Procurement Department
(00 375 236) 37-45-53	37-38-97	37-39-62
37-39-75	37-38-63	37-39-61
37-46-79	37-35-79	37-45-04
Fax: (00 375 236) 37-46-47	37-37-82	37-45-67
37-46-80	37-38-97	E-Mail: MTO@mnpz.by

Inquiries (+375-236) 37-34-99
General plant fax (+375-236) 33-78-43

Address:
Mozyr - 11, 247782
Gomel region, Republic of Belarus

E-mail: office@mnpz.by

UNP 400091131
License No.33133/428-1 registered in the Register of Licenses of Gospromatomnadzor under Ministry on Emergency Situations of the Republic of Belarus.

Products portfolio

2022

Motor Gasolines

Unleaded Gasolines AI-92-K5-EURO, AI-95-K5-EURO, AI-98-K5-EURO as per STB 1656-2016 “Automotive Fuels. Unleaded Gasoline. Specifications”.
Unleaded Gasoline AI-100-K5-EURO as per TU BY 400091131.013-2018 “Unleaded Gasoline AI-100-K5-EURO”.
Unleaded Gasoline AI-101-K5-EURO as per TU BY 400091131.018-2021 “Unleaded Gasoline AI-101-K5-EURO”.
Unleaded Gasolines AI-92-K5-EURO, AI-95-K5-EURO, AI-98-K5-EURO, AI-100-K5-EURO, AI-101-K5-EURO are in compliance with requirements of the Technical Regulations of the Customs Union (TR CU) 013/2011 “On requirements to automobile and aviation gasoline, diesel and marine fuels, jet fuels and fuel oil” with regard to K5 emission class; requirements of European Standard EN 228 “Automotive Fuels. Unleaded Gasoline. Requirements and test methods”

Parameter	Rated value as per TR CU 013/2011	Limit values	
		min	<
1. Research octane number (RON):			
- AI-92-K5-EURO gasoline	80	92.0	—
- AI-95-K5-EURO gasoline		95.0	—
- AI-98-K5-EURO gasoline		98.0	—
- AI-100-K5-EURO gasoline		100.0	—
- AI-101-K5-EURO gasoline		101,0	—
2. Motor octane number (MON):			
- AI-92-K5-EURO gasoline	76	83.0	—
- AI-95-K5-EURO gasoline		85.0	—
- AI-98-K5-EURO gasoline		88.0	—
- AI-100-K5-EURO gasoline		88.0	—
- AI-101-K5-EURO gasoline		89.0	—
3. Lead, mg/l	5* max	—	5.0**
4. Density @ 15 °C, kg/m^3	—	720.0	775.0
5. Sulphur, mg/kg	10 max	—	10.0
6. Oxidation stability, min	—	360	—
7. Resin concentration (solvent washed), mg/ 100 ml	—	—	5
8. Copper strip corrosion (for 3 hrs @ 50°C), Class	—	Class 1	
9. Appearance	—	Clear and clean	
10. Hydrocarbons, vol %:			
- olefins	18 max	—	18.0
- aromatics	35 max	—	35.0
11. Oxygen, wt %	2.7 max	—	2.7
12. Benzene, vol %	1 max	—	1.00
13. Oxygenates, vol %:			
- methanol	1* max	—	1.0**
- ethanol	5 max	—	5.0
- isopropyl alcohol	10 max	—	10.0
- isobutyl alcohol	10 max	—	10.0
- tret-butyl alcohol	7 max	—	7.0
- ethers (5 or more C atoms)	15 max	—	15.0
- other oxygenates	10 max	—	10.0
14. Iron, mg/l	none	none	
15. Manganese, mg/l	none	none	
16. Monomethyl aniline, vol %	none	none	
17. RVP, kPa:	35-80		
for Class A	(in summer season)	45.0	60.0
for Class B		45.0	70.0
for Classes C & C1	35-100	50.0	80.0
for Classes D & D1	(in winter season)	60.0	90.0
for Classes E & E1		65.0	95.0
for Classes F & F1		70.0	100.0

Feedstock for Petroleum Bitumen Production

The feedstock is used in bitumen production by oxidation or blending and meets the requirements of TU RB 300220696.011-2020.

Parameter	Value for Grade as per TU BY 300220696.011-2020		
	1	2	3
1. Assumed viscosity @ 80°C, nozzle diameter, 5 mm, s	20-60	61-120	121-200
2. Open cup flush point, °C, min	200	230	260
3. Water, wt %	traces	traces	traces
4. Ring-and-ball softening point, °C, min	20	25	30
5. Density @ 20°C, min	970	980	990

Fuel Oil

Fuel oil (Grade 100) meets the requirements of GOST 10585-2013 and is used for stationary boiler plants and process units. It is produced from ARs and VRs with addition of HGO fractions. The refinery produces Fuel oil (Grade 100), 2,50 %, ashy, 25 ^{0}C and Fuel oil (Grade 100), 3,00 %, ashy, 25 ^{0}C.

Parameter	Unit	Value as per GOST 10585-2013	
		min	max
1. Kinematic viscosity @ 100°C	mm^2/s	-	50.00
2. Ash	%	-	0.14
3. Mechanical impurities	%	-	1.0
4. Water	%	-	1.0
5. Water soluble acids and alkalies	-	none	
6. Sulphur	%	- -	2.50 3.00
7. Open cup flash point	°C	110	-
8. Pour point	°C	-	25
9. Net heating value (lower) on dry basis (non-rejecting)	kJ/kg	39,900	-
10. Density @ 15°C	kg/m^3	Not rated. Determination is mandatory	

Technical Sulphur

Technical sulphur meets the requirements of GOST 127.1-93 and is used for production of sulphuric acid, carbon sulphide, dyes, rubber goods and in paper-and-pulp, textile and other industries. It is produced at Sulphur Recovery Unit and can be in liquid and solid (lump) form.

Parameter	Value as per GOST 127.1-93	
	liquid	lump
	Grade 9998	Grade 9920
1. Sulphur, wt %, min	99.98	99.20
2. Water, wt %, max	Not rated	1.0
3. Ash, wt %, max	0.008	0.4
4. Organic substances, wt %, max	0.01	0.5
5. Acids in terms ofsulphuric acid, wt %, max	0.0015	0.02

18. Evaporated gasoline @ 70°C (E70), % (V/V): for Classes A & B for Classes C, C1, D, D1, E, E1, F, F1	—	 20.0 22.0	 48.0 50.0
19. Evaporated gasoline @ 100°C (E100), % (V/V)	—	46.0	71.0
20. Evaporated gasoline @ 150°C (E150), % (V/V)	—	75.0	—
21. Final Boiling Point (FBP), °C	—	—	210
22. Distillation test residues, % (V/V)	—	—	2
23. Volatility index (VLI) (10 VP + 7 E70): - for Class C1 - for Class D1 - for Class E1 - for Class F1	—	 — — — —	 1,050 1,150 1,200 1,250

* for Russian Federation - none

** actual value - none

Diesel Fuel

Diesel fuel produced as per STB 1658-2015 “Automotive Fuels. Diesel Fuel. Specifications” is intended for use in internal combustion engines with ignition due to fuel-air mixture compression.

Diesel fuel complies with requirements of TR CU 013/2011 “On requirements to automobile and aviation gasoline, diesel and marine fuels, jet fuels and fuel oil” with regard to K5 emission class and requirements of European Standard EN 590 “Automotive Fuels. Diesel Fuel. Requirements and test methods”.

The following grades of summer and winter diesel fuel are available for use in temperate climate conditions:

DT-L-K5, Grade C – with CFPP of minus 5°C max;

DT-Z-K5, Grade F – with CFPP of minus 20°C max

Requirements and rated values for diesel fuel for use in temperate climate conditions are listed below:

Parameter	Rated value as per TR CU 013/2011	Value as per STB 1658-2015
1. Cetan number, min	47	51.0
2. Cetan index, min	—	46.0
3. Density @ 15°C, kg/m^3	—	820.0-845.0
4. Polycyclic aromatic hydrocarbons, wt %, max	8	8.0
5. Sulfur, mg/kg, max	10	10.0
6. Closed cup flash point, °C	Min. 30	Min. 55
7. Carbon residue (on 10% residue), %, max	—	0.30
8. Ash, wt %, max	—	0.01
9. Water, mg/kg, max.	—	200
10. Mechanical impurities, mg/kg, max	—	24
11. Copper strip corrosion (for 3 hrs @ 50°C), class	—	Class 1
12. Oxidation stability, g/m^3, max	—	25
13. Lubricity: - adjusted wear scar diameter (WSD 1.4) @ 60°C, μm, max	 460	 460
14. Viscosity @ 40°C, mm^2/s	—	2,000-4,500
15. Distillation: - recovered @ 250°C, vol %, max - recovered @ 350°C, vol %, min - 95 vol % recovered @ °C, max	 — — 360	 65 85 360

The following grades of diesel fuel are intended for arctic and cold weather vehicle operations:

DT-Z-K5, class 0 - with CFPP of minus 20°C max and cloud point of minus 10°C max;

DT-Z-K5, class 1 - with CFPP of minus 26°C max and cloud point of minus 16°C max;

DT-Z-K5, class 2 - with CFPP of minus 32°C max and cloud point of minus 22°C max;

DT-A-K5, class 4 - with CFPP of minus 44°C max and cloud point of minus 34°C max;

Hydrotreated Vacuum Gasoil

Hydrotreated Vacuum Gasoil is a heavy residue from Mild Hydrocracking Unit or VGO Hydroconversion Unit which meets the requirements of TU RB 300220696.023-2004. It is used as feedstock for Catalytic Cracking Unit

Property	Specification as per TU RB 300220696.023-2004
1. Distillation: a) up to 10% vol. is recovered at temperature, C°, max b) up to 50% vol. is recovered at temperature, C°, max c) up to 90% vol. is recovered at temperature, C°, max	 405 460 530
2. Density at 15 ºC, kg/m^3	Not rated. Determination is mandatory.
3. Density at 20 ºC, kg/m^3, max	910
4. Kinematic viscosity at 50 ºC, mm^2/s, max	35.0
5. Sulphur, % wt., max: Type 1 Type 2 Type 3	 0.2 0.3 0.5
6. Freezing point, ºC, max or Pour point, °C, max	41 44
7. Open cup flash point, °C, min	160
8. Vanadium, % wt., max	0.0005
9. Carbon residue, % wt., max	0.2

Straight-run Heavy Vacuum Gasoil

Straight-run heavy vacuum gasoil is a broad hydrocarbon fraction obtained by AR vacuum distillation and meets the requirements of TU BY 400091131.020-2021. It is used for production of base oil and solid paraffins as well as a feedstock for hydrocracking units.

Property	Specification as per TU BY 400091131.020-2021
1. Distillation: a) % recovered at 250 °C b) IBP, °C c) % vol. recovered up to 350 °C, max d) 90 % vol. recovered at temperature, °C, max	Not rated. Determination is mandatory. same 17 535
2. Density at 20 ºC, kg/m^3	870-950
3. Kinematic viscosity at 50 ºC, mm^2/s	25.1-60.0
4. Sulphur, % wt., max	2.5
5. Colour (in solution)	Not rated. Determination is mandatory.
6. Freezing point, ºC, min	16
7. Pour point, °C, min	19
8. Closed cup flash point, °C, min	110
9. Vanadium, % wt., max	0.0005
10. Carbon residue, % wt., max	0.4

Requirements and rated values for diesel fuel used in arctic and cold winter conditions:

Parameter	Rated value as per TR CU 013/2011	Values as per STB 1658-2015
1. Cetane number, min: - for Class 0 - for Class 1 - for Class 2 - for Class 4	47	 49.0 49.0 48.0 47.0
2. Cetane index, min: - for Class 0 - for Class 1 - for Class 2 - for Class 4	—	 46.0 46.0 46.0 43.0
3. Density @ 15°C, kg/m^3 - for Class 0 - for Class 1 - for Class 2 - for Class 4	—	 800.0-845.0 800.0-845.0 800.0-840.0 800.0-840.0
4. Polycyclic aromatic hydrocarbons, %, max	8	8.0
5. Sulphur, mg/kg, max	10	10.0
6. Closed cup flash point, °C	30 min	55 min
7. Carbon residue (on 10% residue), %, max	—	0.30
8. Ash, wt %, max	—	0.010
9. H_2O, mg/kg, max	—	200
10. Mechanical impurities, mg/kg, max	—	24
11. Copper strip corrosion (for 3 hrs @ 50°C), class	—	Class 1
12. Oxidation stability, g/m^3, max	—	25
13. Lubricity: - adjusted wear scar diameter (WSD 1.4) @ 60°C, μm, max	 460	 460
14. Viscosity @ 40°C, mm^2/s: - for Class 0 - for Class 1 - for Class 2 - for Class 4	—	 1,500-4,000 1,500-4,000 1,500-4,000 1,200-4,000
15. Distillation: - recovered @ 180°C, % (vol), max - recovered @ 340°C, % (vol), min - 95 % (vol) recovered @ °C, max	 — — 360	 10 95 360
16. CFPP, °C, max: - for Class 0 - for Class 1 - for Class 2 - for Class 4	 minus 20	 minus 20 minus 26 minus 32 minus 44
17. Cloud point, °C, max: - for Class 0 - for Class 1 - for Class 2 - for Class 4	 -	 minus 10 minus 16 minus 22 minus 34

High-Octane Gasoline Component (Alkylate)

Alkylate is produced by HF alkylation and used as a high-octane ecologically friendly gasoline component and a commercial product as per TU BY 400091131.001-2008.

Parameter	Value as per TU BY 400091131.001-2008
1. Density @ 15°C, kg/m^3	Not rated, determination is mandatory
2. RON, min	94.0
3. MON, min	91.0
4. Distillation - IBP, °C, min - FBP, °C, max - distillation test residue, vol %, max - residue and losses, vol %, max	 35.0 210 1.5 4.0
5. RVP, kPa, max	60.0
6. Sulfur, mg/kg, max	10.0
7. Copper strip corrosion (for 3 hrs @ 50°C)	Class 1
8. Appearance	Clean and clear
9. Hydrocarbons, vol %: - aromatic, %, max - olefins, %, max	 0.5 0.5
10. Water and mechanical impurities	none

Methyl-Tret-Butyl Ether (MTBE)

MTBE complies with TU BY 400091131.012-2017 requirements and is produced by etherification reaction between iso-butane and methanol in presence of catalyst. The product obtained is used as a high-octane gasoline component.

Parameter	Value as per TU BY 400091131.012-2017	
	Grade A	Grade B
1. Appearance	Clear liquid	
2. Methyl-tret-butyl ether, wt %, min	98.0	96.0
3. Alcohols (methanol and tret-butanol, wt %, max	1.5	2.5
4. C_4 and C_8 hydrocarbons, wt %, max	1.5	1.5
5. Water, wt %, max	0.15	0.15
6. Sulfur, mg/kg, max	15.0	15.0
7. Mechanical impurities	none	
8. Density @ 15°C, kg/m^3	Not rated, determination is mandatory	

Home Heating Oil

Home heating oil meets the requirements of TU BY 400091131.004-2009 and is intended for public utility needs. It is produced from distillate fractions obtained by straight distillation and from secondary oil processing.

Parameter	Value as per TU BY 400091131.004-2009
1. Distillation: vol % recovered @ 250°C	 Not rated. Determination is mandatory.
vol % recovered @ 300°C	Not rated. Determination is mandatory.
vol % max recovered @ 350°C	84
2. Kinematic viscosity @ 20°C, mm^2/s, max	15.0
3. Freeze point, °C, max: from October 1 through March 31 from April 1 through September 30	 minus 15 minus 5
4. Closed cup flash point, °C, min	62
5. Sulphur, wt % max Type I Type II Type III Type IV	 0.035 0.05 0.1 0.5

MSCC Slurry Oil

Bottom product from Combined Catalytic Cracking Unit is intended for use as a feedstock for carbon black production and is produced in accordance with the requirements of TU BY 400091131.014-2019 “MSCC Slurry Oil” and shall meet the below listed specifications:

Parameter	Value as per TU BY 400091131.014-2019
1. Distillation:	
- IBP, °C, max	300
- 50 vol % recovered @ °C, max	440
- FBP, °C, max	550
- volume recovered, vol %	Not rated. Determination is mandatory
2. Density @ 15°C, kg/m^3, max	1,100
3. Open cup flash point, °C, min	110
4. Pour point, °C, max	12
5. Flow point, °C, max	15
6. Kinematic viscosity @ 50°C, mm^2/s, max	200
7. Sulphur, wt %, max	1.2
8. Water H_2O, wt %, max	1.0
9. Water soluble acids and alkalies	none
10. Acid number, mg of KOH/g, max	2.5
11. H_2S, mg/kg, max	10
12. Ash, wt %	Not rated. Determination is mandatory
13. Carbon residue (micromethod), wt %, max	18

Butane-Butylene Fraction

Butane-Butylene Fraction (grade А, Б, В) meets the requirements of TU 0272-027-00151638-99. It is used as feedstock in production of alkylates in the sulphuric acid or HF alkylation process, isooctylenes and polymer distillates in polymerization of low-molecular-weight polybutylenes.

Property	Specification as per TU 0272-027-00151638-99 for grades		
	А	Б	В
1. Mass fraction of components:			
total hydrocarbons (C_3), max	0.5	3.0	5.0
total butanes	Not rated	Not rated	Not rated
total butylenes, min	40.0	35.0	25.0
total hydrocarbons (C_5 and above), max	1.0	3.0	6.0
2. Mass fraction of H_2S and mercaptan sulphur, max	0.015	0.02	0.02
3. Free water and caustic	n/a	n/a	n/a

Petroleum Benzene

The high purity petroleum benzene complies with GOST 9572-93 requirements and is used as a feedstock for production of synthetic fibres and rubbers, plastics, dyes and other organic synthesis products.

Parameter	Value as per GOST 9572-93
	for high purity grade
1. Density @ 20°C, g/cm^3	0.878-0.880
2. Freeze point, °C, min	5.40
3. Base material, wt %, min	99.9
4. Total sulphur, wt, % max	0.00005

Kerosene, ecologically improved

Ecologically improved kerosene meets the requirements of TU BY 400091131.005-2009 and is produced on the basis of hydrotreated fraction (180° ˍ230°C) with sulfur content of 10 ppm max.

Parameter	Value as per TU BY 400091131.005-2009
1. Density @ 15°C, kg/m^3, max	834
2. Distillation:	
% recovered @ up to 270 °C, min	80
98% recovered @ °C, max	310
3. Color, KNS colorimetric scale conventional units, max	5
4. Smoke point, mm, min	20
5. Closed cup flash point, °C, min	40
6. Cloud point, °C, max	minus 40
7. Sulphur, mg/kg, max	10

Road Bitumen

Road bitumen complies with STB EN 12591-2010 (EN12591:2009), TU BY 400091131.009-2011 requirements and is used for construction and repair of road, airfield and other bituminous-concrete surfaces.

Parameter	Value for Grade		
	50/70	70/100	100/150
1. Penetration @ 25°C, 0.1 mm	50-70	70-100	100-150
2. Ring-and-ball softening point, °C	46-54	43-51	39-47
3. Penetration index	from -1.5 to +0.7	from -1.5 to +0.7	from -1.5 to +0.7
4. Fraas brittle point, °C, max	-8	-10	-12
5. Resistance to hardening @ 163°C:			
- residual penetration, %, min	50	46	43
- softening point increase, °C, max	9	9	10
- change of mass (abs. value), %, max	0.5	0.8	0.8
6. Dynamic viscosity @ 60°C, Pa·s, min	145	90	55
7. Kinematic viscosity @ 135°C, mm^2/s, min	295	230	175
8. Flash point, °C, min	230	230	230
9. Solubility, %, min	99.0	99.0	99.0

Liquefied Petroleum Gases

In accordance with STB 2262-2012 requirements the following grades of liquefied petroleum gases are available:
PBA (mixture of automobile propane-butane or autogas) is intended for use as a fuel for motor vehicles and with regard to physical, chemical and operating characteristics complies with the following requirements and rated values.

Parameter	Values as per STB 2262-2012
1. MON, min.	89
2. Components, wt %:	
- sum of methane, ethane and ethylene	Not rated
- propane	50±10
- sum of butane and butylene	Not rated
- sum of unsaturated hydrocarbons, max	6
3. Liquid residue @ 20°C, vol %, max	1.6
4. Saturated vapour positive pressure, MPa: @ plus 45°C, max @ minus 20°C, min	 1.6 0.07
5. Hydrogen sulphide and mercaptan sulfur, %, max	0.01
including hydrogen sulphide, %, max	0.003
6. Free water and alkali	none
7. Odor intensity, points, min	3

SPBT (mixture of technical grade propane and butane) and **BT** (technical grade butane) are intended for industrial purposes and as a household fuel); by physical and chemical characteristics they comply with the following requirements and rated values:

Parameter	Value as per STB 2262-2012	
	SPBT	BT
1. Components, wt %:		
- sum of methane, ethane and ethylene	Not rated	
- sum of propane and propylene	Not rated	
- sum of butane and butylene	60 max	60 min
2. Liquid residue @ 20°C, vol %, max	1.6	1.8
3. Saturated vapour positive pressure, MPa, @ plus 45°C, max	1.6	
4. Hydrogen sulphide and mercaptan sulfur, wt %, max	0.013	
including hydrogen sulphide, %, max	0.003	
5. Free water and alkali	none	
6. Odor intensity, points, min	3	

The refinery also exports LPG that meets the requirements of PN-EN 589 “Automotive Fuels. Liquefied Petroleum Gas (LPG). Requirements and test methods”:

Parameter	Value as per PN-EN 589
1. MON, min	89.0
2. Diolefins, wt % , max	0.5
3. 1,3-butadiene, wt %, max.	0.10
4. Hydrogen sulphide	none
5. Total sulphur (after odorization), mg/kg, max	30
6. Copper strip corrosion (for 1 hr @ 40°C), class by scale	Class 1
7. Residue on evaporation, mg/kg, max	60
8. Saturated vapours positive pressure @ 40°C, kPa, max	1,550
9. Temperature at which saturated vapours positive pressure is more than 150 kPa, max.: - for Type A - for Type B - for Type C - for Type D - for Type E	 -10 -5 0 +10 +20
10. Water	none
11. Odor: unpleasant, specific at airborne concentrations (20 % of LEL)	

Propane-Propylene Fraction

Propane-propylene fraction meets the requirements of TU BY 400091131.019-2021. It is also used as feedstock for chemical and petrochemical industry as well as for secondary oil refining processes.

Property	Specification as per TU BY 400091131.019-2021
1. Hydrocarbon composition: - propylene, % wt.	 75.0-89.0
- propane, % wt.	Not rated.
- ethane, % wt. max.	0.1
- n-butane and iso-butane, % wt., max.	4.0
- butene, % wt., max.	0.2
- ethylene, mg/kg, max	10
- methane, mg/kg, max	10
- cyclopropane, mg/kg, max	250
- acetylene, mg/kg, max	10
- methylacetylene, mg/kg, max	100
- propadiene, mg/kg, max	50
- butadienes, mg/kg, max	50
- total hydrocarbons (C_5 and above) mg/kg, max	500
2. Sulphur, mg/kg, below	1,0
3. Water, mg/kg	Not rated.
Density, kg/m^3: at 15 °C at 20 °C	Not rated.