

Requirements and quality for ORLEN S.A.

1. The **Seller** guarantees that the **Product** meets the requirements under the following Polish legislation in force:

- Act of 25 August 2006 on biocomponents and liquid biofuels (consolidated text: Journal of Laws of 2025, item 901 as amended)
- Regulation of the Minister of Industry and the Minister of Climate and Environment of 21 March 2025 on quality requirements for liquid biofuels (Journal of Laws of 2025, item 426)
- Regulation of the Minister of Climate and Environment of 18 May 2026 concerning quality requirements, quality testing methods, and sampling procedures for biocomponents, excluding biocomponents produced via co-hydroprocessing, gaseous biocomponents, and biocomponents used for the production of aviation and marine fuels (Journal of Laws of 2026 item 710),
- meets quality requirements under the PN-EN 14214+A2:2019-05 norm, considering any changes in regulations introduced during the term of the Contract. Starting from the implementation date, meets quality requirements under the Polish version of the EN 14214:2026 norm and the relevant legislation applicable in Poland.

2. The **Seller** is obliged to buy and use with regard to the **Product** only additive packages that ensure the fulfilment or quality requirements determined in this specification, subject to §6(8).

Periods for using additives:

- Winter dedicated only to esters possessing intended purpose for manufacturing of self-contained biofuel BIO 100 (containing depressant, an antioxidant and optionally biocide) – used in period from 1 November to the end of February
- Universal (containing an antioxidant and a biocide) – used during the whole year for **Product** which is used for blending, and in period 1st March to the end of October for manufacturing of self-contained biofuel BIO 100 (for BIO100 biocide is optional).

The **Seller** shall set limits for microbiological contamination for the **product** stored in the vendor's tank and shall, at least quarterly, provide a test certificate confirming the maintenance of the prescribed limits. A sample taken for microbiological analysis and analysis should be made by the certified accredited conformity assessment body.

The **Buyer** reserves the right to collect the **Product RME** with a depressant in the period mentioned by **Buyer**.

The **Buyer** reserves the right to collect the **Product**, which does not contain biocide provided the **Seller** is informed 30 days before the delivery month.

The **Buyer** reserves the right to collect the **Product**, which does not contain one or several of the additives, provided the **Seller** is informed 30 days before the delivery month. The **Buyer** reserves the right to indicate a specific additive that should be applied by **Seller** in order to ensure compatibility of additives with additives that are used by the **Buyer**, provided that the **Seller** is informed 60 days before the delivery month.

The **Product** intended for blending shall meet the requirements set out in Tables 3a and 3b specified in EN 14214 + A2: 2019-05 without the use of additives to improve low temperature properties. Upon publication and implementation of the Polish version of EN 14214:2026, the Product shall comply with the quality requirements specified therein and with the relevant legislation applicable in Poland. The **Product** intended for the production of BIO100 shall meet the requirements set out in Table 2 specified in EN 14214 + A2: 2019-05. Upon publication of the Polish version of EN 14214:2026, the Product shall comply with the quality requirements specified therein and with the regulations in force in Poland.

The **Seller** shall ask the **Buyer** for his permission in the event of any modification of the additives used in the **product**. The **Buyer** shall provide his reply regarding the modification of additives within 30 days.

The antioxidant (or antioxidant within the package) used in the **Product** is on the AGQM list.

No later than the first quarter of the **Contract**, the **Seller** is obliged to provide the results at the time of manufacture and at every request of the **Buyer**, **Seller** confirms the effectiveness of the additives. With respect to the effectiveness or lack of need for biocide, the seller is required to provide the quality analysis at least once a quarter.

Product Specification (RME, FAME-10, FAME 0)

ORLEN S.A., PERN S.A., TanQuid Sp. z o.o., UNIMOT Terminale Sp. z o.o. Fatty Acid Methyl Esters (RME, FAME 0, FAME -10), used for blending, produced without the use of palm oil.

The **product** with intended purpose for blending with diesel fuel in **Gdańsk Refinery** and with purpose of manufacturing of self-contained fuel BIO100 is not limited in terms of the basic composition, however it is essential that it complies with the requirements specified in Tab. 1 and provisions of the contract. In the event of a change or introduction of new regulations on the import of palm oil or other raw materials that must meet the low risk criterion of causing indirect land-use change, the **Seller** guarantees the delivery of the Product that meet the requirements resulting from art. 28bcc of the Act of 25 August 2006 on biocomponents and liquid (consolidated text: Journal of Laws of 2025, item 901 as amended), in particular the current requirements of the European Union regulations listed in art. 28bcc.

For FAME produced from cover crops (novel crops, intermediate crops) and qualified as feedstock listed in Annex IX directive, the **Seller** guarantees to meet the requirements resulting from the current provisions of the Act of 25 August 2006 on biocomponents and liquid biofuels (consolidated text: Journal of Laws of 2025, item 901 as amended) including the guidelines of the European Commission of the European Union and which must comply with the provisions of the Double-Counted Products.

Tab. 1. This specification applies to:

- 1) Product used for blending consistent with the ORLEN S.A., PERN S.A., TanQuid Sp. z o.o., UNIMOT Terminale Sp. z o.o. consistent with the ORLEN requirements.
- 2) Esters possessing intended purpose for manufacturing of self-contained biofuel BIO100 consistent with the ORLEN requirements. In case the supplies of such a grade are concerned for the period from the 1st of Nov to the end of Feb it should contain winter additives.
- 3) Product used for blending in Gdańsk Refinery consistent with the ORLEN requirements.

Property ^a	Unit	Scope				Testing method
		minimum	maximum			
1) Content FAME	% (m/m)	96.5	-			EN 14103
2) Density at 15°C ^b	kg/m ³	860	900			EN ISO 3675 ^c EN ISO 12185
3) Viscosity at 40°C	mm ² /s	3.50	5.00			EN ISO 3104 ^d EN ISO 18335 EN ISO 23581
4) Flash point	°C	101	—			EN ISO 2719 ^e EN ISO 3679 ^f
5) Cetane number ^g		51.0	-			EN ISO 5165 ^h EN 15195 ⁱ EN 16715 EN 17155
6) Sulphated ashes content ^{ac}	% (m/m)	—	0.02			ISO 3987
7) Test of copper strip corrosion (3h in 50°C) ^{ac}	Rating	class 1				EN ISO 2160
8) Oxidation stability (at 110°C)	h	8	15 ¹⁾	— ²⁾	— ³⁾	EN 15751 EN 14112 ^j
9) Acid value	mg KOH/g	-	0.50			EN 14104
10) Iodine value	g iodine/100 g	-	120			EN 14111 ^k EN 16300
11) Palmitic acid methyl ester content ^l	% (m/m)	-	7.0 ¹⁾	— ²⁾	— ³⁾	EN 14103

Property ^a	Unit	Scope				Testing method
		minimum	maximum			
12) Linoleic acid methyl ester content	% (m/m)	-	12.0			EN 14103
13) Polyunsaturated (≥4 double bonds) methyl esters	% (m/m)	-	1.00			EN 15779
14) Methanol content	% (m/m)	-	0.20			EN 14110
15) Monoglycerides content	% (m/m)	-	0.70 ^m			EN 14105
16) Diglycerides content	% (m/m)	-	0.20			EN 14105
17) Triglycerides content	% (m/m)	-	0.20			EN 14105
18) Free glycerol	% (m/m)	-	0.02			EN 14105 ⁿ EN 14106
19) Total glycerol	% (m/m)	-	0.25			EN 14105
20) Water content	% (m/m)	-	0.030 ¹⁾	0,030 ²⁾	0,050 ³⁾	EN ISO 12937
21) Total contamination	mg/kg	-	20 ¹⁾	20 ²⁾	24 ³⁾	EN 12662-2
22) Sulfur content	mg/kg	-	10.0			EN ISO 20846 ^{o, p} EN ISO 20884 ^p EN ISO 13032
23) Group I metals (Na+K)	mg/kg	-	5.0 (4.0) ^r			EN 14108 ^s EN 14109 EN 14538
24) Group II metals (Ca+Mg)	mg/kg	-	5.0 (4.0) ^r			EN 14538
25) Phosphorus content	mg/kg	-	4.0			EN 14107 ^t EN 16294 EN 14538
26) Phosphorus content	mg/kg	Report on the Certificate of Quality. ^{1) 2) 3)}				EN 14538 ^u
27) Saturated monoglycerides (SMG)	mg/kg	Report on the Certificate of Quality. ^{1) 3)}				EN 17057 ^w
28) Sterol glycosides content	mg/kg	To be reported in the Certificate of Quality once a quarter ¹⁾				EN 16934
29) Cold filter plugging point (CFPP) ^x						
¹⁾ from 16.04. to 15.09. from 16.09. to 15.04.	°C	- -	0 -10			EN 116
²⁾ from 16.04. to 30.09. from 1.03. to 15.04. as well as from 1.10. to 31.10. from 1.11. till the end of February ^y		- - -	0 -10 -20			
³⁾ from 16.04. to 15.09. ^z from 16.09. to 15.04. ^z		- -	0 -10			
30) Cloud point (CP)						
^{1) 3)} from 16.04. to 15.09. from 16.09. to 15.04.	°C	- -	5 -3			ISO 3015
²⁾ from 16.04. to 30.09. from 1.10. to 15.04.		- -	5 -3			
31) Cold soak filtration test (CSFT) ^{aa}	s	-	200 ¹⁾	- ²⁾	- ³⁾	ASTM D 7501
32) FAME content average molecular weight ^{ab}	g/mol	Report on the Certificate of Quality.				EN 14103

Property ^a	Unit	Scope		Testing method
		minimum	maximum	
a If CEN publishes a new edition of EN 14214:2026, the requirements set out in such standard, the regulations in force in Poland, and any other requirements specified by ORLEN S.A. shall apply. b Density may be determined within the temperature range from 20 °C to 60 °C. Adjustment of temperature shall be made according to the formula set out in Annex B to the PN-EN 14214+A2:2019-05 norm (or in accordance with the new edition of the Polish version of EN 14214:2026, upon its entry into force).). c In cases of dispute concerning density, EN ISO 12185 shall be used with the determination carried out at 15 °C. d In cases of dispute concerning viscosity, EN ISO 3104 shall be used. e In cases of dispute concerning flash point, EN ISO 3679 shall be used. f A 2 ml of a sample shall be used and a measuring apparatus equipped with a thermal detector shall be employed. g The determination of derived cetane number for FAME is not included in the precision determinations of some test methods h In cases of dispute concerning cetane number, EN ISO 5165 shall be used. i EN 15195 is applicable for the quantitative determination of the ignition characteristics of FAME, however the correlation data available were inconclusive about the precision of the equation. j In cases of dispute concerning oxidation stability, EN 15751 shall be used. k In cases of dispute concerning iodine value, EN 14111 shall be used. l Applicable only from 16th September to 15th April, where the product should be delivered with a limit of max. 7% (m/m). For RME this limit is max. 6% (m/m). m For the use as an extension of uses of diesel fuel Table 3 EN 14214+A2:2019-05 ((or in accordance with the new edition of the Polish version of EN 14214:2026, upon its entry into force). In the period from 1.10. to 15.04. the Product shall be delivered with a limit of 0.6% (m/m). n In cases of dispute concerning free glycerol, EN 14105 shall be used. o In cases of dispute concerning sulfur content, EN ISO 20846 shall be used. p In EN ISO 20846 and EN ISO 20884:2019 FAME is not included in the scope or the precision determination. r The requirement shall apply following the publication of the Polish version of the new edition of EN 14214:2026 and the update of the regulations in force in Poland introducing a limit of 4.0 mg/kg. Until then, the limit of 5.0 mg/kg shall remain applicable. s In cases of dispute concerning metals content, EN 14538 shall be used, t In cases of dispute concerning phosphorus content, EN 14107 shall be used. u The phosphorus content determined in accordance with the EN 14538 standard should be reported on the Certificate of Quality in order to obtain information on the actual phosphorus level and the test method. The reporting requirement shall apply upon publication of the new edition of EN 14214:2026. w The SMG content determined in accordance with the EN 17057 standard should be reported on the Certificate of Quality in order to obtain information on the actual phosphorus level and the test method. The reporting requirement shall apply upon publication of the new edition of EN 14214:2026. x If CFPP is -20°C or lower, viscosity shall be measured at -20°C. The measured value shall not exceed 48mm²/s. In this case, the standard test methods are applicable without the precision data owing to non-Newtonian behaviour in a two-phase system y The Buyer has the right to extend the period of use of the Product from CFPP-10 to 15.11, provided that he informs the Seller in advance (14 days before the month of delivery). z The Buyer has the right to extend the application date of CFPP 0 till September 20. And the date indicated refers to the date of delivery to the terminal (CIF/DDP). For FOB/FCA deliveries, the due date may be earlier and will be confirmed by the Buyer. aa Requirement only from 16th of September till 15th of April. CSFT result should be reported on the certificate of analyse. ab The FAME content results shall be reported on the Certificate of Quality. The reporting requirement shall apply upon publication of the new edition of EN 14214:2026. In accordance with the procedure described in EN 14078, after determining the fatty acid methyl ester (FAME) composition using the method specified in EN 14103, the average molecular weight (M) of the FAME contained in the sample shall be calculated in accordance with Annex D of the new edition of EN 14214:2026. ac The requirement shall no longer apply following the publication of the Polish version of the new edition of EN 14214 and the update of the regulations in force in Poland.				