

FIM FUELS REGULATIONS FOR TRACK RACING

2026



FIM Fuels Regulations for Track Racing 2026



YEAR 2026						
Version	on Applicable as from Modified paragraphs					
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01.63 METHANOL, GASOLINE AND LUBRICANT

The fuels that can be used for competition are listed in the table below:

	Pure methanol	Unleaded gasoline	Mixture of unleaded gasoline	Mixture of unleaded gasoline(s) and lubricant
Speedway 250cc - 500cc	✓			
Long Track 250cc – 500cc	✓			
Side car 500 cc	✓			
Flat Track		✓	✓	✓
All other engines	✓	✓	✓	✓

The unleaded gasoline or the mixture of unleaded gasolines used must comply with the FIM specifications as set out in Art. 63.01.

The mixture of unleaded gasoline(s) and lubricant must comply with the FIM specifications as set out in Art. 63.02.

Riders/teams must declare to the FIM Technical Director (or the FMNR Chief Technical Steward when there is no FIM Technical Director appointed) the make and type of gasoline to be used during practices and race(s), upon presentation of the rider/team's motorcycle(s) at the initial Technical Verifications. They are also recommended to provide a certificate issued by the gasoline company which certify that the gasoline has been tested and is in conformity with FIM specifications.

Gasoline companies which supply 'race' gasolines (gasolines other than those obtained at public pump stations) to participating teams/riders must test their gasoline at Intertek Schlieren (Switzerland) against all the FIM specifications set out in Art. 63.01.

Providing the gasoline is within the FIM specifications, a certificate containing a test report and batch number will be issued to the fuel company.

The gasoline company shall be able to provide a copy of such certificate to their client rider/teams before they take part in a race.

Contact for fuel analysis: fimfuels@intertek.com.

A list of gasolines which are in conformity with FIM specifications will be published by FIM on the FIM website.

Furthermore, in the cases in which only gasoline from the appointed supplier is permitted (for a specific event or the entire World Championship, Prize or Cup), the aforementioned gasoline shall have been previously tested in a FIM appointed laboratory in order to test its conformity with the FIM specifications as set out in Art. 63.01:



- in case of conformity, a certificate of conformity (including test report and tested batch number) shall be available and Art. 01.63 applies in case of controls for the riders/teams;
- in case the conformity is not achieved, the FMN of the organising country/the Organiser/the Promoter shall ask the FIM for a waiver in order to enable the use of gasoline not corresponding to FIM specifications. If the waiver is granted, the riders/teams will be responsible for using the gasoline provided without changing its composition. Controls may be carried out by FIM.

63.01 FIM specifications for methanol, unleaded gasolines or mixtures of unleaded gasolines

The following specifications are set for methanol, unleaded gasoline or the mixture of unleaded gasolines:

a) The following properties shall be within the following thresholds (for each property, the relative test methods to be used for the measurement are indicated):

Property	Units	Min.*	Max.*	Test Method
RON		95.0	102.0	EN ISO 5164 or ASTM D2699
MON		85.0	90.0	EN ISO 5163 or ASTM D2700
Oxygen (includes 10% ethanol allowance)	% (m/m)		3.7	EN ISO 22854 ¹ or EN 13132 or elemental analysis
Nitrogen	% (m/m)		0.2	ASTM D 4629 ² or ASTM 5762
Benzene	% (V/V)		1.0	EN ISO 22854 or ASTM D6839 or ASTM D5580
Vapour pressure (DVPE)	kPa		100.0	EN 13016-1 or ASTM D5191
Lead	mg/L		5.0	ICP-OES or AAS
Manganese	mg/L		2.0	ICP-OES or AAS
Density at 15°C	kg/m³	720.0	785.0	EN ISO 12185 or ASTM D4052
Oxidation stability	minutes	360		EN ISO 7536 or ASTM D525
Sulphur	mg/kg		10.0	EN ISO 20846 or ASTM D5453
<u>Distillation:</u>				EN ISO 3405 or ASTM D86
E at 70°C	% (V/V)	20.0	52.0	
E at 100°C	% (V/V)	46.0	72.0	
E at 150°C	% (V/V)	75.0		
Final Boiling Point	°C		210	



Residue	% (V/V)		2.0			
Appearance	clear, bright and visually free from solid matter and undissolved water			Visual inspection		
Olefins	% (V/V)		18.0	EN ISO 22854 or ASTM D6839		
Aromatics	omatics % (V/V)		35.0	EN ISO 22854 or ASTM D6839		
Total diolefins	% (m/m) 1.0		1.0	GC-MS or HPLC		
Oxygenates:				EN ISO 22854 ¹ or EN 13132		
Methanol	% (V/V)		3.0	The only oxygenates		
Ethanol	% (V/V)		10.0	permitted are paraffinic		
Isopropanol	% (V/V)		12.0	mono-alcohols and		
Isobutanol	% (V/V)		15.0	paraffinic mono-ethers		
<i>tert</i> -Butanol	% (V/V)	(of 5 or		(of 5 or more carbon		
Ethers (C5 or higher)	% (V/V)		22.0	atoms per molecule)		
Others	% (V/V)		15.0	with a final boiling point		
				below 210°C.		

¹ In cases of dispute EN ISO 22854 will be the reference method.

- b) The total of individual hydrocarbon components present at concentrations of less than 5% (m/m) must constitute at least 30% (m/m) of the fuel. The test method will be GC-FID (gas chromatography-flame ionisation detector) and/or GC-MS (gas chromatography-mass spectrometry).
- c) The total concentration of naphthenes, olefins and aromatics classified by carbon number must not exceed the values given in the following table:

% (m/m)	C4	C5	C6	C 7	C8	C9+
Naphthenes	0	5	10	10	10	10
Olefins	5	20	20	15	10	10
Aromatics	_	-	1.2	35	35	30

Bicyclic and polycyclic olefins are not permitted. The fuel must contain no substances which are capable of exothermic reaction in absence of external oxygen.

63.02 FIM specifications for mixtures of unleaded gasoline(s) and lubricant

The lubricant

 must not change the composition of the gasoline fraction when added to the gasoline;

² In cases of dispute ASTM D 4629 will be the reference method.

^{*}All reported min. and max. thresholds do not include the tolerance, which needs to be calculated in accordance with ISO 4259 and taken into account to correct the min. and max. thresholds.



- must not contain any nitro-compounds, peroxides or any other engine power boosting additives;
- must in no way contribute to an improvement in overall performance;
- during the distillation up to 250°C, must not show a reduction in mass by evaporation of more than 10% (m/m) (test method: simulated distillation GC);
- must contain a max. content of anti-knock agents (lead, manganese, iron) of 10 mg/Kg (test method: ICP-OES).

Moreover, the following specifications are set for the mixture of unleaded gasoline(s) and lubricant:

a) The following properties shall be within the following thresholds (for each property, the relative test methods to be used for the measurement are indicated):

Property	Unit	Min.	Max.	Test Method
RON			102.0*	EN ISO 5164 or ASTM D2699
MON			90.0*	EN ISO 5163 or ASTM D2700
Density at 15°C	kg/m ³	690**	815**	EN ISO 12185 or ASTM D4052

^{*}Reported min. and max. thresholds do not include the tolerance, which needs to be calculated in accordance with ISO 4259 and taken into account to correct the min. and max. thresholds. ** Min. and max. thresholds do include the tolerance.

63.03 Air

Only ambient air may be mixed with the fuel as an oxidant.

63.05 Sampling and Testing

The FIM may require gasoline controls, i.e. controls of the unleaded gasoline, mixture of unleaded gasolines or mixture of unleaded gasoline and lubricant, used by riders/teams at events.

Samples will be taken at any place and any time during the event (at the discretion of the FIM Technical Director).

The samples will be tested either:

- a) At the event using the methanol tester method.
- **b)** Delivered by FIM courier to the FIM appointed laboratory for post event tests.

63.05.01 Sampling

Procedure A: FIM methanol sampling for methanol testing method at the event (when available, if not procedure B applies).

1) The FIM Technical Director (or the FMNR Chief Technical Steward when there is no FIM Technical Director appointed) is the sole official responsible for the sampling management and supervision.



- 2) Riders/teams selected for methanol controls are directed to proceed with their vehicles to the area that has been designated for this purpose.
- 3) The FIM Technical Director/FMNR Chief Technical Steward collects the methanol from the motorcycle by using a methanol tester (electronic density meter DMA 35).

During the total duration of this Procedure, the motorcycle must remain in the appointed test area.

There will be no protest available, only the option to immediately make a second test.

Procedure B: FIM methanol and gasoline sampling for FIM appointed laboratory testing method (if Procedure A not applicable or in case of appeal / protest about result of the Procedure A).

- The FIM Technical Director (or the FMNR Chief Technical Steward when there
 is no FIM Technical Director appointed) is the sole official responsible for the
 sampling management and supervision.
- 2) Riders/teams selected for methanol/gasoline controls are directed to proceed with their vehicles-to the area that has been designated for this purpose.
- 3) The FIM Technical Director/FMNR Chief Technical Steward collects the gasoline from the motorcycle by using only new sample containers and pipettes/hand pumps. The gasoline is transferred through the use of the pipette/hand pump directly from the gasoline tank into three containers, denominated A, B and C. The containers are closed and sealed by the FIM Technical Director/FMNR Chief Technical Steward.
- 4) The FIM Technical Director/FMNR Chief Technical Steward fills in (in all its parts) and signs the Gasoline Sample Declaration Form (see 63.04.03). The rider or a team representative also signs this Form, after verifying that all the information is correct.
- 5) The FIM Technical Director/FMNR Chief Technical Steward prepares an appropriate shipping box containing the collected A, B and C samples and a copy of the respective, signed, Gasoline Sample Declaration Form. The box is then shipped to the FIM appointed laboratory by registered courier.

63.05.02 Testing

Procedure A: FIM methanol testing method at the event (when available, if not procedure B applies).

1) One or more properties to be checked (following the relevant testing method as per Art. 63.01 and 63.02) are set by the FIM for each selected rider/team.



"All 250cc - 500cc Speedway and Long Track and Sidecar 500cc engines must use pure methanol as fuel."

How pure is the methanol can be checked at the event itself using an electronic density meter DMA 35.

Sample testing procedure:

- Testing with neutral sample (water)
- Sample extraction from the common tank
- Sample taken directly from the fuel tank of the motorcycle tested rider

Density of methanol depends on temperature, as can be seen in the diagram 1 below.

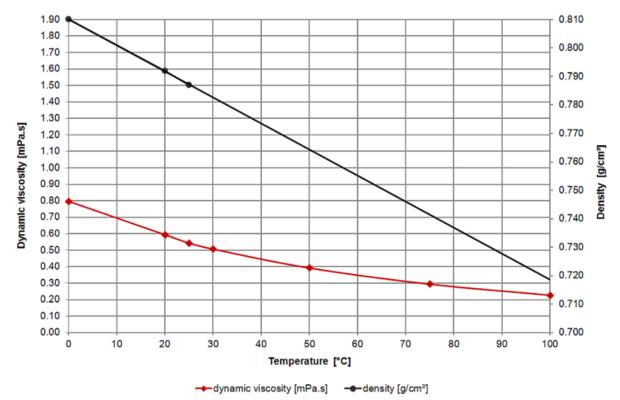
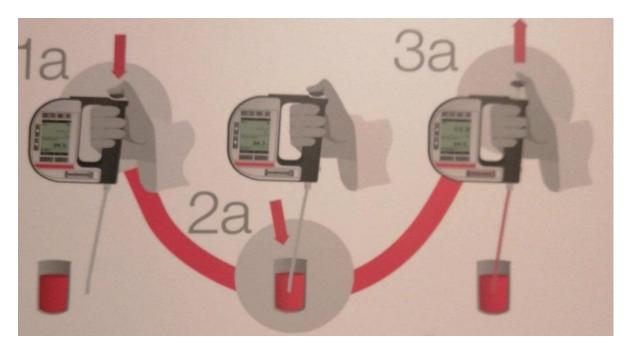


Diagram1, Methanol – dynamic viscosity and density over temperature

Measurement procedure (as shown on the diagram hereunder):

- o (1a) Press the pump lever
- o (2a) Sink the tube in the methanol sample (fuel tank of the motorcycle tested)
- o (3a) Slowly release the pump lever
- Read the value





Credit picture: ANTON PAAR – DMA 35 – User manual illustration

- 1) The threshold of result to pass the methanol test is fixed at 95% of match (compared with the same batch of methanol tested from the common tank (when provided by the promoter/organizer)).
- 2) Under 95% of match, the methanol test result is failed (meaning the methanol tested is not "pure" and is not in conformity with the methanol provided from the common tank (tested previously)).
- 3) The full procedure A can be made a second time upon request of the team manager/rider (of the team which the methanol is tested). The team manager/rider can attend to the full procedure.
- 4) In case of appeal/protest of the result of the Procedure A, the Procedure B will apply.
- 5) This result will be reported to the FIM International Jury which will take appropriate actions.

Procedure B: FIM Fuel testing via FIM appointed laboratory (if Procedure A not available or in case of appeal/protest about result of the Procedure A).

- 1) One or more properties to be checked (following the relevant testing method as per Art. 63.01 and 63.02) are set by the FIM for each selected rider/team.
- 2) Sample A is the first sample to be tested by the FIM appointed laboratory.
- 3) Sample B can be used for a second analysis if required by the FIM. The test result of the A or B sample more favourable to the rider/team is taken into account. Costs for the shipping and testing of sample A and B are paid by FIM.



- 4) As soon as possible after completing the testing, the FIM appointed laboratory reports the test results directly to the responsible CTI Coordinator.
- 5) For negative cases (i.e. conformity of the tested property(ies) with the specification), the riders/teams concerned will be individually informed by the FIM in due course, copying the rider/team's FMN, the FIM Technical Director/FMNR Chief Technical Steward, the competent authority (e.g. Race Direction, International Jury), the CTI Director, the Director and Coordinator(s) of the sporting Commission concerned.
- 6) Only for positive cases following testing of sample A or B or A and B (i.e. non-conformity of one or more properties*), the responsible CTI Coordinator notifies by electronic mail* the rider/team concerned (including the testing results) and, 24 hours after, forwards the relevant information to the rider/team's FMN, the FIM Technical Director/FMNR Chief Technical Steward, the competent authority (e.g. Race Direction, International Jury), the CTI Director, the Director and Coordinator(s) of the sporting Commission concerned.
 *Note: The non-conformity of one property (except the Appearance) is sufficient for declaring non-conformity of the gasoline or the mixture.
- 7) If the rider/team wishes to request a counter-expertise, he must notify the responsible CTI Coordinator by electronic mail* accordingly, within 72 hours of receipt by the FIM of the delivery status notification pertaining to the notification of the test results to the rider/team.
 - If a counter-expertise is requested, the sample dedicated to the counter-expertise is sample C and the test shall aim at checking the same property(ies) previously checked on sample A/B. The rider/team can request that sample C be tested at one of the available FIM appointed laboratories. Costs for shipping and testing of sample C are paid by the rider/team concerned.
 Upon notification of the sample C results, the responsible CTI Coordinator notifies by electronic mail* the rider/team concerned (including the testing results) and forwards the relevant information to the rider/team's FMN, the FIM Technical Director/FMNR Chief Technical

Steward, the competent authority (e.g. Race Direction, International Jury), the CTI Director, the Director and Coordinator(s) of the sporting

- If no counter-expertise is requested within the time limit, the responsible CTI Coordinator forwards the relevant information by electronic mail* the rider/team's FMN, the FIM Technical Director/FMNR Chief Technical Steward), the competent authority (e.g. Race Direction, International Jury), the CTI Director, Director and Coordinator(s) of the sporting Commission concerned.
- 8) The competent authority of the event concerned (e.g. Race Direction, International Jury) takes a decision based on the information received. The

Commission concerned.



Coordinator of the sporting Commission concerned notifies the rider/team concerned regarding the decision by electronic mail*.

The non-conformity of

- A sample (in the cases B sample was not used) or
- B sample (in the cases A sample result was not conclusive) or
- A and B samples or
- A and B and C samples (in the cases B sample was used and a counterexpertise was requested) or
- A and C samples (in the cases B sample was not used and a counterexpertise was requested) automatically results in the disqualification of the rider/team from the entire event.

No disqualification will be applied in case of conformity of sample C. Furthermore, in any case, other penalties may be applied.

9) The rider/team has the right to appeal against the decision of competent authority of the event concerned (e.g. Race Direction, International Jury) in accordance with FIM Disciplinary and Arbitration Code applicable to the relevant discipline.

^{*}The receipt of a delivery status notification will be deemed as proof of delivery.



63.05.03 Gasoline Sample Declaration Form

FEDERATION INTERNATIONALE DE MOTOCYCLISME	FIM WORLD CHAMPIONSHIPS, CUPS AND PRIZE EVENTS Gasoline Sample Declaration Form						
Discipline							
IMN (xxx/xx)							
Rider/team's ı	name						
Rider/team's ı	number						
Rider/team's	email or telephor	ne number					
Team							
Vehicle's mak	ке						
Gasoline's ma	ake and type						
supplier)	in (public station						
Gasoline sam (dd/mm/yy)	iples taken on da	ite					
Gasoline sam	ıples taken at (rig						
MOTOCROS	S TRIAL	TRACK RAC	ING	ENDURO/ISDE	RALLII	ES/BAJAS	
Practice	□Day 1	Heat n°		☐Day 1	Day	1	
Qualifying	race Day 2			□Day 2	□Day 2		
Race 1				☐Day n° ☐Day n°			
Race 2							
				Vial seal n°			
	Sample A						
	Sample B						
	Sample C						
The above listed details refer to gasoline samples taken from the gasoline tank of the motorcycle specified. Sample A is the first testing sample to be used by the FIM appointed laboratory. Sample B can be used for a second analysis if required by the FIM. Sample C is used if a counter-expertise is required by the rider/team. The serial numbers of the vial seals and the accuracy of the listed information have been verified.							
Rider or team responsible name							
Rider or team responsible signature							
FIM Technical Director/FMNR Chief							
Technical Steward name FIM Technical Director/FMNR Chief Technical Steward signature							



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