Petroleum Physical Property Standards

AccuStandard®

ASTM Physical Properties

Our ISO 17034:2016 accredition goes above and beyond ISO/IEC 17025:2017 and ISO 9001:2015 requirements. Physical standards follow strict guidelines for producing, certifying, labeling, and reporting uncertainty for their products. The requirements also include verifying stability and homogeneity.

https://www.accustandard.com/petroleum-physical-property-standards

AccuStandard ISO 17034:2016 scope includes ASTM methods:

Flash Point (D56, D92, D93)
Distillation (D86)
Pour Point (D97, D5950)
Viscosity (D445)
Freeze Point (D1015, D2386, D5972, D7153)
Water Content in Petroleum Products by Karl Fischer (D1744, E1064, D4377)
Cloud Point (D2500, D5771, D5772, D5773)

ASTM D56, D92, D93 - Flash Point Standards

Flash Point is the lowest temperature at which a heated liquid will form sufficient vapor to ignite when exposed to a flame source. For heavy oils or light hydrocarbons, we offer multiple flash point CRMs for your daily and routine checks that are ASTM D56, D92 and D93 compliant.

ASTM No.	Nominal Flash Point	Cat. No.	Unit	ASTM No.	Nominal Flash Point	Cat. No.	Unit
TCC D56	67 °C	ASTM-P-133-04 ▲	250 mL	PMCC D93	60 °C	ASTM-P-132-01 ▲	250 mL
COC D92	138 °C	ASTM-P-133-03	250 mL	PMCC D93	93 °C	ASTM-P-132-02	250 mL
COC D92	200 °C	ASTM-P-132-03	250 mL	PMCC D93	65 °C	ASTM-P-133-01 ▲	250 mL
COC D92	230 °C	ASTM-P-132-04	250 mL	PMCC D93	134 °C	ASTM-P-133-02	250 mL

ASTM D86 - Distillation Standards

The automatic distillation apparatus duplicates the distillation conditions of the manual method. The increased reliance on the detectors requires an independent standard to verify that the apparatus is performing correctly. This synthetic blend of hydrocarbons boils in the temperature range specified in ASTM D86 distillation Groups 1 and 2. The fuel oil meets the Group 4 criteria.

The Group 1 & 2 standards cover the boiling range from 129-368°F (54-187°C). Group 4 standard covers the range from 410-670°F (210-355°C).

Group	Description	Cat. No.	Unit	Group	Description	Cat. No.	Unit
1, 2	Synthetic Distillation Standard	ASTM-P-126-01 ▲	500 mL	4	Distillation Standard	ASTM-P-127-01 ▲	250 mL
						ASTM-P-127-02 ▲	500 mL

ASTM D97, D5950 - Pour Point Calibration Standards

The Pour Point of a liquid is defined as the lowest temperature at which a petroleum product can be poured under certain testing criteria. Pour Point is an important characteristic to measure for Refineries and Petroleum Testing Labs to ensure fuel meets the desired specifications.

Pour Point, (Approx. Value)	Cat. No.	Unit	Pour Point, (Approx. Value)	Cat. No.	Unit
- 50 °C	ASTM-P-135-01 ▲	250 mL	- 15 °C	ASTM-P-135-04 ▲	250 mL
- 25 °C	ASTM-P-135-02 ▲	250 mL	- 40 °C	ASTM-P-135-05 ▲	250 mL
- 5 °C	ASTM-P-135-03 ▲	250 mL			

ASTM D445 - Kinematic Viscosity Calibration Standards

Kinematic viscosity is the measurement of a liquid flow time using a calibrated viscometer tube in a controlled temperature bath. The Kinematic viscosity of petroleum products is important to determine the quality of the product, the applicability and the suitable storage conditions. AccuStandard viscosity CRMs are made in accordance with ASTM Test Method D445 and covers a broad range of viscosity values.

Viscosity @ 40 °C	Cat. No.	Unit	Viscosity @ 40 °C	Cat. No.	Unit
4 cSt	ASTM-P-128-01	500 mL	61 cSt	ASTM-P-128-04	500 mL
7 cSt	ASTM-P-128-02	500 mL	180 cSt	ASTM-P-128-05	500 mL
19 cSt	ASTM-P-128-03	500 mL	400 cSt	ASTM-P-128-07	500 mL

▲ Hazardous fee required.

Additional ASTM Methods on next page

ASTM D611 - Aniline Point Standards *

Aniline point is the temperature at which equal volume of Aniline and oil becomes miscible and no phase separation is observed. The measurement of Aniline point is important to determine the aromaticity as well as the aromatic content in oils and heavy hydrocarbons. The percentage of aromatic compounds in such materials directly impacts properties such as viscosity and flash point.

In addition to pure aniline, we offer a wide range of aniline point standards to cover multiple temperatures and complies with both ASTM D611 and ASTM D611E.

Method 611(A)

Nominal Aniline Point	Cat. No. D-611-SET	Unit 5 x 20 mL
0 °C	D-611-01	20 mL
30 °C	D-611-02	20 mL
55 °C	D-611-03	20 mL
68 °C	D-611-04	20 mL
94 °C	D-611-05	20 mL

Method 611(E)

Nominal Aniline Point	Cat. No. D-611E-SET	Unit 3 x 20 mL
43 °C	D-611E-01	20 mL
62 °C	D-611E-02	20 mL
77 °C	D-611E-03	20 mL
Pure Aniline	**ASTM-P-134-PAK**	**5 x 20 mL**

*** Aniline point standards not on ISO 17034 scope**

For routine purposes pure aniline is packaged in ampules under dry nitrogen. This minimizes the risk of oxidation.

ASTM D1015, D2386, D5972, D7153 - Freezing Points for Aviation Fuel Standards

Aviation fuel freezing point is the lowest temperature at which fuel remains free of solid hydrocarbon crystals.

Nominal Freezing Point	Cat. No.	Unit
- 50 °C	ASTM-P-129-01	250 mL
- 45 °C	ASTM-P-129-02	250 mL

ASTM D1744, E1064, D4377 - Water in Liquid Petroleum Products by Karl Fischer D4928, D6304

The Karl Fischer Coulometric titration is used to determine water content in Petroleum, Pharmaceutical as well as Food products. ASTM D4377 Karl Fischer CRMs are available as low as 60 PPM with versatile fill sizes that meet all your lab needs.

Water Content	Cat. No.	Unit
60 µg/g	KF-0.6X-5ML-VAP	10 x 5 mL
100 µg/g	KF-1X-2ML-VAP	10 x 2 mL
	KF-1X-5ML-VAP	10 x 5 mL
	KF-1X-20ML-PAK	5 x 20 mL
1000 µg/g	KF-10X-2ML-VAP	10 x 2 mL
	KF-10X-5ML-VAP	10 x 5 mL
	KF-10X-20ML-PAK	5 x 20 mL

Water Content	Cat. No.	Unit
5000 µg/g	KF-50X-2ML-VAP	10 x 2 mL
	KF-50X-5ML-VAP	10 x 5 mL
	KF-50X-20ML-PAK	5 x 20 mL

Value Added Packs (VAP) Multiple single units packaged together for consistency and cost savings.

ASTM D2500, D5771, D5772, D5773 - Cloud Point Calibration Standards

The Cloud Point is known as the lowest temperature when a petroleum product becomes cloudy and hydrocarbon crystals start forming. Cloud Point is an important parameter to measure in order to determine quality and performance of petroleum products. Cloud Point CRMs cover a range from -20 °C up to +5 °C. They are available for immediate dispatch to meet your application needs.

Cloud Point, (Approx. Value)	Cat. No.	Unit
+ 5 °C	ASTM-P-131-01	250 mL
- 2 °C	ASTM-P-131-02 ▲	250 mL
- 10 °C	ASTM-P-131-03 ▲	250 mL

Cloud Point, (Approx. Value)	Cat. No.	Unit
- 15 °C	ASTM-P-131-04 ▲	250 mL
- 20 °C	ASTM-P-131-05 ▲	250 mL

▲ Hazardous fee required.