

Quantrix®

BASE OILS

ExxonMobil

 **CALUMET**
SPECIALTY PRODUCTS PARTNERS, L.P.



 **HOLLYFRONTIER™**
SPECIALTY PRODUCTS



ADbase
BROUGHT TO YOU BY ADNOC



 **PURE
PERFORMANCE®**
BASE OILS



**EXCEL
PARALUBES**

OUR ALLIANCES

BASE OILS GROUP I

ExxonMobil

BASE OILS GROUP I QBO 2500/BS-150

Specifications

Property	Standard Method(a)	Limits	QBO 2500/BS-150
ASTM Color	ASTM D1500	Max	6
Appearance	Visual	Min-Max	Clear and Bright
Cold-Cranking Simulator, Apparent Viscosity @ -20 C, mPa.s	ASTM D5293	Max	
Cold-Cranking Simulator, Apparent Viscosity @ -25 C, mPa.s	ASTM D5293	Max	
Flash Point, Cleveland Open Cup, °C	ASTM D92	Min	294
Kinematic Viscosity @ 100 C, mm ² /s	ASTM D445	Min-Max	30.6-32.7
Kinematic Viscosity @ 40 C, mm ² /s	ASTM D445	Min-Max	
Noack Volatility, Procedure B, mass%	ASTM D5800-PROB	Max	
Pour Point, °C	ASTM D97	Max	-6
Viscosity Index	ASTM D2270	Min	95

Corporate Office:

10887 NW 17 Street, Unit 207
Miami, FL, 33172

BASE OILS GROUP I QBO-SN100

Specifications

Property	Standard Method(a)	Limits	QBO-SN100
ASTM Color	ASTM D1500	Max	1.5
Appearance	Visual	Min-Max	Clear and Bright
Cold-Cranking Simulator, Apparent Viscosity @ -20 C, mPa.s	ASTM D5293	Max	
Cold-Cranking Simulator, Apparent Viscosity @ -25 C, mPa.s	ASTM D5293	Max	1,650
Flash Point, Cleveland Open Cup, °C	ASTM D92	Min	194
Kinematic Viscosity @ 100 C, mm ² /s	ASTM D445	Min-Max	3.80-4.20
Kinematic Viscosity @ 40 C, mm ² /s	ASTM D445	Min-Max	18.5-21.0
Noack Volatility, Procedure B, mass%	ASTM D5800-PROB	Max	30
Pour Point, °C	ASTM D97	Max	-18
Viscosity Index	ASTM D2270	Min	95

BASE OILS GROUP I QBO-SN150

Specifications

Property	Standard Method(a)	Limits	QBO-SN150
ASTM Color	ASTM D1500	Max	1.5
Appearance	Visual	Min-Max	Clear and Bright
Cold-Cranking Simulator, Apparent Viscosity @ -20 C, mPa.s	ASTM D5293	Max	2,100
Cold-Cranking Simulator, Apparent Viscosity @ -25 C, mPa.s	ASTM D5293	Max	
Flash Point, Cleveland Open Cup, °C	ASTM D92	Min	210
Kinematic Viscosity @ 100 C, mm ² /s	ASTM D445	Min-Max	4.95-5.40
Kinematic Viscosity @ 40 C, mm ² /s	ASTM D445	Min-Max	29.0-32.0
Noack Volatility, Procedure B, mass%	ASTM D5800-PROB	Max	20
Pour Point, °C	ASTM D97	Max	-15
Viscosity Index	ASTM D2270	Min	95

BASE OILS GROUP I QBO-SN330

Américas SN			QBO-SN330
Propiedad	Límite	Método estándar (a)	
Apariencia	Visual		BandaC
Color ASTM	máx.	ASTM D 1500	2.0
Viscosidad CCS -10°C mPa•seg	máx.	ASTM D 5293	2550
Punto de inflamación, COC grados C	mínimo	ASTM D 92	222
Viscosidad Cinemática@ 40°C mm2/seg	Mínimo máximo	ASTM D 445	
Viscosidad Cinemática@ 100°C mm2/seg	Mínimo máximo	ASTM D 445	7.90-8.55
Volatilidad NOACK % en peso	máx.	ASTM D 5800	9
Punto de fluidez grados C	máx.	ASTM D 97	-9
Índice de viscosidad	mínimo	ASTM D 2270	95

BASE OILS GROUP I QBO-SN600

Property	Standard Method(a)	Limits	QBO-SN600
ASTM Color	ASTM D1500	Max	4
Appearance	Visual	Min-Max	Clear and Bright
Cold-Cranking Simulator, Apparent Viscosity @ -20 C, mPa.s	ASTM D5293	Max	
Cold-Cranking Simulator, Apparent Viscosity @ -25 C, mPa.s	ASTM D5293		
Flash Point, Cleveland Open Cup, °C	ASTM D92	Min	246
Kinematic Viscosity @ 100 C, mm ² /s	ASTM D445	Min-Max	11.70-13.00
Kinematic Viscosity @ 40 C, mm ² /s	ASTM D445	Min-Max	109.0-116.0
Noack Volatility, Procedure B, mass%	ASTM D5800-PROB	Max	
Pour Point, °C	ASTM D97	Max	-6
Viscosity Index	ASTM D2270	Min	95

BASE OILS GROUP I QBO-SN800

Chem. & Phys. Property	UOM	Methods	Min.	Max.
Viscosity Index	none	ASTM D2270	90	
Kinematic Viscosity @ 40°C	mm ² /s	ASTM D445	140	180
Flash Point, Cleveland Open Cup	°C	ASTM D92	246	
Pour Point	°C	ASTM D97		-6
Appearance	ninguna	visual	Clear and Bright	

BASE OILS GROUP II

ExxonMobil

BASE OILS GROUP II QBO-220N

Property	Standard Method(a)	Limits	QBO-220
ASTM Color	ASTM D1500	Max	L0.5
Appearance	Visual	Min-Max	Clear and Bright
Cold-Cranking Simulator, Apparent Viscosity @ -20 C, mPa.s	ASTM D5293	Max	3,100
Cold-Cranking Simulator, Apparent Viscosity @ -25 C, mPa.s	ASTM D5293		
Flash Point, Cleveland Open Cup, °C	ASTM D92	Min	214
Kinematic Viscosity @ 100 C, mm ² /s	ASTM D445	Min-Max	6.3-6.6
Kinematic Viscosity @ 40 C, mm ² /s	ASTM D445	Min-Max	
Noack Volatility, Procedure B, mass%	ASTM D5800-PROB	Max	10
Pour Point, °C	ASTM D97	Max	-18
Viscosity Index	ASTM D2270	Min	103-109

BASE OILS GROUP II QBO-600N

Property	Standard Method(a)	Limits	QBO-600
ASTM Color	ASTM D1500	Max	L0.5
Appearance	Visual	Min-Max	Clear and Bright
Cold-Cranking Simulator, Apparent Viscosity @ -20 C, mPa.s	ASTM D5293	Max	
Cold-Cranking Simulator, Apparent Viscosity @ -25 C, mPa.s	ASTM D5293		
Flash Point, Cleveland Open Cup, °C	ASTM D92	Min	255
Kinematic Viscosity @ 100 C, mm ² /s	ASTM D445	Min-Max	11.7-12.5
Kinematic Viscosity @ 40 C, mm ² /s	ASTM D445	Min-Max	96-108
Noack Volatility, Procedure B, mass%	ASTM D5800-PROB	Max	10
Pour Point, °C	ASTM D97	Max	-15
Viscosity Index	ASTM D2270	Min	102-115

BASE OILS GROUP I



BASE OILS GROUP I QBO-2500/BS-150

Physical Properties*	ASTM Method	QBO-2500/BS-150
Viscosity, SUS @ 100°F	D2161	2584.5
Viscosity, SUS @ 210°F	D2161	155.5
Viscosity, cSt @ 40°C	D445	482.3
Viscosity, cSt @ 100°C	D445	31.8
Viscosity Index	D2270	97
API Gravity @ 60°F	D4052	27.1
FlashPoint, °C	D92	303
FlashPoint, °F	D92	578
PourPoint, °C	D97	-8
PourPoint, °F	D97	19
Color	D1500	L3.5
AnilinePoint, °C	D611	133.0
AnilinePoint, °F	D611	271.5
Saturates, Mass %	D2007	88.8
Sulfur, Mass %	D4294	.0057

BASE OILS GROUP I QBO-SN60

Physical Properties*	ASTM Method	QBO-SN60
Viscosity, SUS @ 100°F	D2161	55.4
Viscosity, SUS @ 210°F	D2161	34.1
Viscosity, cSt @ 40°C	D445	8.5
Viscosity, cSt @ 100°C	D445	2.3
Viscosity Index	D2270	73
API Gravity @ 60°F	D4052	35.0
FlashPoint, °C	D92	161
FlashPoint, °F	D92	322
PourPoint, °C	D97	-51
PourPoint, °F	D97	-60
Color	D1500	L0.5
AnilinePoint, °C	D611	93.5
AnilinePoint, °F	D611	200.3
Saturates, Mass %	D2007	92.2
Sulfur, Mass %	D4294	.0007

BASE OILS GROUP I QBO-SN75

Physical Properties*	ASTM Method	QBO-SN75
Viscosity, SUS @ 100°F	D2161	72.6
Viscosity, SUS @ 210°F	D2161	36.6
Viscosity, cSt @ 40°C	D445	12.75
Viscosity, cSt @ 100°C	D445	3.06
Viscosity Index	D2270	94
API Gravity @ 60°F	D4052	35.4
FlashPoint, °C	D92	195
FlashPoint, °F	D92	383
PourPoint, °C	D97	-17
PourPoint, °F	D97	1
Color	D1500	L0.5
AnilinePoint, °C	D611	101.6
AnilinePoint, °F	D611	214.8
Saturates, Mass %	D2007	95.4
Sulfur, Mass %	D4294	0.0009

BASE OILS

GROUP I

QBO-SN600

Physical Properties*	ASTM Method	QBO-SN600
Viscosity, SUS @ 100°F	D2161	616.4
Viscosity, SUS @ 210°F	D2161	70.4
Viscosity, cSt @ 40°C	D445	117.9
Viscosity, cSt @ 100°C	D445	12.7
Viscosity Index	D2270	99
API Gravity @ 60°F	D4052	29.7
FlashPoint, °C	D92	267
FlashPoint, °F	D92	513
PourPoint, °C	D97	-10
PourPoint, °F	D97	14
Color	D1500	L2.0
AnilinePoint, °C	D611	123.5
AnilinePoint, °F	D611	254.4
Saturates, Mass %	D2007	88.7
Sulfur, Mass %	D4294	.0007

Corporate Office:

10887 NW 17 Street, Unit 207
 Miami, FL, 33172

BASE OILS GROUP II



GROUP II

QBO-220

Test	UOM Description	Method Description	Min	Max	Typical
API GRAVITY @ 60°F		D4052	29.0	33.0	31.0
COLOR, ASTM		D1500		2	L1.0
VISCOSITY @ 40°C	cSt	D445			43.57
VISCOSITY @ 100°C	cSt	D445			6.56
VISCOSITY @ 100°F	SUS	D2161	215.0	235.0	224.7
VISCOSITY @ 210°F	SUS	D2161			48.1
VISCOSITY INDEX		D2270	95		102
FLASH POINT, COC	°C	D92	204		220
FLASH POINT, COC	°F	D92	400		428
POUR POINT	°F	D97			10
POUR POINT	°C	D97		15	-12
ANILINE POINT	°F	D611		-9	229.6
ANILINE POINT	°C	D611			109.8

GROUP II

QBO-250

Test	UOM Description	Method Description	Min	Max	Typical
API GRAVITY @ 60°F		D4052			31.1
SPECIFIC GRAVITY @ 60/60°F		D1250			0.8702
COLOR, ASTM		D1500		2	L1.5
VISCOSITY @ 40°C	cSt	D445			44.63
VISCOSITY @ 100°C	cSt	D445			7.05
VISCOSITY @ 100°F	SUS	D2161	240.0	260.0	251.0
VISCOSITY @ 210°F	SUS	D2161			49.7
VISCOSITY INDEX		D2270	92		102
FLASH POINT, COC	°C	D92	202		210
FLASH POINT, COC	°F	D92	395		410
POUR POINT	°F	D97		15	10
POUR POINT	°C	D97		-9	-12
ANILINE POINT	°F	D611			233.7
ANILINE POINT	°C	D611			112.1

BASE OILS GROUP II QBO-80N

Physical Properties*	ASTM Method	QBO-80N
Viscosity, SUS @ 100°F	D2161	77.3
Viscosity, SUS @ 210°F	D2161	37.1
Viscosity, cSt @ 40°C	D445	13.7
Viscosity, cSt @ 100°C	D445	3.2
Viscosity Index	D2270	95
API Gravity @ 60°F	D4052	34.7
FlashPoint, °C	D92	192
FlashPoint, °F	D92	379
PourPoint, °C	D97	-17
PourPoint, °F	D97	2
Color	D1500	L0.5
AnilinePoint, °C	D611	101.7
AnilinePoint, °F	D611	215.1
Saturates, Mass %	D2007	95.5
Sulfur, Mass %	D4294	.0008

BASE OILS GROUP II QBO-100N

Physical Properties*	ASTM Method	QBO-100N
Viscosity, SUS @ 100°F	D2161	106.7
Viscosity, SUS @ 210°F	D2161	40.0
Viscosity, cSt @ 40°C	D445	20.4
Viscosity, cSt @ 100°C	D445	4.1
Viscosity Index	D2270	99
API Gravity @ 60°F	D4052	33.3
FlashPoint, °C	D92	204
FlashPoint, °F	D92	400
PourPoint, °C	D97	-16
PourPoint, °F	D97	4
Color	D1500	L0.5
AnilinePoint, °C	D611	104.9
AnilinePoint, °F	D611	220.6
Saturates, Mass %	D2007	95.7
Sulfur, Mass %	D4294	.0011

BASE OILS GROUP II QBO-150N

Physical Properties*	ASTM Method	QBO-150N
Viscosity, SUS @ 100°F	D2161	154.5
Viscosity, SUS @ 210°F	D2161	43.7
Viscosity, cSt @ 40°C	D445	29.9
Viscosity, cSt @ 100°C	D445	5.2
Viscosity Index	D2270	103
API Gravity @ 60°F	D4052	32.7
FlashPoint, °C	D92	226
FlashPoint, °F	D92	439
PourPoint, °C	D97	-15
PourPoint, °F	D97	4
Color	D1500	L1.0
AnilinePoint, °C	D611	110.0
AnilinePoint, °F	D611	230.0
Saturates, Mass %	D2007	95.1
Sulfur, Mass %	D4294	.0010

BASE OILS GROUP II QBO-325N

Physical Properties*	ASTM Method	QBO-325N
Viscosity, SUS @ 100°F	D2161	330.9
Viscosity, SUS @ 210°F	D2161	54.2
Viscosity, cSt @ 40°C	D445	63.9
Viscosity, cSt @ 100°C	D445	8.3
Viscosity Index	D2270	98
API Gravity @ 60°F	D4052	30.6
FlashPoint, °C	D92	249
FlashPoint, °F	D92	481
PourPoint, °C	D97	-12
PourPoint, °F	D97	9
Color	D1500	L1.0
AnilinePoint, °C	D611	115.0
AnilinePoint, °F	D611	239.0
Saturates, Mass %	D2007	92.8
Sulfur, Mass %	D4294	.0020

BASE OILS NAPHTHENICS



QBO-750NAP

Product : QBO-750NAP
 Revised Date : 2018-09-06
 Product Code : 300364100000

Test	UOM Description	Method Description	Min	Max	Typical
API GRAVITY @ 60°F		D4052			23.7
COLOR, ASTM		D1500		3	1
VISCOSITY @ 40°C	cSt	D445			143.19
VISCOSITY @ 100°C	cSt	D445			11.16
VISCOSITY @ 100°F	SUS	D2161	750.0	775.0	764.8
VISCOSITY @ 210°F	SUS	D2161			64.6
VISCOSITY INDEX		D2270			43
FLASH POINT, COC	°C	D92	210		228
FLASH POINT, COC	°F	D92	410		443
POUR POINT	°F	D97			-15
POUR POINT	°C	D97			-27
ANILINE POINT	°F	D611			207.8
ANILINE POINT	°C	D611			97.7

External Notes



QBO-2000NAP

Product : QBO-2000NAP
Revised Date : 2022-04-12
Product Code : 300107100000

Test	UOM Description	Method Description	Min	Max	Typical
API GRAVITY @ 60°F		D4052			22.1
COLOR, ASTM		D1500		3.5	L2.0
VISCOSITY @ 40°C	cSt	D445			381.13
VISCOSITY @ 100°C	cSt	D445			19.67
VISCOSITY @ 100°F	SUS	D2161	2000.0	2200.0	2082.9
VISCOSITY @ 210°F	SUS	D2161			100.2
VISCOSITY INDEX		D2270			46
FLASH POINT, COC	°C	D92	227		253
FLASH POINT, COC	°F	D92	440		488
POUR POINT	°F	D97			13
POUR POINT	°C	D97			-11
ANILINE POINT	°F	D611		239.0	216.3
ANILINE POINT	°C	D611		115.0	102.4

External Notes

BASE OIL GRUPO I



QBO-150 Bs

Straight Cut Specifications

QUANTRIX Base Oils product line is manufactured via distillation, solvent extraction and catalytic dewaxing of a consistent crude source. QUANTRIX Base Oils are available in a wide range of viscosities and are commonly used as lubricant base oils in automotive, railroad, industrial and marine engine oils and/or as process oils by the rubber, paper and chemical industries.

QUANTRIX Base Oils		QBO- 150 Bs
		150 Bs" Solvent Bright
METHOD	TEST	SPECIFICATIONS
VISUAL	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	25.0 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	482.8 TYP 30.6/32.7
D2270	Viscosity Index	95 MIN
D5293	CCS @ -25°C, Cp CCS @ -20°C, Cp	
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	293 MIN 305 TYP
D4294	Sulfur, Wt. %	
D1500	ASTM Color	L3.0 TYP/ 5.5 MAX
D5800	Noack Vol, Wt. %	

Date of Change: 11/1/18

QBO-SN100

Straight Cut Specifications

QUANTRIX Base Oils product line is manufactured via distillation, solvent extraction and catalytic dewaxing of a consistent crude source. QUANTRIX Base Oils are available in a wide range of viscosities and are commonly used as lubricant base oils in automotive, railroad, industrial and marine engine oils and/or as process oils by the rubber, paper and chemical industries.

QUANTRIX Base Oils		QBO-SN100
		100" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	32.9 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	18.6/21.0 4.0 TYP
D2270	Viscosity Index	95 MIN
D5293	CCS @ -25°C, Cp CCS @ -20°C, Cp	1500 MAX
D97	Pour Point, °C	-18 MAX
D92	COC Flash Pt, °C	193 MIN 204 TYP
D4294	Sulfur, Wt. %	0.4% MAX
D1500	ASTM Color	L0.5 TYP/1.5 MAX
D5800	Noack Vol, Wt. %	29.5 MAX

Date of Change: 11/1/18

QBO-SN165

Straight Cut Specifications

QUANTRIX Base Oils product line is manufactured via distillation, solvent extraction and catalytic dewaxing of a consistent crude source. QUANTRIX Base Oils are available in a wide range of viscosities and are commonly used as lubricant base oils in automotive, railroad, industrial and marine engine oils and/or as process oils by the rubber, paper and chemical industries.

QUANTRIX Base Oils		QBO-SN165
		165" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	30.2 TYP
D445	Viscosity @ 40 °C, cSt	29.2/34.2
	@ 100 °C, cSt	5.3 TYP
D2270	Viscosity Index	95 MIN
D5293	CCS @ -25°C, Cp	2800 MAX
	CCS @ -20°C, Cp	
D97	Pour Point, °C	-9 MAX
D92	COC Flash Pt, °C	215 MIN 218 TYP
D4294	Sulfur, Wt. %	0.45% MAX
D1500	ASTM Color	L0.5 TYP/1.5 MAX
D5800	Noack Vol, Wt. %	19.0 MAX

Date of Change: 11/1/18

QBO-SN200 Blended Oil Specifications

QUANTRIX Base Oils are manufactured via a state of the art in-line blending system utilizing Paulsboro Refining Company's premium quality fully refined paraffinic base oils. The below products are suitable for use in automotive industrial and other product applications. Additional product blends may be made available upon request.

QUANTRIX Base Oils		QBO- SN200 200" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL<	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	29.8 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	35.9/42.0 6.1 TYP
D2270	Viscosity Index	95 MIN
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	216
D1500	ASTM Color	L1.0 TYP

QBO-SN250 Blended Oil Specifications

QUANTRIX Base Oils are manufactured via a state of the art in-line blending system utilizing Paulsboro Refining Company's premium quality fully refined paraffinic base oils. The below products are suitable for use in automotive industrial and other product applications. Additional product blends may be made available upon request.

QUANTRIX Base Oils		QBO- SN250 250" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL<	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	29.5TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	44.7/52..8 7.0 TYP
D2270	Viscosity Index	95 MIN
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	216
D1500	ASTM Color	L1.0 TYP

QBO-SN300 Blended Oil Specifications

QUANTRIX Base Oils are manufactured via a state of the art in-line blending system utilizing Paulsboro Refining Company's premium quality fully refined paraffinic base oils. The below products are suitable for use in automotive industrial and other product applications. Additional product blends may be made available upon request.

QUANTRIX Base Oils		QBO- SN300 300" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL<	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	29.2 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	53.2/61.9 8.1 TYP
D2270	Viscosity Index	95 MIN
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	218
D1500	ASTM Color	L1.0 TYP

QBO-SN325 Blended Oil Specifications

QUANTRIX Base Oils are manufactured via a state of the art in-line blending system utilizing Paulsboro Refining Company's premium quality fully refined paraffinic base oils. The below products are suitable for use in automotive industrial and other product applications. Additional product blends may be made available upon request.

QUANTRIX Base Oils		QBO- SN325 325" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL<	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	29.1 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	58.3/67.8 8.3 TYP
D2270	Viscosity Index	95 MIN
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	218
D1500	ASTM Color	L1.0 TYP

QBO-SN350 Blended Oil Specifications

QUANTRIX Base Oils are manufactured via a state of the art in-line blending system utilizing Paulsboro Refining Company's premium quality fully refined paraffinic base oils. The below products are suitable for use in automotive industrial and other product applications. Additional product blends may be made available upon request.

QUANTRIX Base Oils		QBO- SN350 350" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL<	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	29.0 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	66.0/74.0 8.8 TYP
D2270	Viscosity Index	95 MIN
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	218
D1500	ASTM Color	L1.5 TYP

QBO-SN500

Straight Cut Specifications

QUANTRIX Base Oils product line is manufactured via distillation, solvent extraction and catalytic dewaxing of a consistent crude source. QUANTRIX Base Oils are available in a wide range of viscosities and are commonly used as lubricant base oils in automotive, railroad, industrial and marine engine oils and/or as process oils by the rubber, paper and chemical industries.

QUANTRIX Base Oils		QBO-SN500
		500" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	28.6 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	95.7 TYP 10.1/11.6
D2270	Viscosity Index	95 MIN
D5293	CCS @ -25°C, Cp CCS @ -20°C, Cp	
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	226 MIN 259 TYP
D4294	Sulfur, Wt. %	
D1500	ASTM Color	L1.0 TYP/ 2.0 MAX
D5800	Noack Vol, Wt. %	

Date of Change: 11/1/18

QBO-SN610 Blended Oil Specifications

QUANTRIX Base Oils are manufactured via a state of the art in-line blending system utilizing Paulsboro Refining Company's premium quality fully refined paraffinic base oils. The below products are suitable for use in automotive industrial and other product applications. Additional product blends may be made available upon request.

QUANTRIX Base Oils		QBO- SN610 610' Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL<	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	27.9 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	109-116.5 12.0 TYP
D2270	Viscosity Index	92 MIN
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	229
D1500	ASTM Color	L1.5 TYP

QBO-SN700

Straight Cut Specifications

QUANTRIX Base Oils product line is manufactured via distillation, solvent extraction and catalytic dewaxing of a consistent crude source. QUANTRIX Base Oils are available in a wide range of viscosities and are commonly used as lubricant base oils in automotive, railroad, industrial and marine engine oils and/or as process oils by the rubber, paper and chemical industries.

QUANTRIX Base Oils		QBO-SN700
		700" Solvent Neutral
METHOD	TEST	SPECIFICATIONS
VISUAL	Appearance	CLEAR AND BRIGHT
D4052	API Gravity	26.9 TYP
D445	Viscosity @ 40 °C, cSt @ 100 °C, cSt	143.5 TYP 13.0/15.0
D2270	Viscosity Index	90 MIN
D5293	CCS @ -25°C, Cp CCS @ -20°C, Cp	
D97	Pour Point, °C	-6 MAX
D92	COC Flash Pt, °C	232 MIN 270 TYP
D4294	Sulfur, Wt. %	
D1500	ASTM Color	L1.5 TYP/ 2.5 MAX
D5800	Noack Vol, Wt. %	

Date of Change: 11/1/18

BASE OILS GROUP I



BASE OILS GROUP I QBO-BS-150

TEST DESCRIPTION	METHOD	SPECIFICATIONS		TYPICAL
		MIN	MAX	
VISCOSITY INDEX	D2270	95		95
VISCOSITY, CST @ 40C	D445			506.9
VISCOSITY, CST @ 100C	D445	30.50	34.80	32.33
VISCOSITY, SUS @ 100F	D2161			2722
VISCOSITY, SUS @ 210F	D2161	150.0	170.0	158.5
FLASH, COC, C(F)	D92	294 (561)		312 (595)
COLOR	D1500		6.0	5.0
GRAVITY, API	D1250	26.5	28.5	27.2
DENSITY @ 15C, KG/DM3	D4052	0.8840	0.8950	0.8911
POUNDS PER GALLON	D1250			7.42
TOTAL ACID NO. MG KOH/G	D974		0.05	0.01
CU STRIP, 3 HRS @ 100C	D130		1B	1
TOTAL SULFUR, MASS%	D4294			0.16
MICROCARBON, MASS%	D4530			0.37
ANILINE POINT, C(F)	D611			129.2 (265)
VGC	D2501			0.794
MOLECULAR WEIGHT, G/MOLE	D2502			697
REFRACTIVE INDEX @ 20C	D1747			1.4899
AROMATIC CARBON ATOMS%	D2140			4
NAPHTHENIC CARBON ATOMS%	D2140			25
PARAFFINIC CARBON ATOMS%	D2140			71
ASPHALTENES, MASS%	D2007			0.0
POLAR COMPOUNDS, MASS%	D2007			4.0
AROMATIC, MASS%	D2007			20.0
SATURATES, MASS%	D2007			76.0
UV ABSORPTION, 260NM	D2008			1.82
VOLATIL. 225F,22H, MASS%	D972			0.05
AUTOMATIC POUR, C(F)	D5950		-9 (+16)	-12 (+10)

BASE OILS GROUP I QBO-N100

MARKETING SPECIFICATIONS

PRODUCT NAME: QBO-N100

PRODUCT CODE: 100721

TEST DESCRIPTION	METHOD	SPECIFICATIONS		TYPICAL
		MIN	MAX	
VISCOSITY INDEX	D2270	90		93
VISCOSITY, CST @ 40C	D445	18.9	21.0	20.1
VISCOSITY, CST @ 100C	D445			4.02
VISCOSITY, SUS @ 100F	D2161	100	110	106
VISCOSITY, SUS @ 210F	D2161			39.8
FLASH, COC, C	D92	186		205
COLOR	D1500		1.0	0.4
GRAVITY, API	D1250	31.5	34.5	33.4
DENSITY @ 15C, KG/DM3	D4052	0.8519	0.8675	0.8578
POUNDS PER GALLON	D1250			7.18
TOTAL ACID NO. MG KOH/G	D974		0.05	0.01
CU STRIP, 3 HRS @ 100C	D130		1B	1
RAMSBOTTOM CARBON, MASS%	D524			0.05
MOLECULAR WEIGHT, G/MOLE	D2502			360
POUR, C	D5950		-15	-15

DATE APPROVED: 7/31/2014

← SPECIFICATION VALID ONLY IF DATED!

DATE REVIEWED: 6/28/2018

ISO 9001:2015
CERTIFIED

BASE OILS GROUP I QBO-SN 70

TEST DESCRIPTION	METHOD	SPECIFICATIONS		TYPICAL
		MIN	MAX	
VISCOSITY INDEX	D2270			84
VISCOSITY, CST @ 40C	D445	10.20	11.90	11.50
VISCOSITY, CST @ 100C	D445			2.820
VISCOSITY, SUS @ 100F	D2161	62.0	69.0	67.4
VISCOSITY, SUS @ 210F	D2161			35.8
FLASH, COC, C(F)	D92	174 (345)		186 (367)
COLOR	D1500		1.0	0.4
GRAVITY, API	D1250	33.5	35.5	34.3
DENSITY @ 15C, KG/DM3	D4052	0.8470	0.8570	0.8530
POUNDS PER GALLON	D1250			7.11
TOTAL ACID NO. MG KOH/G	D974		0.05	0.01
CU STRIP, 3 HRS @ 100C	D130		1B	1A
TOTAL SULFUR, MASS%	D4294			0.07
RAMSBOTTOM CARBON, MASS%	D524			0.06
ANILINE POINT, C(F)	D611			94.4 (202)
VGC	D2501			0.814
MOLECULAR WEIGHT, G/MOLE	D2502			305
REFRACTIVE INDEX @ 20C	D1747			1.4694
AROMATIC CARBON ATOMS%	D2140			3
NAPHTHENIC CARBON ATOMS%	D2140			33
PARAFFINIC CARBON ATOMS%	D2140			64
ASPHALTENES, MASS%	D2007			0.0
POLAR COMPOUNDS, MASS%	D2007			0.3
AROMATICS, MASS%	D2007			12.0
SATURATES, MASS%	D2007			87.7
UV ABSORPTION, 260NM	D2008			0.51
VOLATIL. 225F, 22H, MASS%	D972			3.5
AUTOMATIC POUR, C(F)	D5950		-18 (0)	-24 (-11)

Corporate Office:

10887 NW 17 Street, Unit 207
 Miami, FL, 33172



FUEL
ENTERPRISES

Quantrix
BASE OILS

BASE OILS GROUP I QBO-SN 148

TEST DESCRIPTION	METHOD	SPECIFICATIONS		TYPICAL
		MIN	MAX	
VISCOSITY INDEX	D2270	95	27.1	96
VISCOSITY, CST @ 40C	D445	24.0		24.7
VISCOSITY , CST @ 100C	D445		140.0	4.56
VISCOSITY, SUS @ 100F	D2161	125.0		128.2
VISCOSITY, SUS @ 210F	D2161			41.6
FLASH, COC, C(F)	D92	198 (388)	1.0	215 (419)
COLOR	D1500		33.5	0.4
GRAVITY, API	D1250	31.5	0.8675	32.9
DENSITY @ 15C, KG/DM3	D4052	0.8570		0.8602
POUNDS PER GALLON	D1250		0.05	7.17
TOTAL ACID NO. MG KOH/G	D974		1B	0.01
CU STRIP, 3 HRS @ 100C	D130			1
TOTAL SULFUR, MASS%	D4294			0.05
RAMSBOTTOM CARBON, MASS%	D524			0.06
ANILINE POINT, C(F)	D611			105 (221)
VGC	D2501			0.81
MOLECULAR WEIGHT, G/MOLE	D2502			378
REFRACTIVE INDEX @ 20C	D1747			1.4725
AROMATIC CARBON ATOMS%	D2140			2
NAPHTHENIC CARBON ATOMS%	D2140			32
PARAFFINIC CARBON ATOMS%	D2140			66
ASPHALTENES, MASS%	D2007			0.0
POLAR COMPOUNDS, MASS%	D2007			0.3
AROMATICS, MASS%	D2007			11.5
SATURATES, MASS%	D2007			88.2
UV ABSORPTION, 260NM	D2008			0.30
VOLATIL. 225F,22H, MASS%	D972		-	0.58
AUTOMATIC POUR, C(F)	D5950		18(0)	-18(0)

Corporate Office:

10887 NW 17 Street, Unit 207
Miami, FL, 33172

fuelenterprises.us

BASE OILS GROUP I QBO-SN 560

TEST DESCRIPTION	METHOD	SPECIFICATIONS		TYPICAL
		MIN	MAX	
VISCOSITY INDEX	D2270	95		95
VISCOSITY, CST @ 40C	D445	101.5	113.7	107.1
VISCOSITY, CST @ 100C	D445			11.60
VISCOSITY, SUS @ 100F	D2161	530	595	560
VISCOSITY, SUS @ 210F	D2161			66.2
FLASH, COC, C(F)	D92	246 (475)		270 (518)
COLOR	D1500		2.5	1.0
GRAVITY, API	D1250	29.0	31.0	30.1
DENSITY @ 15C, KG/DM3	D4052	0.8703	0.8812	0.8752
POUNDS PER GALLON	D1250			7.29
TOTAL ACID NO. MG KOH/G	D974		0.05	0.01
CU STRIP, 3 HRS @ 100C	D130		1B	1
TOTAL SULFUR, MASS%	D4294			0.08
MICROCARBON, MASS%	D4530			0.02
AUTOMATIC POUR, C(F)	D5950		-12 (+10)	-12 (+10)

BASE OILS GROUP II



BASE OILS GROUP II QBO-70N

Property	AST M Method	Min/Max/Typical	QBO-70N
Gravity, °API	D 4052		34.8
Viscosity			
cSt @ 40°C	D 445	Typical	12.8
cSt @ 100°C	D 445	Typical	3.03
SUS @ 100°F	D 2161	Typical	73
SUS @ 210°F	D 2161	Typical	36
Cold Crank Simulator	D 5293		
cP @ -30°C		Typical	991
cP @ -25°C		Typical	---
cP @ -20°C		Typical	---
Viscosity Index	D 2270	Typical	86
Pour Point, °F	D 5950	Typical	-22
Pour Point, °C	D 5950	Typical	-30
Flash Point, °F	D 92	Typical	381
Flash Point, °C	D 92	Typical	194
Color, ASTM	D 1500	Typical	<0.5
% Volatility - N OACK	D 5800	Typical	---
% Volatility - ASTM			
% @ 630°F	D 7213	Typical	3.9
% @ 700°F	D 7213	Typical	---
% @ 800°F	D 6352	Typical	---
Composition			
% Saturates	UV Correl.	Min	>99.0

BASE OILS GROUP II QBO-110N

Property	AST M Method	Min/Max/Typical	QBO-110N
Gravity, °API	D 4052		35.6
Viscosity			
cSt @ 40°C	D 445	Typical	20.3
cSt @ 100°C	D 445	Typical	4.2
SUS @ 100°F	D 2161	Typical	107
SUS @ 210°F	D 2161	Typical	40
Cold Crank Simulator	D 5293		
cP @ -30°C		Typical	---
cP @ -25°C		Typical	1189
cP @ -20°C		Typical	---
Viscosity Index	D 2270	Typical	110
Pour Point, °F	D 5950	Typical	7
Pour Point, °C	D 5950	Typical	-14
Flash Point, °F	D 92	Typical	421
Flash Point, °C	D 92	Typical	216
Color, ASTM	D 1500	Typical	<0.5
% Volatility - N OACK	D 5800	Typical	20.9
% Volatility - ASTM			
% @ 630°F	D 7213	Typical	---
% @ 700°F	D 7213	Typical	8.1
% @ 800°F	D 6352	Typical	---
Composition			
% Saturates	UV Correl.	Min	>99.0

BASE OILS GROUP II QBO-225N

Property	AST M Method	Min/Max/Typical	QBO-225N
Gravity, °API	D 4052		32.9
Viscosity			
cSt @ 40°C	D 445	Typical	40.7
cSt @ 100°C	D 445	Typical	6.4
SUS @ 100°F	D 2161	Typical	210
SUS @ 210°F	D 2161	Typical	48
Cold Crank Simulator	D 5293		
cP @ -30°C		Typical	---
cP @ -25°C		Typical	---
cP @ -20°C		Typical	2701
Viscosity Index	D 2270	Typical	106
Pour Point, °F	D 5950	Typical	7
Pour Point, °C	D 5950	Typical	-14
Flash Point, °F	D 92	Typical	460
Flash Point, °C	D 92	Typical	238
Color, ASTM	D 1500	Typical	<0.5
% Volatility - N OACK	D 5800	Typical	8.8
% Volatility - ASTM			
% @ 630°F	D 7213	Typical	---
% @ 700°F	D 7213	Typical	0.9
% @ 800°F	D 6352	Typical	---
Composition			
% Saturates	UV Correl.	Min	>99.0

BASE OILS GROUP II QBO-600N

Property	AST M Method	Min/Max/Typical	QBO-600N
Gravity, °API	D 4052		30.2
Viscosity			
cSt @ 40°C	D 445	Typical	113.0
cSt @ 100°C	D 445	Typical	12.1
SUS @ 100°F	D 2161	Typical	593
SUS @ 210°F	D 2161	Typical	68
Cold Crank Simulator	D 5293		
cP @ -30°C		Typical	---
cP @ -25°C		Typical	---
cP @ -20°C		Typical	---
Viscosity Index	D 2270	Typical	97
Pour Point, °F	D 5950	Typical	9
Pour Point, °C	D 5950	Typical	-13
Flash Point, °F	D 92	Typical	511
Flash Point, °C	D 92	Typical	266
Color, ASTM	D 1500	Typical	<0.5
% Volatility - N OACK	D 5800	Typical	---
% Volatility - ASTM			
% @ 630°F	D 7213	Typical	---
% @ 700°F	D 7213	Typical	---
% @ 800°F	D 6352	Typical	4.0
Composition			
% Saturates	UV Correl.	Min	>99.0

BASE OILS GROUP II



BASE OILS GROUP II QBO-60N

PROPERTY	ASTM METHODS	SPECIFICATIONS
Appearance@22.2° C-25.5	SM 360-99 BO	Bright & Clear
Color	ASTM D1500	LO.5
API Gravity, deg.	ASTM D4052	32.9
Density, lb/gal	ASTM D4052	7.167
Density, kg/l	ASTM D4052	0.860
Specific Gravity @ 60°F/60°F	ASTM D4052	0.861
Viscosity @ 40°C, cSt	ASTM D445	10.5
Viscosity @ 100°C, cSt	ASTM D445	2.6
Viscosity Index	ASTM D2270	80
CCS @ -20°C, cP	ASTM D5293	N/A
CCS @ -25°C, cP	ASTM D5293	N/A
CCS @ -30°C, cP	ASTM D5293	N/A
Pour Point, °C	ASTM D5950/10	-33
Flash Point, COC, °C	ASTM D92	165
Evaporative loss, Noack wt%	ASTM D5800(B	N/A
Water, ppm	ASTM D6304	50
Sulfur, ppm	ASTM D5453	<6
Saturates, HPLC wt.%	Chevron	>99
Aromatics, HPLC wt.%	Chevron	<1

BASE OILS GROUP II QBO-100N

PROPERTY	ASTM METHODS	SPECIFICATIONS
Appearance@22.2° C-25.5	SM 360-99 BO	Bright & Clear
Color	ASTM D1500	LO.5
API Gravity, deg.	ASTM D4052	36.5
Density, lb/gal	ASTM D4052	7.034
Density, kg/l	ASTM D4052	0.842
Specific Gravity @ 60°F/60°F	ASTM D4052	0.845
Viscosity @ 40°C, cSt	ASTM D445	21.2
Viscosity @ 100°C, cSt	ASTM D445	4.40
Viscosity Index	ASTM D2270	117
CCS @ -20°C, cP	ASTM D5293	N/A
CCS @ -25°C, cP	ASTM D5293	1200
CCS @ -30°C, cP	ASTM D5293	N/A
Pour Point, °C	ASTM D5950/10	-15
Flash Point, COC, °C	ASTM D92	220
Evaporative loss, Noack wt%	ASTM D5800(B	16
Water, ppm	ASTM D6304	<50
Sulfur, ppm	ASTM D5453	<6
Saturates, HPLC wt.%	Chevron	>99
Aromatics, HPLC wt.%	Chevron	<1

BASE OILS GROUP II QBO-150N

PROPERTY	ASTM METHODS	SPECIFICATIONS
Appearance@22.2° C-25.5	SM 360-99 BO	Bright & Clear
Color	ASTM D1500	LO.5
API Gravity, deg.	ASTM D4052	34.0
Density, lb/gal	ASTM D4052	7.119
Density, kg/l	ASTM D4052	0.855
Specific Gravity @ 60°F/60°F	ASTM D4052	0.855
Viscosity @ 40°C, cSt	ASTM D445	29.1
Viscosity @ 100°C, cSt	ASTM D445	5.24
Viscosity Index	ASTM D2270	112
CCS @ -20°C, cP	ASTM D5293	1400
CCS @ -25°C, cP	ASTM D5293	2660
CCS @ -30°C, cP	ASTM D5293	5070
Pour Point, °C	ASTM D5950/10	-15
Flash Point, COC, °C	ASTM D92	220
Evaporative loss, Noack wt%	ASTM D5800(B	14
Water, ppm	ASTM D6304	<50
Sulfur, ppm	ASTM D5453	<6
Saturates, HPLC wt.%	Chevron	>99
Aromatics, HPLC wt.%	Chevron	<1

BASE OILS GROUP II QBO-220N

PROPERTY	ASTM METHODS	SPECIFICATIONS
Appearance@22.2° C-25.5	SM 360-99 BO	Bright & Clear
Color	ASTM D1500	LO.5
API Gravity, deg.	ASTM D4052	32.1
Density, lb/gal	ASTM D4052	7.202
Density, kg/l	ASTM D4052	0.865
Specific Gravity @ 60°F/60°F	ASTM D4052	0.865
Viscosity @ 40°C, cSt	ASTM D445	41.7
Viscosity @ 100°C, cSt	ASTM D445	6.4
Viscosity Index	ASTM D2270	102
CCS @ -20°C, cP	ASTM D5293	3200
CCS @ -25°C, cP	ASTM D5293	N/A
CCS @ -30°C, cP	ASTM D5293	N/A
Pour Point, °C	ASTM D5950/10	-15
Flash Point, COC, °C	ASTM D92	230
Evaporative loss, Noack wt%	ASTM D5800(B	9
Water, ppm	ASTM D6304	<50
Sulfur, ppm	ASTM D5453	<6
Saturates, HPLC wt.%	Chevron	>99
Aromatics, HPLC wt.%	Chevron	<1

BASE OILS GROUP II QBO-600N

PROPERTY	ASTM METHODS	SPECIFICATIONS
Appearance@22.2° C-25.5	SM 360-99 BO	Bright & Clear
Color	ASTM D1500	LO.5
API Gravity, deg.	ASTM D4052	31.0
Density, lb/gal	ASTM D4052	7.251
Density, kg/l	ASTM D4052	0.870
Specific Gravity @ 60°F/60°F	ASTM D4052	0.871
Viscosity @ 40°C, cSt	ASTM D445	105
Viscosity @ 100°C, cSt	ASTM D445	12.0
Viscosity Index	ASTM D2270	106
CCS @ -20°C, cP	ASTM D5293	N/A
CCS @ -25°C, cP	ASTM D5293	N/A
CCS @ -30°C, cP	ASTM D5293	N/A
Pour Point, °C	ASTM D5950/10	-15
Flash Point, COC, °C	ASTM D92	270
Evaporative loss, Noack wt%	ASTM D5800(B	N/AN
Water, ppm	ASTM D6304	<50
Sulfur, ppm	ASTM D5453	<6
Saturates, HPLC wt.%	Chevron	>99
Aromatics, HPLC wt.%	Chevron	<1

BASE OILS GROUP III



أدنوك
ADNOC



FUEL
ENTERPRISES

Quantrix
BASE OILS

QBO / 4CST GROUP III

<u>Sample</u>		<u>Sample ID, Type & Description</u>				
170-23-01353-034		B 110-1 UMLB COMP				
<u>Method</u>	<u>Test</u>	<u>Min</u>	<u>Max</u>	<u>Result</u>	<u>Units</u>	<u>Remarks</u>
ASTM D4052	Gravity by Digital Density Meter					
	API Gravity @60°F			38.8	i	
	Density @15°C			0.8305	g/mL	
ASTM D4176A proc. 1	Appearance	Clear and Bright		Clear & Bright		
ASTM D4176B proc. 1	Appearance Distillate Fuels					
	Particulates			Free of Particulates		
	Free Water			No Free Water		
ASTM D445	Kinematic Viscosity @100°C	4.2	4.4	4.370	cSt	
ASTM D445	Kinematic Viscosity @104°F/40°C			19.59	cSt	
ASTM D2270	Viscosity Index	121		136	-	
ASTM D5293	Viscosity @-30°C (Cold Crank Simulator)		1,800	1,475	mPa-s	
ASTM D5800	Evaporation Loss, Procedure B		14.1	10.4	%m/m	
ASTM D97	Pour Point					
	Pour Point		-18	-18	°C	
	Pour Point			-0.4	°F (calc)	
ASTM D2622	Total Sulfur Content			< 3.0	ppmw	
ASTM D92	Flash Point And Fire Point by Cleveland Open Cup Tester					
	Flash Point	220		225	°C	
	Flash Point			436	°F	
ASTM D6304A	Water Concentration		50	25	mg/kg	
ASTM D6045	Saybolt Color	20		+30		
ASTM D130	Copper Strip Corrosion Rating @100°C/212°F for 3 Hours			1A		

Corporate Office:

10887 NW 17 Street, Unit 207
Miami, FL, 33172

fuelenterprises.us



FUEL
ENTERPRISES

Quantrix
BASE OILS

QBO / 6CST GROUP III

<u>Sample</u>		<u>Sample ID, Type & Description</u>				
170-23-01353-053		ST A50-6 UMLB Composite After Discharge				
<u>Method</u>	<u>Test</u>	<u>Min</u>	<u>Max</u>	<u>Result</u>	<u>Units</u>	<u>Remarks</u>
ASTM D4052	Gravity by Digital Density Meter API Gravity @60°F Density @15°C			37.4 0.8373	i g/mL	
ASTM D4176A proc. 1	Appearance	Clear and Bright		Clear and Bright		
ASTM D4176B proc. 1	Appearance Distillate Fuels Particulates Free Water			Free of Particulates No Free Water		
ASTM D445	Kinematic Viscosity @100°C	5.8	6.2	6.002	cSt	
ASTM D445	Kinematic Viscosity @104°F/40°C			31.36	cSt	
ASTM D2270	Viscosity Index	121		140	-	
ASTM D5293	Viscosity @-30°C (Cold Crank Simulator)		4,500	3,453	mPa-s	
ASTM D5800	Evaporation Loss, Procedure B		8	6.3	%m/m	
ASTM D97	Pour Point Pour Point Pour Point		-15	-18 -0.4	°C °F (calc)	
ASTM D2622	Total Sulfur Content			< 3.0	ppmw	
ASTM D92	Flash Point And Fire Point by Cleveland Open Cup Tester Flash Point Flash Point	220		240 464	°C °F	
ASTM D6304A	Water Concentration		50	30	mg/kg	
ASTM D6045	Saybolt Color	20		+30		
ASTM D130	Copper Strip Corrosion Rating @100°C/212°F for 3 Hours			1A		

Corporate Office:

10887 NW 17 Street, Unit 207
Miami, FL, 33172

fuelenterprises.us



FUEL
ENTERPRISES

Quantrix
BASE OILS

QBO / 8CST GROUP III

<u>Sample</u>		<u>Sample ID, Type & Description</u>				
170-23-01353-035		A 50-8 UMLB COMP				
<u>Method</u>	<u>Test</u>	<u>Min</u>	<u>Max</u>	<u>Result</u>	<u>Units</u>	<u>Remarks</u>
ASTM D4052	Gravity by Digital Density Meter API Gravity @60°F Density @15°C			36.4 0.8423	i g/mL	
ASTM D4176A proc. 1	Appearance	Clear and Bright		Clear & Bright		
ASTM D4176B proc. 1	Appearance Distillate Fuels Particulates Free Water			Free of Particulates No Free Water		
ASTM D445	Kinematic Viscosity @100°C	7.6	8.2	7.833	cSt	
ASTM D445	Kinematic Viscosity @104°F/40°C			44.96	cSt	
ASTM D2270	Viscosity Index	125		145	-	
ASTM D5293	Viscosity @-30°C (Cold Crank Simulator)			7,381	mPa-s	
ASTM D5800	Evaporation Loss, Procedure B		5	2.7	%m/m	
ASTM D97	Pour Point Pour Point Pour Point		-12	-18 -0.4	°C °F (calc)	
ASTM D2622	Total Sulfur Content			< 3.0	ppmw	
ASTM D92	Flash Point And Fire Point by Cleveland Open Cup Tester Flash Point Flash Point	220		259 496	°C °F	
ASTM D6304A	Water Concentration		50	24	mg/kg	
ASTM D6045	Saybolt Color	20		+30		
ASTM D130	Copper Strip Corrosion Rating @100°C/212°F for 3 Hours			1A		

Corporate Office:

10887 NW 17 Street, Unit 207
Miami, FL, 33172

fuelenterprises.us