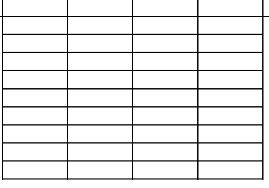
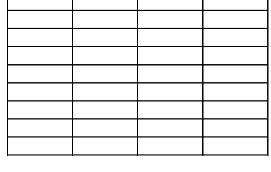
Ble	end Stock D	ata	D86 (Converted t	о ТВР	Bler	d at Select	ed Temperat	ures	Blend at Specified Yields		
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224										
T10	113	231										
T30	121	232										
T50	132	234										
T70	149	237										
T90	184	251										
EP	258	316										
Fraction	50%	50%	•									

- Convert all D86 analyses to TBP
 - Approximate IBP & EP as 1% & 99%
- Pick a set of TBP temperatures & interpolate for appropriate yield values
- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis



Ble	end Stock D	ata	D86 (Converted t	о ТВР	Blen	nd at Select	ed Temperat	ures	Blend at Specified Yields		
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224	1	40.5	200.8					1		
T10	113	231	10	88.1	224.7					10		
T30	121	232	30	109.9	229.6					30		
T50	132	234	50	130.5	234.8					50		
T70	149	237	70	156.3	241.1					70		
T90	184	251	90	200.9	263.4					90		
EP	258	316	99	350.8	384.2					99		
Fraction	50%	50%				•					•	•

- Convert all D86 analyses to TBP
 - Approximate IBP & EP as 1% & 99%
- Pick a set of TBP temperatures & interpolate for appropriate yield values
- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis



Ble	end Stock D	ata	D86 (Converted t	о ТВР	Bler	d at Select	ed Temperat	ures	Blend at Specified Yields		
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224	1	40.5	200.8	25	0.4	0.0		1		
T10	113	231	10	88.1	224.7	50	1.7	0.0		10		
T30	121	232	30	109.9	229.6	75	5.8	0.0		30		
T50	132	234	50	130.5	234.8	100	19.3	0.0		50		
T70	149	237	70	156.3	241.1	125	44.4	0.0		70		
T90	184	251	90	200.9	263.4	150	65.4	0.0		90		
EP	258	316	99	350.8	384.2	175	80.0	0.0		99		
Fraction	50%	50%				200	89.7	0.9			•	

- Convert all D86 analyses to TBP
 - Approximate IBP & EP as 1% & 99%
- Pick a set of TBP temperatures & interpolate for appropriate yield values
- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis

1/5	80.0	0.0	
200	89.7	0.9	
225	92.6	11.0	
250	94.8	79.6	
275	96.4	91.7	
300	97.6	94.5	
325	98.4	96.5	
350	99.0	97.9	
375	99.4	98.8	
100	99.6	99.3	
	250 250 275 300 325 350	200 89.7 225 92.6 250 94.8 275 96.4 300 97.6 325 98.4 350 99.0 375 99.4	89.7 0.9 125 92.6 11.0 150 94.8 79.6 175 96.4 91.7 100 97.6 94.5 125 98.4 96.5 150 99.0 97.9 175 99.4 98.8



Ble	end Stock D	ata	D86 (Converted t	о ТВР	Bler	d at Select	ed Temperat	ures	Blend	at Specified	Yields
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224	1	40.5	200.8	25	0.4	0.0	0.2	1		
T10	113	231	10	88.1	224.7	50	1.7	0.0	0.9	10		
T30	121	232	30	109.9	229.6	75	5.8	0.0	2.9	30		
T50	132	234	50	130.5	234.8	100	19.3	0.0	9.6	50		
T70	149	237	70	156.3	241.1	125	44.4	0.0	22.2	70		
T90	184	251	90	200.9	263.4	150	65.4	0.0	32.7	90		
EP	258	316	99	350.8	384.2	175	80.0	0.0	40.0	99		
Fraction	50%	50%		•		200	89.7	0.9	45.3			

- Convert all D86 analyses to TBP
 - Approximate IBP & EP as 1% & 99%
- Pick a set of TBP temperatures & interpolate for appropriate yield values
- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis

175	80.0	0.0	40.0
200	89.7	0.9	45.3
225	92.6	11.0	51.8
250	94.8	79.6	87.2
275	96.4	91.7	94.0
300	97.6	94.5	96.0
325	98.4	96.5	97.5
350	99.0	97.9	98.4
375	99.4	98.8	99.1
400	99.6	99.3	99.5
	200 225 250 275 300 325 350 375	200 89.7 225 92.6 250 94.8 275 96.4 300 97.6 325 98.4 350 99.0 375 99.4	200 89.7 0.9 225 92.6 11.0 250 94.8 79.6 275 96.4 91.7 300 97.6 94.5 325 98.4 96.5 350 99.0 97.9 375 99.4 98.8



Ble	end Stock D	ata	D86 (Converted t	о ТВР	Blen	d at Select	ed Temperat	ures	Blend	at Specified	Yields
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224	1	40.5	200.8	25	0.4	0.0	0.2	1	52.9	
T10	113	231	10	88.1	224.7	50	1.7	0.0	0.9	10	101.0	
T30	121	232	30	109.9	229.6	75	5.8	0.0	2.9	30	144.0	
T50	132	234	50	130.5	234.8	100	19.3	0.0	9.6	50	218.0	
T70	149	237	70	156.3	241.1	125	44.4	0.0	22.2	70	236.0	
T90	184	251	90	200.9	263.4	150	65.4	0.0	32.7	90	258.7	
EP	258	316	99	350.8	384.2	175	80.0	0.0	40.0	99	371.7	
Fraction	50%	50%		•		200	89.7	0.9	45.3			

- Convert all D86 analyses to TBP
 - Approximate IBP & EP as 1% & 99%
- Pick a set of TBP temperatures & interpolate for appropriate yield values
- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis

175	80.0	0.0	40.0
200	89.7	0.9	45.3
225	92.6	11.0	51.8
250	94.8	79.6	87.2
275	96.4	91.7	94.0
300	97.6	94.5	96.0
325	98.4	96.5	97.5
350	99.0	97.9	98.4
375	99.4	98.8	99.1
400	99.6	99.3	99.5
	200 225 250 275 300 325 350 375	200 89.7 225 92.6 250 94.8 275 96.4 300 97.6 325 98.4 350 99.0 375 99.4	200 89.7 0.9 225 92.6 11.0 250 94.8 79.6 275 96.4 91.7 300 97.6 94.5 325 98.4 96.5 350 99.0 97.9 375 99.4 98.8



Ble	end Stock D	ata	D86 (Converted t	о ТВР	Bler	nd at Select	ed Temperat	ures	Blend at Specified Yields		
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224	1	40.5	200.8	25	0.4	0.0	0.2	1	52.9	120.5
T10	113	231	10	88.1	224.7	50	1.7	0.0	0.9	10	101.0	142.8
T30	121	232	30	109.9	229.6	75	5.8	0.0	2.9	30	144.0	163.6
T50	132	234	50	130.5	234.8	100	19.3	0.0	9.6	50	218.0	217.7
T70	149	237	70	156.3	241.1	125	44.4	0.0	22.2	70	236.0	228.6
T90	184	251	90	200.9	263.4	150	65.4	0.0	32.7	90	258.7	242.9
EP	258	316	99	350.8	384.2	175	80.0	0.0	40.0	99	371.7	305.3
Fraction	50%	50%	•	•		200	89.7	0.9	45.3			_

- Convert all D86 analyses to TBP
 - Approximate IBP & EP as 1% & 99%
- Pick a set of TBP temperatures & interpolate for appropriate yield values
- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis

175	80.0	0.0	40.0
200	89.7	0.9	45.3
225	92.6	11.0	51.8
250	94.8	79.6	87.2
275	96.4	91.7	94.0
300	97.6	94.5	96.0
325	98.4	96.5	97.5
350	99.0	97.9	98.4
375	99.4	98.8	99.1
400	99.6	99.3	99.5

Blo	end Stock D	ata	D86 (Converted t	о ТВР	Ble	nd at Selecte	ed Temperat	ures	Blend at Specified Yields		
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224	1	40.5	200.8	25	0.4	0.0	0.2	1	52.9	120.5
T10	113	231	10	88.1	224.7	50	1.7	0.0	0.9	10	101.0	142.8
T30	121	232	30	109.9	229.6	75	5.8	0.0	2.9	30	144.0	163.6
T50	132	234	50	130.5	234.8	100	19.3	0.0	9.6	50	218.0	217.7
T70	149	237	70	156.3	241.1	40 —						
T90	184	251	90	200.9	263.4		5 14:16:18					

Steps

ΕP

Fraction

Convert all D86 analyses to TBP

258

50%

• Approximate IBP & EP as 1% & 99%

316

50%

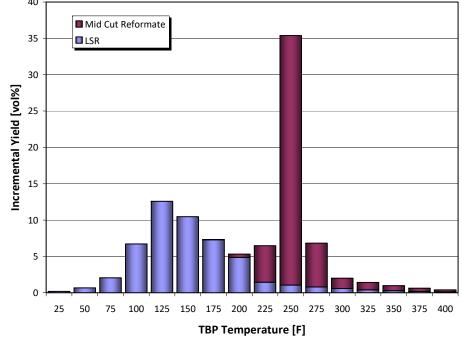
 Pick a set of TBP temperatures & interpolate for appropriate yield values

99

350.8

384.2

- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis



Updated: July 5, 2017

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Bl	end Stock D	ata	D86 (Converted t	о ТВР	Blei	nd at Selecte	ed Temperat	ures	Blend	at Specified	Yields
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Blend	Vol%	ТВР	D86
°API	81.8	32.8					81.8	32.8	54.1			
IBP	91	224	1	40.5	200.8	25	0.4	0.0	0.2	1	52.9	120.5
T10	113	231	10	88.1	224.7	50	1.7	0.0	0.9	10	101.0	142.8
T30	121	232	30	109.9	229.6	75	5.8	0.0	2.9	30	144.0	163.6
T50	132	234	50	130.5	234.8	100	19.3	0.0	9.6	50	218.0	217.7
T70	149	237	70	156.3	241.1	100 —						
T90	184	251	90	200.9	263.4							111

384.2

Steps

ΕP

Fraction

Convert all D86 analyses to TBP

258

50%

• Approximate IBP & EP as 1% & 99%

316

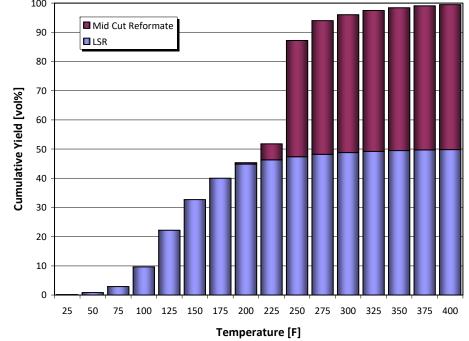
50%

 Pick a set of TBP temperatures & interpolate for appropriate yield values

99

350.8

- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis





Blend Stock Data			D86 Converted to TBP			Blend at Selected Temperatures			
	LSR	Mid Cut Reformate	Vol%	LSR	Mid Cut Reformate	°F	LSR	Mid Cut Reformate	Ble
°API	81.8	32.8					81.8	32.8	54
IBP	91	224	1	40.5	200.8	25	0.4	0.0	0
T10	113	231	10	88.1	224.7	50	1.7	0.0	0
T30	121	232	30	109.9	229.6	75	5.8	0.0	2
T50	132	234	50	130.5	234.8	100	10 2	0.0	۵
T70	149	237	70	156.3	241.1	450			
T90	184	251	90	200.9	263.4				
EP	258	316	99	350.8	384.2	400			-

Steps

Fraction

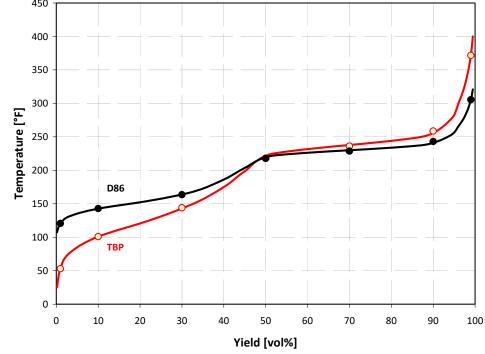
Convert all D86 analyses to TBP

50%

Approximate IBP & EP as 1% & 99%

50%

- Pick a set of TBP temperatures & interpolate for appropriate yield values
- Volumetrically blend at each temperature for combined TBP curve
- Interpolate for appropriate TBP values at the standard volumetric yields
- Convert to D86 analysis



Blend

54.1

0.2

0.9

2.9

۹ ۵

Vol%

1

10

30

50

Blend at Specified Yields

TBP

52.9

101.0

144.0

21Q N

D86

120.5

142.8

163.6 2177