





DATASHEET FOR THERMAL SAFETY VALVE

HP02-00-IN-DAS-0009

0	12-Nov-23	Approval for Construction		D.T.T	L.V.D	N.T.S V.L.T
A	13-Oct-23	Issue for Review		D.T.T	L.V.D	N.T.S V.L.T
REV. NO.	DATE	DESCRIPTION		PREP'N	CHECK	REVIEW APPROVAL
REV. NO.	DISCIPLINE	PREPARATION	CHECK	REVIEW		APPROVAL
0	INSTRUMENT					
		D.T.T	L.V.D	N.T.S		V.L.T


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<div>TOPNXT International</div>		<div>HAI PHONG 2 PROJECT</div> <div>DATASHEET FOR THERMAL SAFETY VALVE</div>				<div>DOC. No. HP02-00-IN-DAS-0009</div> <div>REV. No. 0</div> <div>PAGE 3</div>		
No.	Item	Description	Requirement				Remark	Rev.
A Process Data			Min	Normal	Max	Unit		
1		Operating Temperature	5	40	45	⁰ C		
2		Operating Pressure	-	4.5	-	Barg		
3		Viscosity	0.33	-	0.45	Cp		
4		Density	670	-	920	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	Hydrocarbon/ Chemical Solvent		Fluid Phase	Liquid		0
8		Relieving Temperature	45 ⁰ C		Set Pressure	10.0 Barg		0
9		Require Discharge (Kg/h)	Note 1					0
10		Back Pressure Constant	1.5 Barg		Variable	0 Barg		0
		Total	1.5 Barg					0
12		Overpressure Factor	10%			Barg		
13		Required Capacity (Nm ³ /h)	Inhale	-	Exhale			
15		Molecular Weight	See solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
18		% Flashing						
19		Specifcaiton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Inlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
2		Outlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
3		Line Internal Diameter	-		Material	CS		
4		Nozzle (Full,Semi)	Full Nozzle					
5		Design Type	Thermal Relief		Design Style	Conventional		
6		Bonnet Code	Close		Stamping	-		
C Basic and Selection								
1		Design Code	API520					0
2		Sizing Basic	Thermal Expansion					
3		Calculated Area	B.V		Selected Area	B.V		
4		Orifice Designation	B.V		Blowdown %	15-20%		
5		Discharfe Coefficient	0.673					
6		Noise Level	< 90 dB		Reaction Force	4 N		
7	Connection	Size Inlet	1"		Outlet	1"		
8		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	ANSI 150# - RF		
9		Material Body	A216 WCB		Bonnet Mat.	A216 WCB		
10		Dics Material	SS 316		Nozzle Mat.	316 SS		
11		Guide Material	SS 316		Spring Mat.	316 SS		
12		Bellows Material	-		Gasket Mat.	Soft Iron		
13		Leak Class	ANSI IV Standard					
14		Cap: Screwed or Bolted	Bolted					
15		Lever: Plain or Packed	B.V					
16		Test Gag	No					
17		Upstream Bursting Disc Tag. No.	No					
18								
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Manufacture Calibration, Local Authorities Certificate, Local Calibration					
E General								
1		Tag-Name	TSV-2108					
2		P&ID	HP02-00-PR-PID-010					
3		Line Number	1"-C-1005-AA21-NI		Carbon Steel			
Notes								
1. Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No.								
2. Normally the relief rate due to thermal expansion is quite small. Selected valve size of ID1 is the basis of design of the project for thermal relief valve. Vendor to advise rated relief capacity.								
Mft. Std. : Manufacture Standard V.T.A Vendor To Advise								
B.V: Bv Vendor								

<div>TOPNXT</div> <div>International</div>		HAI PHONG 2 PROJECT					DOC. No.	
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2		Operating Pressure	-	4.5	-	Barg		
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4		Density	670	-	920	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	Hydrocarbon/ Chemical Solvent		Fluid Phase	Liquid		0
8		Relieving Temperature	45 ⁰ C		Set Pressure	10.0 Barg		0
9		Require Discharge (Kg/h)	Note 1					0
10		Back Pressure Constant	1.5 Barg		Variable	0 Barg		0
		Total	1.5 Barg					0
12		Overpressure Factor	10%			Barg		
13		Required Capacity (Nm ³ /h)	Inhale	-	Exhale			
15		Molecular Weight	See solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
18		% Flashing						
19		Specificaliton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Inlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
2		Outlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
3		Line Internal Diameter	-		Material	CS		
4		Nozzle (Full,Semi)	Full Nozzle					
5		Design Type	Thermal Relief		Design Style	Conventional		
6		Bonnet Code	Close		Stamping	-		
C Basic and Selection								
1		Design Code	API520					0
2		Sizing Basic	Thermal Expansion					
3		Calculated Area	B.V		Selected Area	B.V		
4		Orifice Designation	B.V		Blowdown %	15-20%		
5		Discharfe Coefficient	0.673					
6		Noise Level	< 90 dB		Reaction Force	4 N		
7	Connection	Size Inlet	1"		Outlet	1"		
8		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	ANSI 150# - RF		
9		Material Body	A216 WCB		Bonnet Mat.	A216 WCB		
10		Dics Material	SS 316		Nozzle Mat.	316 SS		
11		Guide Material	SS 316		Spring Mat.	316 SS		
12		Bellows Material	-		Gasket Mat.	Soft Iron		
13		Leak Class	ANSI IV Standard					
14		Cap: Screwed or Bolted	Bolted					
15		Lever: Plain or Packed	B.V					
16		Test Gag	No					
17		Upstream Bursting Disc Tag. No.	No					
18								
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Manufacture Calibration, Local Authorities Certificate, Local Calibration					
E General								
1		Tag-Name	TSV-2109					
2		P&ID	HP02-00-PR-PID-010					
3		Line Number	1"-C-1006-AA21-NI		Carbon Steel			
Notes								
1. Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No.								
2. Normally the relief rate due to thermal expansion is quite small. Selected valve size of 1D1 is the basis of design of the project for thermal relief valve. Vendor to advise rated relief capacity.								
Mft. Std. : Manufacture Standard V.T.A Vendor To Advise								
B.V: By Vendor								

TOPNXT International		HAI PHONG 2 PROJECT				DOC. No. HP02-00-IN-DAS-0009		
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No.	Item	Description	Requirement				Remark	Rev.
A Process Data			<i>Min</i>	<i>Normal</i>	<i>Max</i>	<i>Unit</i>		
1		Operating Temperature	5	40	45	⁰ C		
2		Operating Pressure	-	4.5	-	Barg		
3		Viscosity	0.33	-	0.45	Cp		
4		Density	670	-	920	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	Hydrocarbon/ Chemical Solvent		Fluid Phase	Liquid		0
8		Relieving Temperature	45 ⁰ C		Set Pressure	13.5 Barg		0
9		Require Discharge (Kg/h)	Note 1					0
10		Back Pressure Constant	1.5 Barg		Variable	0 Barg		0
		Total	1.5 Barg					0
12		Overpressure Factor	10%			Barg		
13		Required Capacity (Nm ³ /h)	Inhale	-	Exhale			
15		Molecular Weight	See solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
18		% Flashing						
19		Specifcaiton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Inlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
2		Outlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
3		Line Internal Diameter	-		Material	CS		
4		Nozzle (Full,Semi)	Full Nozzle					
5		Design Type	Thermal Relief		Design Style	Conventional		
6		Bonnet Code	Close		Stamping	-		
C Basic and Selection								
1		Design Code	API520					0
2		Sizing Basic	Thermal Expansion					
3		Calculated Area	B.V		Selected Area	B.V		
4		Orifice Designation	B.V		Blowdown %	15-20%		
5		Discharfe Coefficient	0.673					
6		Noise Level	< 90 dB		Reaction Force	4 N		
7	Connection	Size Inlet	1"		Outlet	1"		
8		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	ANSI 150# - RF		
9		Material Body	A216 WCB		Bonnet Mat.	A216 WCB		
10		Dics Material	SS 316		Nozzle Mat.	316 SS		
11		Guide Material	SS 316		Spring Mat.	316 SS		
12		Bellows Material	-		Gasket Mat.	Soft Iron		
13		Leak Class	ANSI IV Standard					
14		Cap: Screwed or Bolted	Bolted					
15		Lever: Plain or Packed	B.V					
16		Test Gag	No					
17		Upstream Bursting Disc Tag. No.	No					
18								
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Manufacture Calibration, Local Authorities Certificate, Local Calibration					
E General								
1		Tag-Name	TSV-2141					
2		P&ID	HP02-00-PR-PID-014					
3		Line Number	1"-C-1412-AA21-NI		Carbon Steel			
Notes								
1. Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No.								
2. Normally the relief rate due to thermal expansion is quite small. Selected valve size of ID1 is the basis of design of the project for thermal relief valve. Vendor to advise rated relief capacity.								
Mft. Std. : Manufacture Standard V.T.A Vendor To Advise								
B.V: Bv Vendor								

		HAI PHONG 2 PROJECT				DOC. No. HP02-00-IN-DAS-0009		
		DATASHEET FOR THERMAL SAFETY VALVE				REV. No. 0		
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No.	Item	Description	Requirement				Remark	Rev.
A Process Data			<i>Min</i>	<i>Normal</i>	<i>Max</i>	<i>Unit</i>		
1		Operating Temperature	5	40	45	⁰ C		
2		Operating Pressure	-	4.5	-	Barg		
3		Viscosity	0.33	-	0.45	Cp		
4		Density	670	-	920	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	Hydrocarbon/ Chemical Solvent		Fluid Phase	Liquid		0
8		Relieving Temperature	45 ⁰ C		Set Pressure	10.0 Barg		0
9		Require Discharge (Kg/h)	Note 1					0
10		Back Pressure Constant	1.5 Barg		Variable	0 Barg		0
		Total	1.5 Barg					0
12		Overpressure Factor	10%			Barg		
13		Required Capacity (Nm ³ /h)	Inhale	-	Exhale			
15		Molecular Weight	See solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
18		% Flashing						
19		Specificaliton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Inlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
2		Outlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
3		Line Internal Diameter	-		Material	CS		
4		Nozzle (Full,Semi)	Full Nozzle					
5		Design Type	Thermal Relief		Design Style	Conventional		
6		Bonnet Code	Close		Stamping	-		
C Basic and Selection								
1		Design Code	API520					0
2		Sizing Basic	Thermal Expansion					
3		Calculated Area	B.V		Selected Area	B.V		
4		Orifice Designation	B.V		Blowdown %	15-20%		
5		Discharfe Coefficient	0.673					
6		Noise Level	< 90 dB		Reaction Force	4 N		
7	Connection	Size						

		HAI PHONG 2 PROJECT				DOC. No. HP02-00-IN-DAS-0009		
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No.	Item	Description	Requirement				Remark	Rev.
A Process Data			<i>Min</i>	<i>Normal</i>	<i>Max</i>	<i>Unit</i>		
1		Operating Temperature	5	40	45	⁰ C		
2		Operating Pressure	-	4.5	-	Barg		
3		Viscosity	0.33	-	0.45	Cp		
4		Density	670	-	920	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	Hydrocarbon/ Chemical Solvent		Fluid Phase	Liquid		0
8		Relieving Temperature	45 ⁰ C		Set Pressure	13.5 Barg		0
9		Require Discharge (Kg/h)	Note 1					0
10		Back Pressure Constant	1.5 Barg		Variable	0 Barg		0
		Total	1.5 Barg					0
12		Overpressure Factor	10%			Barg		
13		Required Capacity (Nm ³ /h)	Inhale	-	Exhale			
15		Molecular Weight	See solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
18		% Flashing						
19		Specificaliton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Inlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
2		Outlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
3		Line Internal Diameter	-		Material	CS		
4		Nozzle (Full,Semi)	Full Nozzle					
5		Design Type	Thermal Relief		Design Style	Conventional		
6		Bonnet Code	Close		Stamping	-		
C Basic and Selection								
1		Design Code	API520					0
2		Sizing Basic	Thermal Expansion					
3		Calculated Area	B.V		Selected Area	B.V		
4		Orifice Designation	B.V		Blowdown %	15-20%		
5		Discharfe Coefficient	0.673					
6		Noise Level	< 90 dB		Reaction Force	4 N		
7	Connection	Size Inlet	1"		Outlet	1"		
8		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	ANSI 150# - RF		
9		Material Body	A216 WCB		Bonnet Mat.	A216 WCB		
10		Dics Material	SS 316		Nozzle Mat.	316 SS		
11		Guide Material	SS 316		Spring Mat.	316 SS		
12		Bellows Material	-		Gasket Mat.	Soft Iron		
13		Leak Class	ANSI IV Standard					
14		Cap: Screwed or Bolted	Bolted					
15		Lever: Plain or Packed	B.V					
16		Test Gag	No					
17		Upstream Bursting Disc Tag. No.	No					
18								
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Manufacture Calibration, Local Authorities Certificate, Local Calibration					
E General								
1		Tag-Name	TSV-2151					
2		P&ID	HP02-00-PR-PID-015					
3		Line Number	1"-C-1512-AA21-NI		Carbon Steel			
Notes								
1. Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No.								
2. Normally the relief rate due to thermal expansion is quite small. Selected valve size of 1D1 is the basis of design of the project for thermal relief valve. Vendor to advise rated relief capacity.								
Mft. Std. : Manufacture Standard V.T.A Vendor To Advise								
B.V: Bv Vendor								

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No.	Item	Description	Requirement				Remark	Rev.
A Process Data			<i>Min</i>	<i>Normal</i>	<i>Max</i>	<i>Unit</i>		
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2		Operating Pressure	-	4.5	-	Barg		
3		Viscosity	0.33	-	0.45	Cp		
4		Density	670	-	920	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	Hydrocarbon/ Chemical Solvent		Fluid Phase	Liquid		0
8		Relieving Temperature	45 ⁰ C		Set Pressure	10.0 Barg		0
9		Require Discharge (Kg/h)	Note 1					0
10		Back Pressure Constant	1.5 Barg		Variable	0 Barg		0
		Total	1.5 Barg					0
12		Overpressure Factor	10%			Barg		
13		Required Capacity (Nm ³ /h)	Inhale	-	Exhale			
15		Molecular Weight	See solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
18		% Flashing						
19		Specificaliton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Inlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
2		Outlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
3		Line Internal Diameter	-		Material	CS		
4		Nozzle (Full,Semi)	Full Nozzle					
5		Design Type	Thermal Relief		Design Style	Conventional		
6		Bonnet Code	Close		Stamping	-		
C Basic and Selection								
1		Design Code	API520					0
2		Sizing Basic	Thermal Expansion					
3		Calculated Area	B.V		Selected Area	B.V		
4		Orifice Designation	B.V		Blowdown %	15-20%		
5		Discharfe Coefficient	0.673					
6		Noise Level	< 90 dB		Reaction Force	4 N		
7	Connection	Size Inlet	1"		Outlet	1"		
8		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	ANSI 150# - RF		
9		Material Body	A216 WCB		Bonnet Mat.	A216 WCB		
10		Dics Material	SS 316		Nozzle Mat.	316 SS		
11		Guide Material	SS 316		Spring Mat.	316 SS		
12		Bellows Material	-		Gasket Mat.	Soft Iron		
13		Leak Class	ANSI IV Standard					
14		Cap: Screwed or Bolted	Bolted					
15		Lever: Plain or Packed	B.V					
16		Test Gag	No					
17		Upstream Bursting Disc Tag. No.	No					
18								
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Manufacture Calibration, Local Authorities Certificate, Local Calibration					
E General								
1		Tag-Name	TSV-2152					
2		P&ID	HP02-00-PR-PID-015					
3		Line Number	1"-C-1510-AA21-NI		Carbon Steel			
Notes								
1. Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No.								
2. Normally the relief rate due to thermal expansion is quite small. Selected valve size of 1D1 is the basis of design of the project for thermal relief valve. Vendor to advise rated relief capacity.								
Mft. Std. : Manufacture Standard V.T.A Vendor To Advise								
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4		Density	670	-	920	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	Hydrocarbon/ Chemical Solvent		Fluid Phase	Liquid		0
8		Relieving Temperature	45 ⁰ C		Set Pressure	10.0 Barg		0
9		Require Discharge (Kg/h)	Note 1					0
10		Back Pressure Constant	0.65 Barg		Variable	0 Barg		0
		Total	0.65 Barg					0
12		Overpressure Factor	10%			Barg		
13		Required Capacity (Nm ³ /h)	Inhale	-	Exhale			
15		Molecular Weight	See solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
18		% Flashing						
19		Specificaliton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Inlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
2		Outlet Line Size	1"ANSI 150# - RF		Line Schedule	80		0
3		Line Internal Diameter	-		Material	CS		
4		Nozzle (Full,Semi)	Full Nozzle					
5		Design Type	Thermal Relief		Design Style	Conventional		
6		Bonnet Code	Close		Stamping	-		
C Basic and Selection								
1		Design Code	API520					0
2		Sizing Basic	Thermal Expansion					
3		Calculated Area	B.V		Selected Area	B.V		
4		Orifice Designation	B.V		Blowdown %	15-20%		
5		Discharfe Coefficient	0.673					
6		Noise Level	< 90 dB		Reaction Force	4 N		
7	Connection	Size Inlet	1"		Outlet	1"		
8		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	ANSI 150# - RF		
9		Material Body	A216 WCB		Bonnet Mat.	A216 WCB		
10		Dics Material	SS 316		Nozzle Mat.	316 SS		
11		Guide Material	SS 316		Spring Mat.	316 SS		
12		Bellows Material	-		Gasket Mat.	Soft Iron		
13		Leak Class	ANSI IV Standard					
14		Cap: Screwed or Bolted	Bolted					
15		Lever: Plain or Packed	B.V					
16		Test Gag	No					
17		Upstream Bursting Disc Tag. No.	No					
18								
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Manufacture Calibration, Local Authorities Certificate, Local Calibration					
E General								
1		Tag-Name	TSV-2161					
2		P&ID	HP02-00-PR-PID-016					
3		Line Number	1"-C-1610-AA21-NI		Carbon Steel			
Notes								
1. Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No.								
2. Normally the relief rate due to thermal expansion is quite small. Selected valve size of 1D1 is the basis of design of the project for thermal relief valve. Vendor to advise rated relief capacity.								
Mft. Std. : Manufacture Standard V.T.A Vendor To Advise								
B.V: By Vendor								

SOLVENT PROPERTY

Name	BP - °C	FP - °C	VP @20°C kPa	Density @20°C-kg/m³	Viscosity mPa.s @20°C
Acetone	56	-18	24.7	790-792	0.33
Butyl acetate	126	24	10.7	900	NA
Ethyl acetate	74-78	-4	9.8	900	0.45
Hexane	65-69	-27	19	675	NA
Isopropanol	82-83	12	4.1	NA	NA
Methyl ethyl ketone	70-80.5	-4	9.5	NA	0.42
Methyl isobutyl ketone	114-117	14	1.9	NA	NA
Sec-butyl acetate	112	16	3.3@25°C	870	NA
S-97	50-135	<0	NA	670-755 @15°C	NA
Solvent xylene	136-145	21-27	0.8-1.2	870 @15°C	
Thinner 2T (TAK-001)	75-105	3	NA	839	NA
Thinner 3T (TAK-002)	80-130	3	NA	851	NA
Toluene	110-111	6	3-3.5	871 @ 15°C	NA
TOPSol 3040 ^a	162-192	41-42	0.37	783 @ 15°C	NA
TOPSol A100	150-185	38-50	0.21-1.3	876 @ 15°C	NA
TOPSol A150	179-214	62-65.6	NA	893 @ 15°C	NA
Isomer xylene	137-143	23-27	0.8-1.2	870 @ 15°C	NA
Xylene	136-145	23-27	0.8-1.2	870 @ 15°C	NA
Hexane extraction	65.69	27	19	670 -675 @15°C	NA
Isobutyl acetate	117.2	18	1.7@25°C	871@15°C	NA
TOPSol Extraction	65.69	27	19	670 -675 @15°C	NA

Abbreviations:

BP: Boiling point

FP: Flash point

VP: Vapour pressure