

# TEMPERATURE MEASUREMENT AND MARKING SOLUTIONS



**VPL INDUSTRIAL TECHNOLOGIES PVT. LTD.**

(An ISO 9001 : 2015 Certified Company)



VPL Industrial Technologies Pvt. Ltd. (an ISO 9001:2015 certified company) provides world class solutions in temperature measurement as well as marking at most cost effective way. The details of the products manufactured are given below :

## TEMPERATURE MEASUREMENT SOLUTIONS

The VPL's temperature indicating crayons/sticks are sold in the market with **Tempindic**<sup>®</sup> trade name.

### Product Features

**Tempindic**<sup>®</sup> : Temperature Indicating Crayons has proven to deliver

- ❖ **Cost Efficiency** in Temperature Measurement - High Product Quality + Product Reliability Vs Product Cost
- ❖ **Quality Assurance** for users, with Assured Accuracy - Meets ±1% Accuracy and traceable Batch numbers to ensure quality
- ❖ **Safety** to Users and Environment and tested material - Tested and certified by third party labs to be free from Detrimental Chemicals (Halogens, Lead and Sulfur free)
- ❖ **Convenient packing** in 5 pieces per box - User NO NEED to buy in Box of 10 to receive Crayons in Original Protective Packing, saving costs by avoiding unnecessary excessive purchases
- ❖ **Compliance** as per European RoHS regulations
- ❖ **Shelf Life** 3 Years from the date of manufacture.



### Usage

Simple to use; mark on the surface of work piece with the required Tempindic. Once the surface reaches the rated temperature of the Tempindic, The mark would melt and show liquid smear appearance. The colour of the crayon is only an indication and will not have any role while marking or on its performance.



### User Industries

The following industries normally use TEMPINDIC<sup>®</sup>

- ❖ Welding industries (during pre-welding, inter-pass, and post welding)
- ❖ Annealing, Foundries
- ❖ Oil refineries, Aluminium refineries
- ❖ Iron and Steel making industries, Glass industries
- ❖ Rail wheel factories, Heat treatment industries
- ❖ Plastic manufacturing industries
- ❖ Rubber industries, Textile mills
- ❖ Ceramic industries, Chemical industries etc.



### TEMPINDIC SELECTION CHART - Conversion from °C to °F = (°C \* 1.8) + 32

S.No	Deg C	Deg F	S.No	Deg C	Deg F	S.No	Deg C	Deg F	S.No	Deg C	Deg F
1	38	100	46	146	295	91	274	525	136	650	1202
2	40	104	47	149	300	92	275	527	137	677	1250
3	43	109	48	150	302	93	280	536	138	680	1256
4	45	113	49	152	306	94	288	550	139	690	1274
5	48	118	50	155	311	95	290	554	140	700	1292
6	50	122	51	156	313	96	300	572	141	704	1299
7	52	126	52	159	319	97	302	576	142	720	1328
8	55	131	53	160	320	98	310	590	143	725	1337
9	56	133	54	163	325	99	316	601	144	732	1350
10	59	138	55	165	329	100	320	608	145	750	1382
11	60	140	56	166	331	101	330	626	146	760	1400
12	65	149	57	170	338	102	340	644	147	775	1427
13	66	151	58	173	343	103	343	649	148	788	1450
14	70	158	59	175	347	104	350	662	149	800	1472
15	73	163	60	177	351	105	360	680	150	804	1480
16	75	167	61	180	356	106	370	698	151	816	1501
17	76	169	62	184	363	107	371	700	152	825	1517
18	79	174	63	185	365	108	380	716	153	843	1550
19	80	176	64	187	369	109	390	734	154	850	1562
20	83	181	65	190	374	110	399	750	155	871	1600
21	85	185	66	191	376	111	400	752	156	899	1650
22	87	189	67	195	383	112	413	775	157	900	1652
23	90	194	68	198	388	113	425	797	158	925	1697
24	93	199	69	200	392	114	427	801	159	927	1700
25	95	203	70	204	399	115	440	824	160	950	1742
26	97	207	71	205	401	116	450	842	161	954	1750
27	100	212	72	210	410	117	454	849	162	980	1796
28	101	214	73	212	414	118	460	860	163	982	1800
29	104	219	74	215	419	119	475	887	164	1000	1832
30	107	225	75	218	424	120	480	896	165	1010	1850
31	110	230	76	220	428	121	482	900	166	1025	1877
32	114	237	77	225	437	122	490	914	167	1038	1900
33	115	239	78	230	446	123	500	932	168	1040	1904
34	120	248	79	232	450	124	510	950	169	1050	1922
35	121	250	80	235	455	125	525	977	170	1066	1950
36	124	255	81	239	462	126	538	1000	171	1093	2000
37	125	257	82	240	464	127	550	1022	172	1100	2012
38	128	262	83	245	473	128	560	1040	173	1150	2102
39	130	266	84	246	475	129	566	1051	174	1175	2147
40	132	270	85	250	482	130	580	1076	175	1200	2192
41	135	275	86	253	487	131	593	1100			
42	139	282	87	255	491	132	600	1112			
43	140	284	88	260	500	133	621	1150			
44	142	288	89	265	509	134	625	1157			
45	145	293	90	270	518	135	649	1200			

Tailor made ranges will be supplied as per the customer requirement

**Standard packaging** 5 pieces per box (same temperature) Packed in patented aluminium holders.





## **VPLITPL THERMO LABELS - TEMPERATURE INDICATING LABELS / STRIPS**

A simple cost effective and accurate temperature measurement can be made using VPLITPL's Irreversible temperature sensing labels / strips (VPLITPL Labels). Temperature strips / Labels are known as thermo labels, temperature indicator strips, temp stickers, thermo strips and temperature sensing labels etc.

### **Features of the product:**

- Calibrated at  $\pm 1\%$  accuracy
- Self-adhesive
- Rate of response: 5 to 10seconds
- Irreversible color change
- Simple, reliable and cost effective
- Shelf life- One year

**Temperature ranges:** VPLITPL Labels starts from 40°C/104°F to 200°C /392°F

**Temperature Intervals:** 5, 10, 15, 20 and 25 deg C /Deg F intervals.

**Different Levels:** Single, double, three, four, five, six, seven, eight, nine and ten level.

**Applications:** To monitor the surface temperature of an object, the desired temperature strip should be affixed on to a surface of the object. The white colored circle changes from WHITE to RED color as soon as the surface of the object attains the rated temperature of the circle.

**Usage:** After Remove the adhesive outer liner then stick label on a clean and dry surface of the test component. Once the test component reaches to the temperature of the pasted label, the white circle turns to red (irreversible).

**Storage Conditions:** Store in a cool, dry place (< 25°C/77°F and 45 to 50% relative humidity).

### **User Industries:**

- *High voltage switching, Wave soldering*
- *Overheat detection of mortar and Cable etc*
- *Baking, Dish washing*
- *Printed circuit boards, Semi-conductor cabinets*
- *Casting, Moulding, Rubber extruding*
- *Cooling water radiator, Wind tunnel*
- *Warranty abuse monitor etc*
- *Textile Processing*

**Note:** To the best of VPLITPL's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. Data may be changed from time to time.

## P: Single Step Thermo Labels (VPLI)

### Single Steps Labels: CODE VPLI

°C	38	40	42	43	44	46	49
°F	100	104	108	109	111	115	120
°C	54	60	62	65	71	77	82
°F	129	140	144	149	160	171	180
°C	88	93	99	104	110	116	121
°F	190	199	210	219	230	241	250
°C	127	132	138	143	149	154	160
°F	261	270	280	289	300	309	320
°C	166	171	177	182	188	193	199
°F	331	340	351	360	370	379	390
°C	204	210	216				
°F	399	410	421				

**Label Dimension:**  
**Size** : 10 x 10 mm  
**Label Type** : Self Adhesive  
**Packing** : 100 Labels



## Q : Four Step Thermo Labels (VPLIV)

Code	Four Steps Labels																
VPLQ1	°C	37	44	49	54	VPLQ6	°C	93	99	104	110	VPLQ11	°C	160	166	171	177
	°F	100	111	120	129		°F	199	210	219	230		°F	320	331	340	351
VPLQ2	°C	40	42	44	46	VPLQ7	°C	104	110	116	121	VPLQ12	°C	171	177	182	188
	°F	104	108	111	115		°F	219	230	241	250		°F	340	351	360	370
VPLQ3	°C	49	54	60	65	VPLQ8	°C	116	121	127	132	VPLQ13	°C	182	188	193	199
	°F	120	129	140	149		°F	241	250	261	270		°F	360	370	379	390
VPLQ4	°C	60	65	71	77	VPLQ9	°C	127	132	138	143	VPLQ14	°C	193	199	204	210
	°F	140	149	160	171		°F	261	270	280	289		°F	379	390	399	410
VPLQ5	°C	71	77	82	88	VPLQ10	°C	138	143	149	154						
	°F	160	171	180	190		°F	280	289	300	309						
	°C	82	88	93	99	°C	149	154	160	166							
	°F	180	190	199	210	°F	300	309	320	331							
	°C	82	88	93	99	°F	300	309	320	331							

**Labels Dimensions:**

**Size** : 28mm L x 16 mm W, **Label Type** : Self Adhesive, **Packing** : 50 Labels

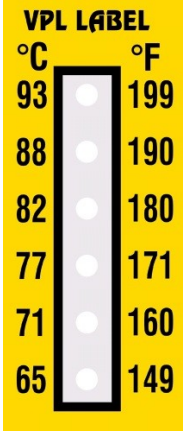
## R : Five Step Thermo Labels (VPLV)

Code	Five Steps Labels													
VPLR1	°C	38	40	43	46	49	VPLR6	°C	116	121	127	132	138	
	°F	100	104	109	115	120		°F	241	250	261	270	280	
VPLR2	°C	40	43	46	49	54	VPLR7	°C	132	138	143	149	154	
	°F	105	109	115	120	129		°F	270	280	289	300	309	
VPLR3	°C	49	54	60	65	71	VPLR8	°C	143	149	154	160	166	
	°F	120	129	140	149	160		°F	290	300	309	320	331	
VPLR4	°C	60	65	71	77	82	VPLR9	°C	160	166	171	177	182	
	°F	140	149	160	171	180		°F	320	331	340	351	360	
VPLR5	°C	77	82	88	93	99	VPLR10	°C	171	177	182	188	193	
	°F	171	180	190	199	210		°F	340	351	360	370	380	
VPLR6	°C	88	93	99	104	110	VPLR11	°C	188	193	199	204	210	
	°F	190	199	210	219	230		°F	370	379	390	399	410	
VPLR7	°C	104	110	116	121	127								
	°F	219	230	241	250	261								

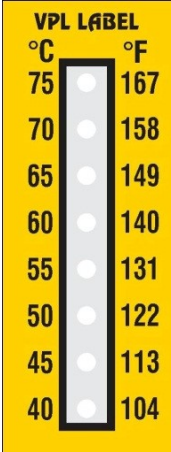
**Labels Dimensions:**

**Size** : 36mm L x 16 mm W, **Label Type** : Self Adhesive, **Packing** : 100 Labels

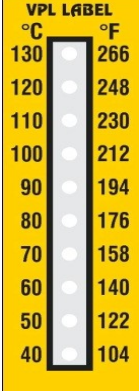
### S: Six Step Thermo Labels (VPLVI)

Code	Six Steps Labels							<p>Labels Dimensions:                      Size : 36mm L x 16 mm W                      Label Type : Self Adhesive                      Packing : 100 Labels</p>	
VPLS1	°C	38	40	42	44	46	49		
	°F	100	104	108	111	115	120		
VPLS2	°C	44	46	49	54	60	62		
	°F	111	115	120	129	140	144		
VPLS3	°C	65	71	77	82	88	93		
	°F	149	160	171	180	190	199		
VPLS4	°C	99	104	110	116	121	127		
	°F	210	219	230	241	250	261		
VPLS5	°C	132	138	143	149	154	160		
	°F	270	280	289	300	309	320		
VPLS6	°C	166	171	177	182	188	193		
	°F	331	340	351	360	370	379		

### T: Eight Step Thermo Labels (VPLVIII)

Code	Eight Steps Labels (5 Deg Intervals)									
VPLH1	°C	38	40	43	46	49	54	60		65
	°F	100	104	109	115	120	129	140		149
VPLH2	°C	71	77	82	88	93	99	104		110
	°F	160	171	180	190	199	210	219		230
VPLH3	°C	116	121	127	132	138	143	149		154
	°F	241	250	261	270	280	289	300		309
VPLH4	°C	160	166	171	177	182	188	193	199	
	°F	320	331	340	351	360	370	379	390	
<p><b>Label Dimension:</b>                      Size : 45mm L x 16 mm W                      Label Type : Self Adhesive                      Packing : 100 Labels</p>										

### U: Ten Step Thermo Labels (VPLX)

Code	Ten Steps Labels (5 Deg Intervals)											
VPLJ1	°C	40	42	44	46	49	54	60	62	65		71
	°F	104	108	111	115	120	129	140	144	149		160
VPLJ2	°C	77	82	88	93	99	104	110	116	121		127
	°F	171	180	190	199	210	219	230	241	250		261
VPLJ3	°C	132	138	143	149	154	160	166	171	177		182
	°F	270	280	289	300	309	320	331	340	351		360
<p><b>Label Dimension:</b>                      Size : 50mm L x 16 mm W                      Label Type : Self Adhesive                      Packing : 100 Labels</p>												



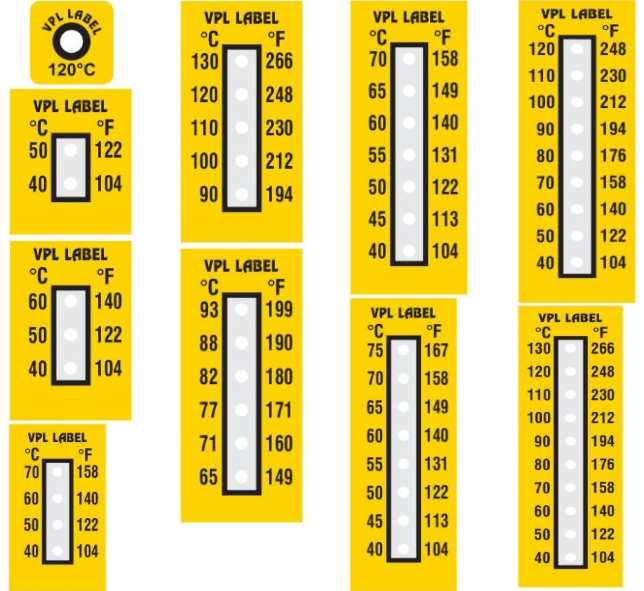
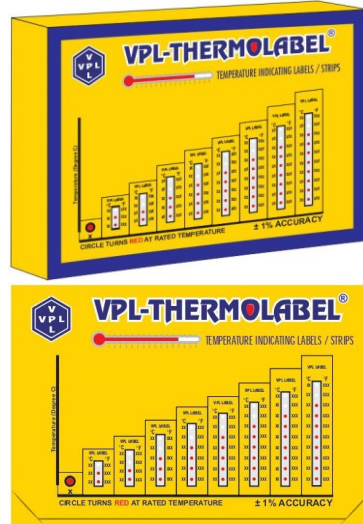
**PRODUCT DATA SHEET OF**

**VPL THERMO LABELS - TEMPERATURE INDICATING LABELS / STRIPS**

A simple cost effective and accurate temperature measurement can be made using VPLITPLs Irreversible temperature sensing labels / strips (VPLITPL Labels). Temperature strips / Labels are known as thermo labels, temperature indicator strips, temp stickers, thermo strips and temperature sensing labels etc.

**Features of the product:**

- Calibrated to  $\pm 1\%$  accuracy
- Self-adhesive
- Oil, water and steam resistant
- Rate of response: 5 to 10 seconds
- Irreversible color change
- Simple, reliable and cost effective
- Shelf life- One year



VPL Irreversible Temperature Indicating labels consists of heat sensitive indicator sealed under a transparent heat resistant circle. The indicator circle turns to pinkish red at the temperature rating mentioned on the label. Once the colour changes it will not go back to white colour (Irreversible).

Description	Labels up to 170°C	Labels from 170°C to 210°C
<b>Adhesive Type</b>	Acrylic	Modified Acrylic
<b>Carrier</b>	Polyester	Tissue
<b>Covering film</b>	Aluminium film	Aluminum film
<b>Colour change material</b>	Non- toxic, while solid on absorbing sheet pasted on an aluminum foil which inturn adhered with acrylic / Modified Acrylic adhesive	
<b>Shelf life</b>	1 year from the date of manufacture provided if the labels are stored at room temperature (below 25 0C and 45- to 50% RH)	

**Temperature ranges:** Tempindic Crayons starts from 38°C/100°F to 210°C /410°F

**Temperature Intervals:** 5, 10, 15, 20 and 25 deg C /Deg F intervals.

**Different Levels:** Single, double, three, four, five, six, seven, eight, nine and ten level.

**Applications:** To monitor the surface temperature of an object, the desired temperature strip should be affixed on to a surface of the object. The white colored circle changes from WHITE to PINKISH RED color as soon as the surface of the object attains the rated temperature of the circle.

**Usage:** After Remove the adhesive outer liner then stick label on a clean and dry surface of the test component. Once the test component reaches to the temperature of the pasted label, the white circle turns to red (irreversible).

**Storage Conditions:** Store in a cool, dry place (< 25°C/77°F and 45 to 50% relative humidity).

**User Industries:** High voltage switching, Wave soldering, Overheat detection of mortar and Cable etc, Baking, Dish washing, Printed circuit boards, Semi-conductor cabinets, Casting, Moulding, Rubber extruding, Cooling water radiator, Wind tunnel, Warranty abuse monitor etc Textile Processing industries

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## PRODUCT DATA SHEET OF

# VPL PAINT MARKERS (LOW CHLORIDE, FIBRE TIP)- OIL BASED

The marker has high quality reversible nib. Permanent marking, lettering, coding or numbering can be made using these marker pens.

### Product Features :

- *Fast Drying*
- *Japanese Technology valve action set*
- *Low Chloride, Lead Free*
- *Durable Reversible Nibs (2.3mm nib)*
- *Weather Resistance Marks (UV resistant and water proof ink)*
- *Valve action for controlled ink flow*
- *Indelible marking*
- *Suitable for marking on metal, glass, wood, rubber, plastic etc*
- *The mark colour will withstand upto 100 Deg C whereas white mark withstands upto 300 deg C*
- *Xylene free*

### User Industries:

- Auto Workshops
- Machine Shops,
- Marble & Granite Fabricators,
- Tool Shops,
- Professional Welders,
- Heat Treatment Industries etc

### Available Colours:

**Light shades of White, Yellow, Red, Blue, Green, Black.** Other colours also will be supplied depending on user requirement.

**Standard Packaging:** 12 pcs (of same colour) per box

**Storage Conditions:** Store in a cool, dry place (< 25°C/77°F and 55 to 65% relative humidity).



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