



TempilStik[°]

Tempil's industrial melting point standards are simple, reliable and guaranteed accurate within 1%. TempilStik[°] technology was developed to meet the demand for measuring surface temperatures during preheat, interpass and postweld heat treatment temperatures. When the TempilStik[°] mark melts...the temperature has been reached. Nothing could be simpler. Over 100 temperature ratings available between 100°F (38°C) and 2500°F (1371°C). Lot numbered for NIST traceability in accordance with ISO 10012-1.

Applications

A few of the hundreds of uses for TempilStik[°] temperature indicators include: Determining surface temperatures during welding and metal fabrication including preheat, interpass, postweld heat treatment, annealing and stress relieving.

Determining operating temperatures of bearings, transformers, steam traps, molds, PC board preheaters, motors, electronic components, hydraulic systems, commercial irons, hot plates & heat exchangers.

How to Use

When working below 700°F (371°C) on relatively rough surfaces, where prolonged heating is not required, the simplest method is to mark the workpiece before heating begins. The dry opaque TempilStik[°] mark will change to a distinct melted mark; this phase change will occur when the temperature rating of the selected TempilStik[°] has been reached.

CAUTION - Disregard any color change that may occur during heating. This has no significance. It is only the melting of the TempilStik[°] mark that indicates when the rated temperature has been reached.

At temperatures above 700°F (371°C) or under prolonged heating, the TempilStik[°] mark may evaporate or be absorbed. Under these conditions, stroke the workpiece with the selected TempilStik[°] from time to time during the heating operation. When the rated temperature has been reached, it will leave a liquid smear. This method should also be used if a smooth surface is involved, where the hard TempilStik[°] chalk will not leave a mark. (If it is necessary to mark a smooth surface before heating, use Tempilaq[°].)

Cleaning

For temperature ratings of 650°F (343°C) or below, the TempilStik[°] mark can be removed (if it has not been charred) with alcohol or water; for ratings above 650°F (343°C), use water only. If the mark has been heated well above the rated temperature and has become charred, an abrasive procedure may be required.

Part Number System

TempilStik[°] Fahrenheit
Part No. TS and Degree

TempilStik[°] Celsius
Part No. TSC and Degree

TempilStik[°] Blister packs
Part No. TSB and Degree

Standard Packaging

TempilStik[°] temperature Indicators are 5" long and come in adjustable aluminum holders with pocket clip. 10 indicators per box. Bar-coded per NWSA guidelines. Approximate weight per box of 10: 1/2 lb.

Fahrenheit Ratings

°F	°C	°F	°C	°F	°C	°F	°C
100	38	256	124	500	260	1500	816
103	39	263	128	525	274	1550	843
106	41	269	132	550	288	1600	871
109	43	275	135	575	302	1650	899
113	45	282	139	600	316	1700	927
119	48	288	142	650	343	1750	954
125	52	294	146	700	371	1800	982
131	55	300	149	750	399	1850	1010
138	59	306	152	800	427	1900	1038
144	62	313	156	850	454	1950	1066
150	66	319	159	900	482	2000	1093
156	69	325	163	932	500	2050	1121
163	73	331	166	950	510	2100	1149
169	76	338	170	977	525	2150	1177
175	79	344	173	1000	538	2200	1204
182	83	350	177	1022	550	2250	1232
188	87	363	184	1050	566	2300	1260
194	90	375	191	1100	593	2350	1288
200	93	388	198	1150	621	2400	1316
206	97	400	204	1200	649	2450	1343
213	101	413	212	1250	677	2500	1371
219	104	425	218	1300	704		
225	107	438	226	1350	732		
231	111	450	232	1400	760		
238	114	463	239	1425	774		
244	118	475	246	1450	788		
250	121	488	253	1480	804		

Celsius Ratings

°C	°F	°C	°F	°C	°F	°C	°F
40	104	150	302	270	518	680	1256
45	113	155	311	280	536	700	1292
50	122	160	320	290	554	740	1364
55	131	165	329	300	572	760	1400
60	140	170	338	310	590	775	1427
65	149	175	347	320	608	800	1472
70	158	180	356	340	644	825	1517
75	167	185	365	350	662	850	1562
80	176	190	374	370	698	875	1607
85	185	195	383	380	716	900	1652
90	194	200	392	390	734	910	1670
95	203	205	401	400	752	950	1742
100	212	210	410	420	788	1010	1850
105	221	215	419	460	860	1075	1967
110	230	220	428	475	887	1100	2012
115	239	225	437	500	932	1125	2057
120	248	230	446	520	968	1150	2102
125	257	235	455	530	986	1175	2147
130	266	240	464	560	1040	1200	2192
135	275	245	473	600	1112		
140	284	250	482	625	1157		
145	293	260	500	650	1202		

Tempilabel°

Tempilabel° Temperature Monitors

- Self-adhesive temperature indicating labels.
- Each label consists of heat sensitive indicator(s) sealed under transparent window(s).
- As the rated temperature(s) are reached, the indicator(s) color change from light gray to black.
- Color change is one-way; irreversible
- Temperatures from 100°F to 500°F (38°C to 260°C) are available.
- Shapes, sizes and types available are numerous and can satisfy a wide range of application requirements.

Series 4 Tempilabel°

4 temperature ratings per label

Label size: 1-3/4" W x 7/8" H

Each indicating window is 5/32"

Available in packs of 10 or rolls of 500 (4 rolls min.)

Part No.	°F	°C	°F	°C	°F	°C	°F	°C
TLL4A100	100°	38°	110°	43°	120°	49°	130°	54°
TLL4A120	120°	49°	130°	54°	140°	60°	150°	66°
TLL4A130	130°	54°	140°	60°	150°	66°	160°	71°
TLL4A150	150°	66°	160°	71°	170°	77°	180°	82°
TLL4A170	170°	77°	180°	82°	190°	88°	200°	93°
TLL4A190	190°	88°	200°	93°	210°	99°	220°	104°
TLL4A200	200°	93°	210°	99°	220°	104°	230°	110°
TLL4A220	220°	104°	230°	110°	240°	116°	250°	121°
TLL4A230	230°	110°	240°	116°	250°	121°	260°	127°
TLL4A250	250°	121°	260°	127°	270°	132°	280°	138°
TLL4A270	270°	132°	280°	138°	290°	143°	300°	149°
TLL4A290	290°	143°	300°	149°	310°	154°	320°	160°
TLL4A300	300°	149°	310°	154°	320°	160°	330°	166°
TLL4A320	320°	160°	330°	166°	340°	171°	350°	177°
TLL4A330	330°	166°	340°	171°	350°	177°	360°	182°
TLL4A350	350°	177°	360°	182°	370°	188°	380°	193°
TLL4A370	370°	188°	380°	193°	390°	199°	400°	204°

Benefits:

Inexpensive - alternative for temperature measurement

Simple - easy to apply self-adhesive label; no gauges or electronics

Accurate - within ±2% rated temperature or better

Guaranteed - accuracy certification is available

Reliable - monitor surface temperature continuously

Calibration - Tempilabels are always in calibration

Permanent Record - easily removed after use providing documentation for warranty claims and inspection or quality control reports

Traceable - production lot numbered

Part No.	°F	°C	°F	°C	°F	°C	°F	°C
TLL4B100	100°	38°	125°	52°	150°	66°	175°	79°
TLL4B125	125°	52°	150°	66°	175°	79°	200°	93°
TLL4B150	150°	66°	175°	79°	200°	93°	225°	107°
TLL4B175	175°	79°	200°	93°	225°	107°	250°	121°
TLL4B200	200°	93°	225°	107°	250°	121°	275°	135°
TLL4B225	225°	107°	250°	121°	275°	135°	300°	149°
TLL4B300	300°	149°	325°	163°	350°	177°	375°	191°
TLL4B350	350°	177°	375°	191°	400°	204°	425°	218°
TLL4B400	400°	204°	425°	218°	450°	232°	475°	246°
TLL4C100	100°	38°	150°	66°	200°	93°	250°	121°
TLL4C200	200°	93°	250°	121°	300°	149°	350°	177°
TLL4C300	300°	149°	350°	177°	400°	204°	450°	232°
TLL4C350	350°	177°	400°	204°	450°	232°	500°	260°
TLL4C450	450°	232°	500°	260°	550°	288°	600°	316°

4A - 10° F between each rating **4B** - 25° F between each rating

4C - 50° F between each rating

Series 6M

6 temperature ratings per label

Each indicating window is 1/16" W x 1/8" H

Label size: 1-3/8" W x 3/8" H

Available in packs of 10 or rolls of 500 (4 rolls min.)

Part No.	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
TLL6MA100	100°	38°	110°	43°	120°	49°	130°	54°	140°	60°
TLL6MA130	130°	54°	140°	60°	150°	66°	160°	71°	170°	77°
TLL6MA160	160°	71°	170°	77°	180°	82°	190°	88°	200°	93°
TLL6MA190	190°	88°	200°	93°	210°	99°	220°	104°	230°	110°
TLL6MA220	220°	104°	230°	110°	240°	116°	250°	121°	260°	127°
TLL6MA250	250°	121°	260°	127°	270°	132°	280°	138°	290°	143°
TLL6MB100	100°	38°	125°	52°	150°	66°	175°	79°	200°	93°
TLL6MB175	175°	79°	200°	93°	225°	107°	250°	121°	275°	135°

6MA - 10° F between each rating

6MB - 25° F between each rating

Series 8M

8 temperature ratings per label

Each indicating window is 1/16" W x 1/8" H

Label size: 1-3/4" W x 3/8" H

Available in packs of 10 or rolls of 500 (4 rolls min.)

Part No.	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
TLL8MA100	100°	38°	110°	43°	120°	49°	130°	54°	140°	60°	150°	66°
TLL8MA140	140°	60°	150°	66°	160°	71°	170°	77°	180°	82°	190°	88°
TLL8MA180	180°	82°	190°	88°	200°	93°	210°	99°	220°	104°	230°	110°
TLL8MA230	230°	110°	240°	116°	250°	121°	260°	127°	270°	132°	280°	138°
TLL8MA280	280°	138°	290°	143°	300°	149°	310°	154°	320°	160°	330°	166°
TLL8MB100	100°	38°	125°	52°	150°	66°	175°	79°	200°	93°	225°	107°
TLL8MB175	175°	79°	200°	93°	225°	107°	250°	121°	275°	135°	300°	149°

8MA - 10° F between each rating

8MB - 25° F between each rating

Button Series

4 temperature ratings per label
Temperatures are read clockwise from the arrow
Label Size: 1/4" dia.
Each indicating window is 3/64" dia.

Part No.	F	C	F	C	F	C	F	C
TLLBU100	100°	38°	110°	43°	120°	49°	130°	54°
TLLBU120	120°	49°	130°	54°	140°	60°	150°	66°
TLLBU140	140°	60°	150°	66°	160°	71°	170°	77°
TLLBU160	160°	71°	170°	77°	180°	82°	190°	88°
TLLBU175	175°	79°	200°	93°	225°	107°	250°	121°
TLLBU225	225°	107°	250°	121°	275°	135°	300°	149°

Bulls-Eye Series

1 temperature ratings per label
Label Size: 5/16" dia.
Each indicating window is 1/8"
Available in packs of 10 or rolls of 500 (4 roll min)

Part No.	F	C	Part No.	F	C
TLLBE105	105°	40°	TLLBE260	260°	127°
TLLBE110	110°	43°	TLLBE270	270°	132°
TLLBE115	115°	46°	TLLBE280	280°	138°
TLLBE120	120°	49°	TLLBE290	290°	143°
TLLBE130	130°	54°	TLLBE300	300°	149°
TLLBE140	140°	60°	TLLBE310	310°	154°
TLLBE150	150°	66°	TLLBE320	320°	160°
TLLBE160	160°	71°	TLLBE330	330°	166°
TLLBE170	170°	77°	TLLBE410	340°	171°
TLLBE180	180°	82°	TLLBE420	350°	177°
TLLBE190	190°	88°	TLLBE435	360°	182°
TLLBE200	200°	93°	TLLBE450	370°	188°
TLLBE210	210°	99°	TLLBE465	380°	193°
TLLBE220	220°	104°	TLLBE480	390°	199°
TLLBE240	240°	116°	TLLBE490	400°	204°
TLLBE250	250°	121°	TLLBE500	410°	210°

Tempstik® Test Kit

Tempstik® Test Kit consists of twenty 2-1/2" temperature indicating crayons, each with its own holder, with ratings from 125°F/52°C to 800°F/427°C. For welders who frequently weld different types of heat treated alloy steels in various thicknesses, and need to know precise preheat and interpass temperatures.



Part No. TSTK



Temprobe® Temperature Test Kit

Temprobe® Temperature Test Kits consist of twenty 3/4" temperature indicating crayons with ratings from 125°F/52°C to 600°F/316C, and a special holder. They are intended for use by researchers, experimenters, technicians and people who do other heat-related operations.



Part No. TTTK

Tempilstik® Welding Code Kit:

Includes welding code requirements, preheat and interpass temperature specifications and certified chemical analysis to MIL-SPEC. Also included are 10 temperature indicators spaced between 125°F (52°C) and 450°F (232°C). They include all preheat melting point temperatures needed to meet requirements of AWS D1.1 Structural Welding Code for Steel; ASME Code, Section 1, Power Boilers; Section III, Nuclear Components; and Section VIII, Unfired Pressure Vessels; ANSI/ASME Code B31.1, Power Piping; and B31.3, Chemical Plant and Petroleum Refinery Piping.



Part No. TWCK

Tempil Paintpen™

Tempil Paintpen™ is a new valve action felt tip marker. Paintpen™ waterborne acrylic paint formulations are in compliance with CONEG regulations, Clean Air Act, SARA legislation and California VOC regulations. Contains NO solvents and NO ODC's. Tip is washable, can't dry out.

- Simply shake well; gently depress tip until saturated with paint. There is no ball point to freeze.
- Permanently marks metals, plastic, wood, cardboard, glass, and most other surfaces - even wet or oily. It is non-hazardous, non-flammable and environmentally safe. It is waterproof and quick drying.
- Available in 4 bright lead-free colors (black, red, white, yellow).
- 12 markers per box/144 per case.

Part No.	Description
TPPBLK	Paintpen Black
TPPRED	Paintpen Red
TPPWHT	Paintpen White
TPPYEL	Paintpen Yellow

Pyromarker / Bloxide

Pyromark® Paints

Pyromark® High Temperature Paints are specially formulated for protecting, decorating or color identifying metal surfaces that will be subjected to high temperatures. There are three systems of Pyromark® Protective Coatings, each classified by its maximum performance temperature. The maximum temperature rating varies by substrate from 2500°F on Inconel to 1200°F on mild steel. The silicone-base coatings provide long-lasting protection against oxidation and corrosion. Pyromark® coatings have excellent covering characteristics and will not blister, chip, crack or peel at their rated temperature. Pyromark® paints improve heat transfer in infrared heating applications due to their high emissivity properties.

Series 800 - 9 colors available. Temperature range from 600°F to 800°F, depending on the specific color.

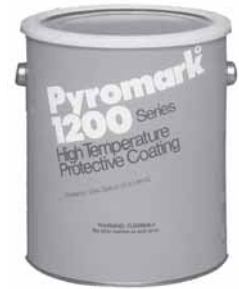
Series 1200 - 4 colors - able to withstand 1200°F

Series 2500 - 6 colors available, each able to withstand 2500°F after heat cure and vitrification procedures. The air dried finish on all colors is semi-gloss. This finish will become flat after heating. Black is also available flat.

How to Use

Surface must be clean, dry and between 60°F and 125°F, at the time of application. Mild Steel: sand blast to near white metal (SSPC-SP10). Stainless, aluminum, Inconel: steam clean or solvent clean to remove all soil, grease, and oil. See product technical data sheet for details. Apply by spray or brush. Heat curing of Series 2500 is necessary to obtain maximum thermal properties. Series 800 and Series 1200 will air dry.

Color Code	800	1200	2500
Black, Flat	FBLK	FBLK	FBLK
Black, Semi-Gloss	SBLK		SBLK
Black, Satin Sheen		SBLK	
Blue	BLU	BLU	BLU
Gray	GRY		
Green	GRN		GRN
Metallic, Aluminum	MAL		
Metallic, Charcoal		CHM	
Tan	TAN		
White	WHT		WHT
Yellow	YEL		YEL



Typical Applications

Infrared space heaters, boilers, breechings, stoves, furnaces, steampipes, fireplaces, stacks, kilns or any other metal surfaces that are subjected to high temperature service.

Ordering example: Pyromark Series 1200 Flat Black, 5 Gallon pail...PK12FBLK5GL

Bloxide®

Bloxide® is a weldable rust preventative that insures x-ray quality welds. The aluminized coating acts as an oxygen barrier that protects against rust. It also forms aluminum oxide in the weld puddle which reduces porosity and pinholing.

The use of Bloxide® eliminates recleaning of sub assemblies prepared for welding even after they have been in outside storage for several months. It is an excellent weldable primer paint, and leaves no objectional residue or slag. Bloxide® is free of lead, sulfur, zinc, cadmium, mercury, chlorine or other halogens which makes it safe for the nuclear fabrication industry. It will also withstand temperatures up to 800°F.

How to Use

Bloxide® can be applied by brush or spray. It requires no special training, equipment, or precautions for effective application. Bloxide® is quick drying, forming a tack-free, tenacious film in minutes. Coverage is approx. 800-1,000 sq. ft. per gallon.

Typical Applications

Bloxide® can be advantageously used on all steels, and is compatible with most welding processes. It should definitely be considered for x-ray quality work.

TYPE APPROVED BY ABS - AMERICAN BUREAU OF SHIPPING and by DNV - DET NORSKE VERITAS FOR MARINE AND OFFSHORE FABRICATION APPLICATIONS.



Part No.	Description	UM
BLAR	Bloxide	13 oz. Aerosol
BLGL	Bloxide	1 gal
BLQT	Bloxide	1 qt
BL5GL	Bloxide	5 gal

Anti-Heat°

Anti-Heat° is a protective heat-sink compound that confines heat to the welding, brazing or soldering zone, protecting adjacent areas from undesirable heat build-up. It minimizes risk of heat damage, prevents discoloration, warping, buckling or other distortion of light-gauge metals.

How to Use

Anti-Heat° is easy to apply. Simply spread it on right from the can. Tube will fit standard caulking gun. It is harmless to the skin, odorless, non-toxic and will not stain the base metal. To clean, just wipe off excess and wash with water.

Typical Applications

Anti-Heat° can be used effectively to protect thin gauge metals from objectionable heat inflow due to welding, brazing, soldering or other heat sources. Will also protect components, parts etc. from heat related damages, such as gasket of a valve being welded to pipes, or paint on automobiles while being locally repaired by brazing, soldering or welding.

Part No.	Description	UM
AHTB	Anti-Heat	12 oz. tube
AHQT	Anti-Heat	1 qt
AHGL	Anti-Heat	1 gal
AH5GL	Anti-Heat	5 gal



2 oz Tempilaq°

Part No.	°F	°C	Part No.	°F	°C
TL0175	175	79	TL0700	700	371
TL0200	200	93	TL0750	750	399
TL0225	225	107	TL0800	800	427
TL0250	250	121	TL0850	850	454
TL0275	275	135	TL0900	900	482
TL0300	300	149	TL0950	950	510
TL0313	313	156	TL1000	1000	538
TL0325	325	163	TL1022	1022	550
TL0350	350	177	TL1050	1050	566
TL0363	363	184	TL1100	1100	593
TL0375	375	191	TL1150	1150	621
TL0400	400	204	TL1200	1200	1121
TL0425	425	218	TL1250	1250	649
TL0450	450	232	TL1300	1300	704
TL0475	475	246	TL1400	1400	760
TL0488	488	253	TL1450	1450	788
TL0500	500	260	TL1500	1500	816
TL0525	525	274	TL1600	1600	871
TL0550	550	288	TL1700	1700	927
TL0575	575	302	TL1800	1800	982
TL0600	600	316	TL1900	1900	1038
TL0650	650	343	TL2000	2000	1093



Tempilaq° is made of the same materials as Tempilstik°. This material is suspended in a quick-drying, inert vehicle. Most are non-flammable. Tempilaq° is available in the same 102 temperature ratings as Tempilstik° and carries the same ± 1% accuracy. Lot numbers on each bottle allow it to be traced to the specific batch of raw material from which it was made.

Apply a thin coating of the appropriate Tempilaq° by brush to the workpiece before heating begins. It dries almost instantly to a dull opaque mark. When its specified temperature is reached, the Tempilaq° mark liquifies (melts) sharply.

CAUTION - Disregard any color change that may occur during heating. This has no significance. It is only the melting of the Tempilaq° mark that indicates when the rated temperature has been reached. Upon cooling, the melted Tempilaq° mark will solidify to a glossy-transparent appearance.

Tempilaq° can be diluted to any desired consistency without changing its melting point. The thinner the coating used, the quicker the reaction time will be when temperature has been reached. Use only Tempilaq° thinner, and only the thinner recommended for the specific temperature rating being used.

Cleaning: Same procedures as for Tempilstik

Applications

Tempilaq° should be used on surfaces which cannot be easily marked with a Tempilstik°, such as polished metal, glass, plastics, rubber, fabrics or electronic components. It should also be used for making larger marks than can conveniently be made with Tempilstik° (for viewing at a distance). It is widely used for monitoring critical temperatures in the electronics field, such as preheat temperatures for wave soldering. Other applications include dielectric heatsealing, postforming plastic laminate, and annealing polished metal surfaces.

Tempilaq°

Part No.	°F	°C	UM
TL0175QT	175	79	1 qt
TL0275PT	275	135	1 pt
TL0950PT	950	510	1 pt