



An Illinois Tool Works Company

Surface Temperature Measurement



Accurate indication. Reliable results.™



Effective, Efficient Solutions for Accurate Surface Temperature Measurement

Since 1938, Tempil® has been a leader in the development of innovative and accurate temperature indication technology for multiple markets. Our cost-effective solutions can monitor your supply chain, check critical temperatures in the manufacturing process or ensure a products' performance in the field.

At Tempil, our products specifically answer industry concerns and application challenges that are faced on a daily basis. Our surface temperature indicators – Tempilstik® and Tempilaq® – are uniquely engineered for fast and accurate temperature measurement, while producing results you can trust. And our heat absorbing, rust-preventative compound and high temperature paint – Anti-Heat®, Bloxide® and Pyromark® – are designed to help eliminate heat damage and prevent the formation of corrosion during storage respectively.

With our Tempil products, we have utilized advanced and reliable indication and prevention technology, to produce a range of surface temperature products that allow for safe and versatile surface measurements. Cost-efficient, easy-to-use, and available in multiple formats to meet your specific application needs. Tempil is delivering the surface measurement solutions you can count on, when you need them most.



Tempilstik® Indicators

NEW LOOK: Fahrenheit and Celsius versions now combined into one great product!

An inexpensive alternative for surface temperature measurement, Tempilstik® is a simple, easy-to-use surface indicator that delivers reliable and accurate results, with no gauges or electronics and no calibration required. Tempilstik features a slim holder and dense chalk design, specifically engineered for smooth operation while maximizing user efficiency. Lasting longer than competing brands, Tempilstik provides the comfort, confidence and cost-effectiveness you expect in your temperature measurement indicators.

Easy to use application. Simply stroke the workpiece during heating, and Tempilstik will make a distinct mark by melting at the point of contact once the surface reaches the product's rated temperature.

- Ranges available: 100°F to 2000°F (38°C to 1093°C)
- Reliably accurate – melts within ± 1 percent of rated temperature
- Provides strong chalk grip to avoid slippage
- Lead and sulfur-free
- Available 10 per box (bar-coded per NWSA guidelines); blister packaging available for point-of-purchase displays
- Certification available upon request
- Numbered production lot for traceability

Applications:

- Welding and metal fabrication
- Preheat
- Interpass
- Post-weld heat treatment
- Annealing
- Stress-relieving

Also available are Tempilstik® Test Kits and Custom Test kits on back page.



Tempilaq G® Indicating Liquids

Optimal for cold and/or smooth surfaces, Tempilaq G® is a quick, easy and cost-effective method to verifying the achievement of a specific temperature on a wide range of surfaces under dynamic conditions.

Quick application. Accurate results. When applied to a surface, Tempilaq quickly dries forming a dull, opaque film. Then, when heat is applied to that surface and the rated temperature is reached, the film liquefies. As the surface cools, the liquefied Tempilaq re-solidifies to leave a distinctly different mark, confirming that the target temperature has indeed been achieved.

- 44 different temperature ratings from 175°F to 2000°F (79°C to 1093°C)
- Reliably accurate – melts within ± 1 percent of rated temperature
- HAP free – contains no hazardous air pollutants
- Easy to apply quick-drying fluid
- Non-flammable for maximum safety and unrestricted shipment
- Standard packaging: 2 oz bottles
- Certification available upon request
- Numbered production lot for traceability

Applications:

- Thermal mapping on multiple surfaces
- Calibrating brake calipers
- Wave soldering PC boards
- Dielectric heat sealing
- Post-forming plastic laminate
- Annealing polished metal surfaces
- Calculating glass temperatures at various heating stages
- Calibrating industrial ovens
- And much, much more...

Bloxide®

A versatile primer, Bloxide® is a unique formula that can be applied to a wide range of metals preventing the formation of rust and corrosion during extended periods of storage. With enhanced corrosion preventative features, Bloxide eliminates the need to clean metal surfaces before welding, saving time and labor costs during fabrication. And, Bloxide is completely weldable, also improving the weld quality after application.

Quick application. Accurate results.

Simply apply Bloxide by brush, dip or spray with no special equipment or training. Coverage is up to approximately 800 square feet per gallon. Industry-safe and free from lead, sulfur, zinc and other halogens, Bloxide is an excellent primer for a wide range of applications.

- Ideal for extended periods of outside steel storage
- Ability to strike welding arc without removal
- Temperature resistant to 800°F (427°C)
- Aluminized finish
- Dry time: around 77°F and 50% relative humidity/tack free – 6 hours
- Recommended film thickness: Wet 3.0 mil, Dry 0.75 mil
- Standard packaging: 12 oz. aerosol cans, quarts, gallons, 5 gallon pails and 55 gallon drums

Pyromark®

Delivering multiple benefits to metal products, Pyromark®, a silicone-based coating, is specifically formulated for protecting, decorating, or color identifying metal surfaces that will be subjected to high temperatures. Pyromark provides long-lasting protection against oxidation and corrosion, and has excellent coverage characteristics – no blistering, chipping, cracking or peeling at rated temperatures.

- Improves heat transfer in infra-red heating applications due to high-emission properties
- Solar absorption rate of 0.95 makes it an almost perfect black box absorber
- Standard packaging: gallons, 5 gallon pails, 55 gallon drums

Anti-Heat®

Anti-Heat®, an exceptional heat-absorbing compound, is specially formulated to eliminate heat damage and discoloration, which often occurs on light gauge metals during fabrication. Once applied, Anti-Heat draws excess heat away from the surface being welded, brazed or soldered, creating a protective barrier that prevents buckling, cracking, warping or other metal distortions from occurring.

Easy to use application. Anti-Heat applies quickly and easily to applications. Simply spread it on from the can, or apply directly from the 12 oz. tube that fits in a standard caulking gun. Anti-Heat wipes up easily with water.

- Non-toxic
- Harmless to the skin
- Asbestos-free and odorless
- Adheres to horizontal, vertical and overhead surfaces
- Standard packaging: 12 oz. tubes, quarts, gallons, 5 gallon pails



Applications:

Marine and off-shore fabrication
All steels, including high tensile, carbon moly and chrome moly
Primer for paint and coatings



Applications:

Infra-red heaters | Boilers | Furnaces
Ovens | Fireplace Accessories
Solar Absorbers | Mufflers
Radiators | Stoves
Boat and Auto Engines



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.



NEW Combined Fahrenheit/Centigrade Tempilstik®

Part No.	F°	C°	Part No.	F°	C°	Part No.	F°	C°
TS0100/TSC0038	100	38	TS0302/TSC0150	302	150	TS0600/TSC0316	600	316
TS0104/TSC0040	104	40	TS0306/TSC0152	306	152	TS0608/TSC0320	608	320
TS0109/TSC0043	109	43	TS0311/TSC0155	311	155	TS0650/TSC0343	650	343
TS0119/TSC0048	119	48	TS0313/TSC0156	313	156	TS0662/TSC0350	662	350
TS0122/TSC0050	122	50	TS0320/TSC0160	320	160	TS0700/TSC0371	700	371
TS0125/TSC0052	125	52	TS0325/TSC0163	325	163	TS0750/TSC0399	750	399
TS0131/TSC0055	131	55	TS0329/TSC0165	329	165	TS0752/TSC0400	752	400
TS0140/TSC0060	140	60	TS0338/TSC0170	338	170	TS0800/TSC0427	800	427
TS0150/TSC0066	150	66	TS0344/TSC0173	344	173	TS0850/TSC0454	850	454
TS0158/TSC0070	158	70	TS0347/TSC0175	347	175	TS0860/TSC0460	860	460
TS0163/TSC0073	163	73	TS0350/TSC0177	350	177	TS0900/TSC0482	900	482
TS0167/TSC0075	167	75	TS0356/TSC0180	356	180	TS0932/TSC0500	932	500
TS0169/TSC0076	169	76	TS0363/TSC0184	363	184	TS0950/TSC0510	950	510
TS0175/TSC0079	175	79	TS0374/TSC0190	374	190	TS0977/TSC0525	977	525
TS0176/TSC0080	176	80	TS0375/TSC0191	375	191	TS1000/TSC0538	1000	538
TS0182/TSC0083	182	83	TS0383/TSC0195	383	195	TS1022/TSC0550	1022	550
TS0185/TSC0085	185	85	TS0388/TSC0198	388	198	TS1040/TSC0560	1040	560
TS0188/TSC0087	188	87	TS0392/TSC0200	392	200	TS1050/TSC0566	1050	566
TS0194/TSC0090	194	90	TS0400/TSC0204	400	204	TS1100/TSC0593	1100	593
TS0200/TSC0093	200	93	TS0410/TSC0210	410	210	TS1112/TSC0600	1112	600
TS0203/TSC0095	203	95	TS0413/TSC0212	413	212	TS1150/TSC0621	1150	621
TS0206/TSC0097	206	97	TS0419/TSC0215	419	215	TS1157/TSC0625	1157	625
TS0212/TSC0100	212	100	TS0425/TSC0218	425	218	TS1200/TSC0649	1200	649
TS0213/TSC0101	213	101	TS0428/TSC0220	428	220	TS1250/TSC0677	1250	677
TS0219/TSC0104	219	104	TS0437/TSC0225	437	225	TS1292/TSC0700	1292	700
TS0225/TSC0107	225	107	TS0446/TSC0230	446	230	TS1300/TSC0704	1300	704
TS0230/TSC0110	230	110	TS0450/TSC0232	450	232	TS1350/TSC0732	1350	732
TS0239/TSC0115	239	115	TS0455/TSC0235	455	235	TS1400/TSC0760	1400	760
TS0248/TSC0120	248	120	TS0463/TSC0239	463	239	TS1450/TSC0788	1450	788
TS0250/TSC0121	250	121	TS0475/TSC0246	475	246	TS1472/TSC0800	1472	800
TS0256/TSC0124	256	124	TS0482/TSC0250	482	250	TS1480/TSC0804	1480	804
TS0257/TSC0125	257	125	TS0488/TSC0253	488	253	TS1500/TSC0816	1500	816
TS0263/TSC0128	263	128	TS0500/TSC0260	500	260	TS1550/TSC0843	1550	843
TS0266/TSC0130	266	130	TS0518/TSC0270	518	270	TS1600/TSC0871	1600	871
TS0269/TSC0132	269	132	TS0525/TSC0274	525	274	TS1650/TSC0899	1650	899
TS0275/TSC0135	275	135	TS0536/TSC0280	536	280	TS1700/TSC0927	1700	927
TS0284/TSC0140	284	140	TS0550/TSC0288	550	288	TS1800/TSC0982	1800	982
TS0288/TSC0142	288	142	TS0554/TSC0290	554	290	TS1850/TSC1010	1850	1010
TS0294/TSC0146	294	146	TS0572/TSC0300	572	300	TS1900/TSC1038	1900	1038
TS0300/TSC0149	300	149	TS0575/TSC0302	575	302	TS1950/TSC1066	1950	1066
						TS2000/TSC1093	2000	1093



Fahrenheit/Centigrade Ratings for Tempilaq G®

Part No.	F°	C°	Part No.	F°	C°	Part No.	F°	C°	Part No.	F°	C°
TL0175	175	79	TL0400	400	204	TL0700	700	371	TLI200	1200	649
TL0200	200	93	TL0425	425	218	TL0750	750	399	TLI250	1250	677
TL0225	225	107	TL0450	450	232	TL0800	800	427	TLI300	1300	704
TL0250	250	121	TL0475	475	246	TL0850	850	454	TLI400	1400	760
TL0275	275	135	TL0488	488	253	TL0900	900	482	TLI450	1450	788
TL0300	300	149	TL0500	500	260	TL0950	950	510	TLI500	1500	816
TL0313	313	156	TL0525	525	274	TL1000	1000	538	TLI600	1600	871
TL0325	325	163	TL0550	550	288	TL1022	1022	550	TLI700	1700	927
TL0350	350	177	TL0575	575	302	TL1050	1050	566	TLI800	1800	982
TL0363	363	184	TL0600	600	316	TLI100	1100	593	TLI900	1900	1038
TL0375	375	191	TL0650	650	343	TLI150	1150	621	TL2000	2000	1093

Tempilstik® Test Kits



Provides all the information needed for determining the proper temperatures for welding, heat treating, soldering, brazing, and other operations involved in the fabrication of most metals. In addition, the kit provides information for measuring preheat, interpass and postweld heat treatment temperatures.

The kit contains: 20 temperature indicators systematically spaced between 125°F (52°C) and 800°F (427°C).

Available Temperatures — 125°F, 150°F, 175°F, 200°F, 225°F, 250°F, 275°F, 300°F, 325°F, 350°F, 375°F, 400°F, 425°F, 450°F, 475°F, 500°F, 550°F, 600°F, 700°F, 800°F

Applications:

- Surface welding
- Hard facing
- Torch or flame cutting treating
- Overlaying for corrosion resistance
- Heat treating
- Pipe bending
- Die repair welding

Custom Tempilstik® Test Kits



Customized Temperature Indicating Kit

Designed for researchers, experimenters and technicians who frequently work with heat-related operations. Welders, welding different types of heat treated alloy steels of various thickness who need to know precise preheat and inter pass temperatures will find Tempilstik® Custom Kit to be an invaluable tool.

Four Ways to Order Tempilstik® Custom Kit:

Full Range (°F) — 125°, 200°, 250°, 300°, 350°, 425°, 500°, 575°, 650°, 750°
Low Range (°F) — 125°, 150°, 175°, 200°, 225°, 250°, 275°, 300°, 325°, 350°
High Range (°F) — 300°, 350°, 400°, 450°, 500°, 550°, 600°, 650°, 700°, 750°
Select Your Own — Any combination of 10 Tempilstik® temperature indicators from 125°F to 750°F.

Applications:

- Surface welding
- Hard facing
- Overlaying for corrosion resistance
- Heat treating
- Pipe bending
- Die repair welding

Min/Max Double Tempilstik®



Tempilstik® Min/Max Indicators allow for higher-rated and lower-rated testing in a single, handy, double-ended holder.

Available as a custom kit of six min/max holders, each with two kit-size sticks. You specify your preferred ratings from Tempil's range of 100 to 650°F, 38 to 343°C.

Applications:

- Interpass testing
- Surface welding
- Hard facing
- Overlaying for corrosion resistance
- Heat treating
- Pipe bending
- Die repair welding



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