

**MARKAL**<sup>®</sup>

**Tempil**<sup>®</sup>

PRODUCT BROCHURE

# WELDING MARKERS AND TEMPERATURE INDICATORS



LONG-LASTING

VISIBLE

FAST

ACCURATE



# CAPTION

## PACKAGING:



Box



Retail Pack



Display



Clip Strip

## SURFACES :



Steel



Lumber, Timber



Rubber



Plastic



Cardboard



Pipes, Tubes



Concrete, Stone



Glass



Stainless Steel

## COLORS :



White



Green



Grey



Light green



Fluorescent Pink



Yellow



Black



Pink



Aluminium



Fluorescent Yellow



Red



Orange



Brown



Silver



Fluorescent Blue



Blue



Purple



Light blue



Gold



Fluorescent Green



Fluorescent Orange

## PICTOGRAMS :



Marking range



Weather- and UV-resistant marking



Formula limiting the risk of corrosion (low sulfur and halogen content)



Mark temperature resistance



Manufacturing location



Low Volatile Organic Compound (VOC)



Fast drying paint



Tip shape and size



Indelible marking



Xylene-free paint



PMUC certified product



Erasable marking



IMDS registered product



Heat resistant marking

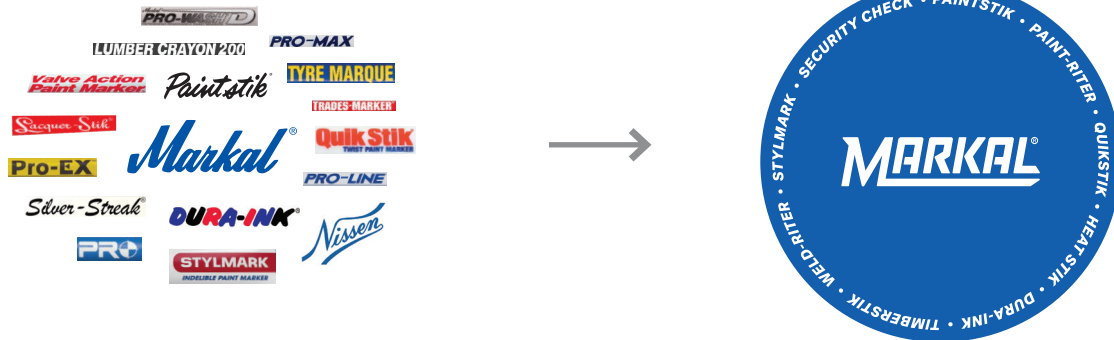


Visible through the welding shield



High visibility marking

## BRAND TRANSITION



## WHAT IS CHANGING

### Changing:

- Logo
- Product Naming
- Packaging

### NOT changing:

- Part Numbers
- Case Quantities
- Packaging Dimensions
- Product formulation

## NEW NAMING SYSTEM

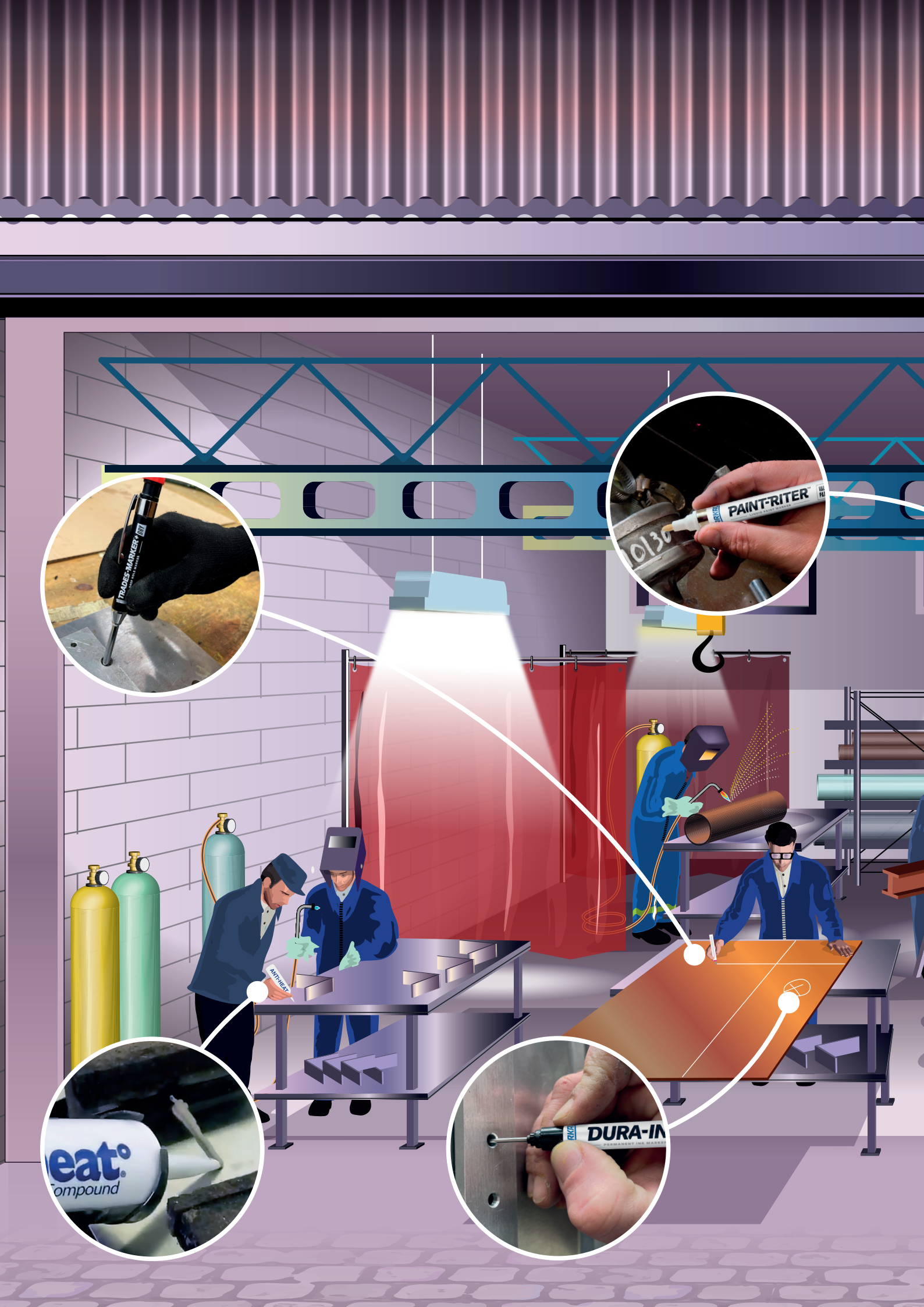
**MARKAL** + **POD-BRAND** + **KRITIČNA RADNJA**

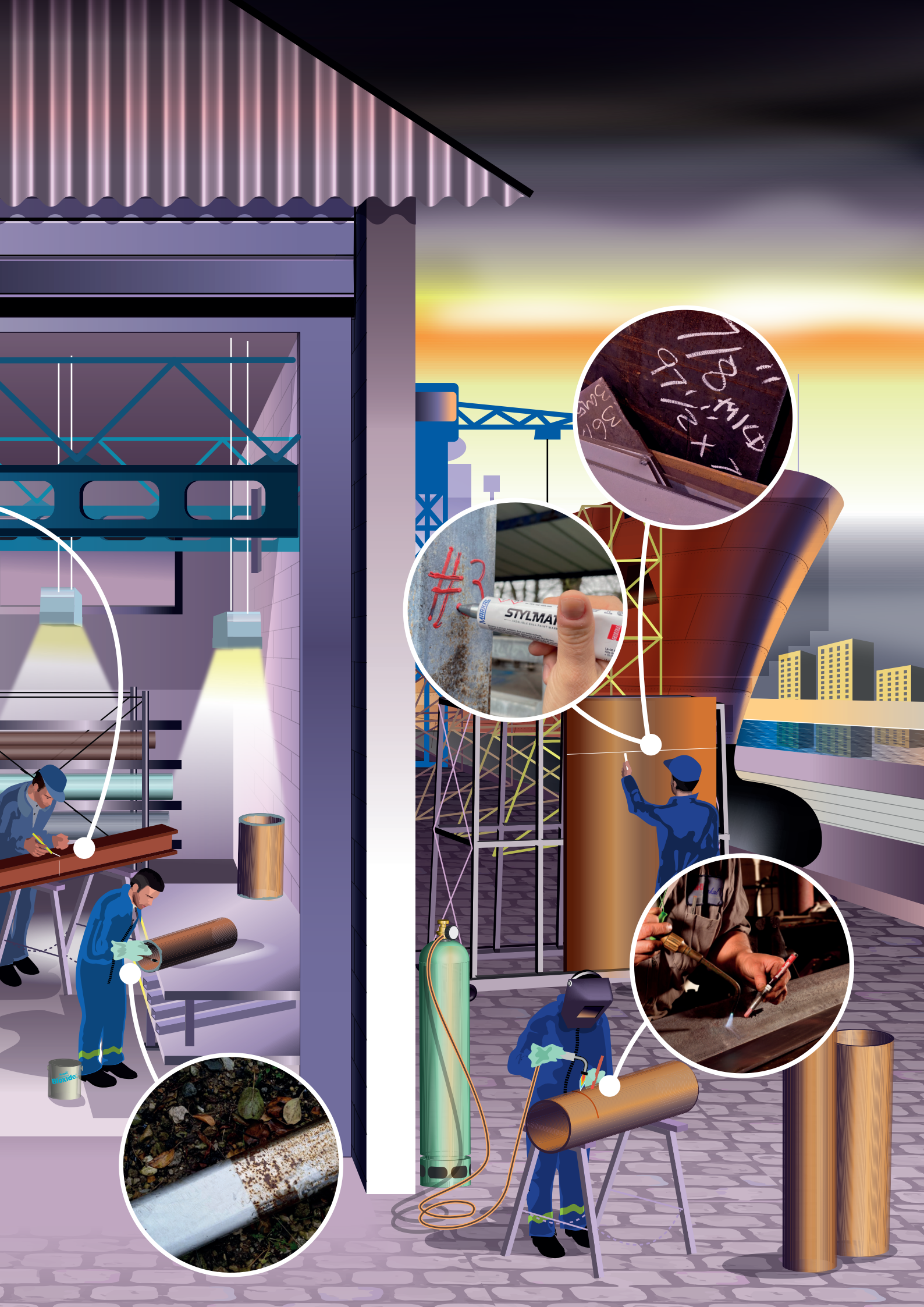
### Old Names:

- Silver-Streak® and Red-Riter® Welders Pencils
- Silver-Streak® Round Soapstone
- FM.400

### New Names:

- **Markal**® WELD-RITER® Welding Pencils (Silver-Streak® or Red-Riter®)
- **Markal**® WELD-RITER® Welding Marker (Silver-Streak®)
- **Markal**® WELD-RITER® Soapstone
- **Markal**® WELD-RITER® FM.400





Rustide

# WELD-RITER® WELDING MARKERS

The first step to creating a durable, long-lasting weld is using the best tools available to meet the level of precision required during the process. Markal® offers the best in economical and specialized welding markers to produce longer-lasting and more visible marks guaranteed to not contaminate or cause inclusions, pitting, or porosity in the weld. The temporary range of welding markers includes Welders Pencils, soapstone, and other high-visibility layout markers.



## MARKAL® WELD-RITER® WELDING PENCILS — SILVER-STREAK® OR RED-RITER®



### WELDERS PENCILS FOR METAL LAYOUT AND FABRICATION

Markal® WELD-RITER® Silver-Streak® and Red-Riter® Welding Pencils make torch-resistant marks that will not burn or rub off like soapstone. Ideal for fine line marking during metal layout and fabrication, these highly visible marks illuminate when cutting or welding.



PART NR. — BOX		PART NR. — RETAIL PACK	
	96101 Silver-Streak®		22220 3x Silver-Streak®
	96100 Red-Riter®		22219 2x Silver-Streak® + 1x Red-Riter®

PART NR. — READY-TO-SELL		PART NR. — READY-TO-SELL		PART NR. — READY-TO-SELL	
	22592 Welders Pencils Mix x288 (12 boxes Silver-Streak® + 12 boxes Red-Riter®)		22593 Welders Pencils Silver-Streak® x288 (24 boxes)		22594 WELD-RITER® Mix x168 (12 blisters crayons 96006 + 12 blisters refills 96007 + 72 Welders Pencils SILVER-STREAK® (6 boxes) + 72 Welders Pencils RED-RITER® (6 boxes))



## MARKAL® WELD-RITER® WELDING MARKER — SILVER-STREAK®

### FOR WELDING, METAL LAYOUT AND FABRICATION

Markal® WELD-RITER® Silver-Streak® Welding Markers pencils are ideal when highly-visible, torch-resistant marks are required during metal layout and fabrication work. The unique reflective lead is more visible through a welder's filter plate and will not rub, burn or blow off like soapstone. Marks on all metal surfaces including oily or wet.



PART NR. — BOX		PART NR. — RETAIL PACK	
	96006 1 Silver-Streak® Round holder (incl. 1 Silver-Streak® refill)		22221 1 Silver-Streak® Round holder + 2 packs of 6 refills Silver-Streak®
	96007 1 pack of 6 Silver-Streak® refills		22222 2 packs of 6 refills Silver-Streak®

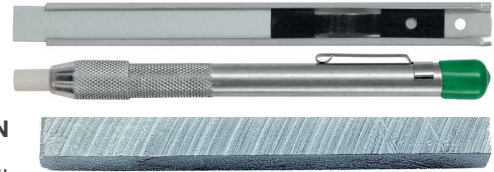
PART NR. — READY-TO-SELL		PART NR. — READY-TO-SELL		PART NR. — READY-TO-SELL	
	22590 Silver-Streak® Round Mix x36 (18 blisters crayons 96006 + 18 blisters refills 96007)		22591 Silver-Streak® Round Refills x36 (36 blisters refills 96007)		22594 WELD-RITER® Mix x168 (12 blisters crayons 96006 + 12 blisters refills 96007 + 72 Welders Pencils SILVER-STREAK® (6 boxes) + 72 Welders Pencils RED-RITER® (6 boxes))



Part nr. 22594









## MARKAL® WELD-RITER® SOAPSTONE



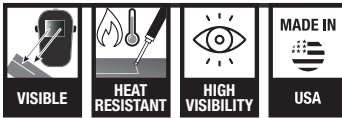
### TEMPORARY MARKERS FOR WELDING AND METAL FABRICATION

Markal® WELD-RITER® Soapstone is the all-natural economical, versatile solution for temporary marking during welding operations. Marks are easily removed and will not contaminate welds.

PART NR. — SOAPSTONE		PART NR. — HOLDER		PART NR. — FM.400	
 BOX	80129 Flat (127 x 13 x 5mm)	 BOX	80140 Holder for the flat soapstone	 BOX	44030100 FM.400 soapstone (100 x 10 x 10mm)
 432	80130 Round (127 x Ø 6mm)	 12	80141 Holder for the round soapstone	 1000	

## TRADES-MARKER® + DRY

DEEP HOLE MARKER









## TRADES-MARKER® + DRY — SILVER-STREAK® OR RED-RITER® REFILLS


















### WELDING REFILLS FOR TRADES-MARKER+ DRY

Markal® Silver-Streak® and Red-Riter® welding refills for Trades-Marker® Dry make torch-resistant marks that will not burn or rub off like soapstone. Ideal for fine line marking during metal layout and fabrication, these highly visible marks illuminate when cutting or welding.

- Fine tip extends to 45mm, ideal for hard-to-reach places (allows for deep markings, in fixation holes)
- Cap, body and clip in metal to ensure durability and strength for professional use
- Automatic lead ejection: a single press on the button pushes the lead out by 2mm
- Practical as it is always at hand, the sharpener is incorporated into the push button, allowing for extremely precise markings
- Sturdy clip for hooking onto shirts or pants.



PART NR. — BOX		PART NR. — REFILLS IN BULK	
 BOX	96260 1 Trades-Marker+ Dry (including 1 graphite refill)	 BOX	96267 1 pack of 6 refills  Silver-Streak®
 100		 50	96268 1 pack of 6 refills  Red-Riter®

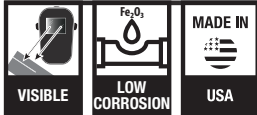
PART NR. — RETAIL PACK		PART NR. — DISPLAY	
 RETAIL PACK	96281 1 Trades-Marker+ Dry (including 1 graphite refill) + 1 pack of 6 refills  Silver-Streak®	 DISPLAY	96269 20 x 96260 + 10 x (1 pack of 6 refills  Silver-Streak®) + 10 x (1 pack of 6 refills  Red-Riter®)
 12	22227 1 pack of 6 refills  Silver-Streak®	 1	96280 20 x 96260 + 3 x  (1 pack of 6 graphite refills) + 3 x  (1 pack of 6 mix refills) + 2 x  (1 pack of 6 red refills) + 2 x  (1 pack of 6 yellow refills) + 5 x (1 pack of 6 refills  Silver-Streak®) + 5 x (1 pack of 6 refills  Red-Riter®)
 12	22228 1 pack of 6 refills  Red-Riter®	 1	



# MARKAL® TEMPERATURE INDICATORS

## FAST ACCURATE RESULTS

For the best in weld integrity, heating base materials to highly specific temperatures is required and our line of THERMOMELT® temperature indicators offers the best combination of speed, ease of use, and accuracy. The simple-to-use stick melts quickly when applied to a surface at the stated temperature on the package to guarantee fast and accurate results every time without calibration.



## THERMOMELT® HEAT-STIK®



### ACCURATE SURFACE TEMPERATURE INDICATING STICK

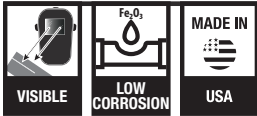
THERMOMELT® HEAT-STIK® markers are a quick, low-cost method to accurately measure surface temperatures of various metals and equipment. Available in 28 Fahrenheit or Celsius temperatures, the stick-in-holder design provides convenience and durability for long-lasting use in the workshop or in the field. Please note that the color of the Thermomelts are not a part of their function, since the temperature signal consists of melting. Indicator color is subject to change without notice.

- When the stick melts, the precise temperature is reached
- Long-lasting stick is 33% bigger than competition
- Accurate to within +/- 1% of Fahrenheit and +/- 3% Celsius rated temperatures; no need for sensor calibration
- Ideal for: pre-heating, post-weld heat treating, interpass temperature monitoring, stress-relieving and annealing
- Protective holder, shirt-clip and adjustment ring prevents breakage and improves handling
- For low corrosion (low chlorides/halogens) applications, see THERMOMELT® - Low Corrosion Temperatures
- Meets welding codes: AWS D1.1, ANSI/ASME Code B32.1 & B31.3, ASME Code Sec. I, III, and VII, NIST Traceable

	PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT	PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT
	86400	38 °C	100 °F	86516	200 °C	-
	86402	50 °C	-	86733*	204 °C	400 °F
	86436*	52 °C	125 °F	86751*	218 °C	425 °F
	86463*	66 °C	150 °F	86769*	232 °C	450 °F
	86481*	79 °C	175 °F	86787*	246 °C	475 °F
	86517*	93 °C	200 °F	86563	250 °C	-
	86401	100 °C	-	86805*	260 °C	500 °F
	86526	101 °C	213 °F	86823*	288 °C	550 °F
	86544*	107 °C	225 °F	86841	316 °C	600 °F
	86562*	121 °C	250 °F	86859*	343 °C	650 °F
	86589*	135 °C	275 °F	86868	371 °C	700 °F
	86625*	149 °C	300 °F	86734	400 °C	-
	84664	150 °C	-			
	86661*	163 °C	325 °F			
	86697*	177 °C	350 °F			
	86715*	191 °C	375 °F			

\* Indicates that this marker color is low in chlorides, halogens, and sulfurs for low corrosion marking requirements.





## CERTIFIED THERMOMELT® HEAT-STIK®



### ACCURATE SURFACE TEMPERATURE INDICATING STICK

Pre-certified to meet nuclear and military low-corrosion specifications for stainless-steel fabrication and other super alloys, the Markal® Certified THERMOMELT® HEAT-STIK® is a quick method to accurately measure metal surface temperatures and equipment. The 20 available temperatures are lot traceable for jobsite documentation. Please note that the color of the Thermomelts are not a part of their function, since the temperature signal consists of melting. Indicator color is subject to change without notice.

- **Certified to meet the following U.S.A. and international specifications:**
  - EDF PMUC
  - MIL-STD-2041D
  - U.S. DOE RDT F-7-3T (expired)
  - U.S. Navy C3070
- **Engineered to meet:**
  - 200 ppm total halogens
  - 250 ppm each low melting point metals
  - 300 ppm total low melting point metals
  - 200 ppm sulfur
- **Individual lot analysis and certification available at [www.markal.com/certified](http://www.markal.com/certified) for quick, accurate reference**
- **Protective holder, shirt-clip and adjustment ring prevents breakage and improves handling**

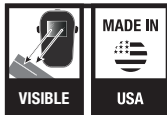
	PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT	PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT
	89100*	38 °C	100 °F	89350*	177 °C	350 °F
	89125*	52 °C	125 °F	89375*	191 °C	375 °F
	89150*	66 °C	150 °F	89400*	204 °C	400 °F
	89175*	79 °C	175 °F	89425*	218 °C	425 °F
	89200*	93 °C	200 °F	89450*	232 °C	450 °F
	89225*	107 °C	225 °F	89475*	246 °C	475 °F
	89250*	121 °C	250 °F	89500*	260 °C	500 °F
	89275*	135 °C	275 °F	89525*	274 °C	525 °F
	89300*	149 °C	300 °F	89550*	288 °C	550 °F
	89325*	163 °C	325 °F	89650*	343 °C	650 °F



# TEMPIL® TEMPERATURE INDICATORS

## LEADER IN ADVANCED TEMPERATURE INDICATION-TECHNOLOGIES

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. 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. Costefficient, 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®



### FAST, ACCURATE SURFACE TEMPERATURE INDICATOR

Providing accuracy, confidence and compliance for over 80 years, Tempilstik® is the original temperature-indicating stick with the best combination of precision and convenience for surface temperature measurement. Specially engineered for accurate temperature indication in pre-heating, interpass and post-weld heat treating applications, Tempilstik® is the industry's leading choice for use in the most critical jobs. Please note that the color of the Tempilstik® are not a part of their function, since the temperature signal consists of melting. Indicator color is subject to change without notice.

- 116 temperatures available from 100°F(38°C) to 2000°F(1093°C)
- Stick instantly melts at designated temperature for easy and immediate visual inspection
- Calibration-free with 100% reliability
- Accurate to within +/- 1% of Fahrenheit and +/- 3% Celsius rated
- Comply with preheat temperature requirements of AWS D1.1, ASME Code Sec. I, III and VIII, ANSI/ASME Code B31.1 and B31.3.
- Imprinted part number, temperature and lot code across entire stick for improved traceability
- Made in U.S.A.

PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT	PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT
28000	38 °C	100 °F	28029	163 °C	325 °F
28002	43 °C	109 °F	28030	173 °C	344 °F
28004	48 °C	119 °F	28031	177 °C	350 °F
28005	52 °C	125 °F	28032	184 °C	363 °F
28006	66 °C	150 °F	28033	191 °C	375 °F
28007	73 °C	163 °F	28034	198 °C	388 °F
28008	76 °C	169 °F	28035	204 °C	400 °F
28009	79 °C	175 °F	28036	212 °C	413 °F
28010	83 °C	182 °F	28037	218 °C	425 °F
28011	87 °C	188 °F	28039	232 °C	450 °F
28012	93 °C	200 °F	28040	239 °C	463 °F
28013	97 °C	206 °F	28041	246 °C	475 °F
28014	101 °C	213 °F	28042	253 °C	488 °F
28015	104 °C	219 °F	28043	260 °C	500 °F
28016	107 °C	225 °F	28044	274 °C	525 °F
28019	121 °C	250 °F	28045	288 °C	550 °F
28020	124 °C	256 °F	28046	302 °C	575 °F
28021	128 °C	263 °F	28047	316 °C	600 °F
28022	132 °C	269 °F	28048	343 °C	650 °F
28023	135 °C	275 °F	28049	371 °C	700 °F
28024	142 °C	288 °F	28050	399 °C	750 °F
28025	146 °C	294 °F	28051	427 °C	800 °F
28026	149 °C	300 °F	28052	454 °C	850 °F
28027	152 °C	306 °F	28053	482 °C	900 °F
28028	156 °C	313 °F	28055	510 °C	950 °F



# Tempil®

PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT	PART NR.	TEMP. — CELSIUS	TEMP. — FAHRENHEIT
28056	538 °C	1000 °F	28315	125 °C	257 °F
28057	550 °C	1022 °F	28316	130 °C	266 °F
28058	566 °C	1050 °F	28317	140 °C	284 °F
28059	593 °C	1100 °F	28318	150 °C	302 °F
28060	621 °C	1150 °F	28319	155 °C	311 °F
28061	649 °C	1200 °F	28320	160 °C	320 °F
28062	677 °C	1250 °F	28321	165 °C	329 °F
28063	704 °C	1300 °F	28322	170 °C	338 °F
28064	760 °C	1400 °F	28323	175 °C	347 °F
28065	788 °C	1450 °F	28324	180 °C	356 °F
28066	816 °C	1500 °F	28325	190 °C	374 °F
28067	843 °C	1550 °F	28326	195 °C	383 °F
28068	871 °C	1600 °F	28327	200 °C	392 °F
28069	899 °C	1650 °F	28328	210 °C	410 °F
28070	927 °C	1700 °F	28329	215 °C	419 °F
28072	982 °C	1800 °F	28330	220 °C	428 °F
28073	1038 °C	1900 °F	28331	225 °C	437 °F
28074	1066 °C	1950 °F	28332	230 °C	446 °F
28075	1093 °C	2000 °F	28333	235 °C	455 °F
28300	40 °C	104 °F	28336	250 °C	482 °F
28301	50 °C	122 °F	28338	270 °C	518 °F
28302	55 °C	131 °F	28339	280 °C	536 °F
28303	60 °C	140 °F	28340	290 °C	554 °F
28304	70 °C	158 °F	28341	300 °C	572 °F
28305	75 °C	167 °F	28342	320 °C	608 °F
28306	80 °C	176 °F	28343	350 °C	662 °F
28307	85 °C	185 °F	28345	400 °C	752 °F
28308	90 °C	194 °F	28347	460 °C	860 °F
28309	95 °C	203 °F	28349	500 °C	932 °F
28310	100 °C	212 °F	28350	560 °C	1040 °F
28312	110 °C	230 °F	28351	600 °C	1112 °F
28313	115 °C	239 °F	28352	625 °C	1157 °F
28314	120 °C	248 °F	28355	700 °C	1292 °F






## TEMPSTIK® TEST KIT

### TEMPERATURE INDICATOR AND REFERENCE KIT

Tailor-made for welding inspectors, instructors and supervisors, Tempstik® Test Kit is an essential, one-stop tool that provides you with 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.



- 20 Tempstik® Test Kit indicators systematically spaced between 125°F (52°C) -800°F (427°C)
- Stick melts at designated temperature for easy and immediate visual inspection with +/-1% accuracy.
- Calibration free with 100% reliability
- Made in U.S.A.

PART NR.	TEMP. — °C / °F	TEMP. — °C / °F	TEMP. — °C / °F
 28600, includes :	52 °C / 125 °F	135 °C / 275 °F	232 °C / 450 °F
	66 °C / 150 °F	149 °C / 300 °F	246 °C / 475 °F
	79 °C / 175 °F	163 °C / 325 °F	260 °C / 500 °F
	93 °C / 200 °F	177 °C / 350 °F	288 °C / 550 °F
	107 °C / 225 °F	191 °C / 375 °F	316 °C / 600 °F
	121 °C / 250 °F	204 °C / 400 °F	371 °C / 700 °F
		218 °C / 425 °F	427 °C / 800 °F

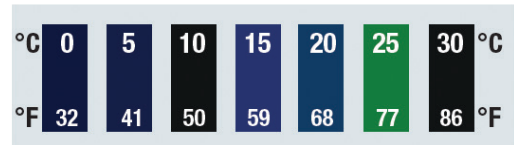
## TEMPIL® TEMPERATURE SENSITIVE LABELS

### TEMPERATURE MONITORING

Temperature indicating labels are an economical temperature indication solution that can be easily applied to almost any surface for later monitoring, making it ideal for preventative maintenance, logistics, quality control, manufacturing, and many other applications.




## TEMPILABEL® REVERSIBLE (LIQUID CRYSTAL®)



### REVERSIBLE TEMPERATURE INDICATING LABELS

Providing users with a high level of flexibility, Tempilabel® reversible labels indicates accurate readings as the temperature fluctuates. Each label is equipped with seven specific temperature levels for easy identification and monitoring. Available in pack of 10 labels.

- Excellent accuracy of +/- 2% of the Fahrenheit rating
- LCD technology for real-time, accurate readings as temperature fluctuates
- Temperature range from 30°C (86°F) to 90°C (194°F)
- Calibration-free
- Oil, water and steam resistant.

PART NR.	TEMP. — °C / °F
 26901	°C 30 35 40 45 50 55 60 °C
	°F 86 95 104 113 122 131 140 °F
26903	°C 60 65 70 75 80 85 90 °C
	°F 140 149 158 167 176 185 194 °F

## TEMPILABEL® SERIES 4 AND SERIES 21

Monitor temperatures attained during:

- Shipping and storage: product integrity may depend on maintaining shipping and storage temperatures
- Proces: manufacturing and other processes may depend on reaching — or staying below — certain temperatures
- Product use: product warranty may depend on maintaining certain temperatures
- Laboratory testing: testing procedures may depend on reaching — or staying below— certain temperatures.

- **Excellent accuracy to +/- 2% of the Fahrenheit rating**
- **Temperature range from 38°C (100°F) to 260°C (500°F)**
- **Permanent record for inspection and quality control**
- **Calibration-free**
- **Oil, water and steam resistant**
- **SERIES 4 :**
  - **Four temperature readings per labels for max/min applications**
  - **Label Size 23mm x 45mm**




## TEMPILABEL® SERIES 4

### FOUR-LEVEL, IRREVERSIBLE TEMPERATURE INDICATING LABEL

Tempilabel® Series 4 labels are designed to deliver immediate, accurate and reliable readings for up to four temperatures in a variety of applications or environments.

Tempilabels can be quickly affixed to almost any surface and used to quickly indicate when a precise temperature is reached. Available in pack of 10 labels.



PART NR.		TEMP. — °C / °F		PART NR.		TEMP. — °C / °F	
	26700	°C	38 43 49 54 °C	26705	°C	166 171 177 182 °C	
		°F	100 110 120 130 °F		°F	330 340 350 360 °F	
	26701	°C	54 60 66 71 °C	26706	°C	52 66 79 93 °C	
		°F	130 140 150 160 °F		°F	125 150 175 200 °F	
	26702	°C	77 82 88 93 °C	26707	°C	38 66 93 121 °C	
		°F	170 180 190 200 °F		°F	100 150 200 250 °F	
	26703	°C	88 93 99 104 °C	26708	°C	93 121 149 177 °C	
		°F	190 200 210 220 °F		°F	200 250 300 350 °F	


## TEMPILABEL® SERIES 21

### SINGLE-LEVEL, IRREVERSIBLE TEMPERATURE INDICATING LABEL

Tempilabel® Series 21 labels are uniquely designed to deliver immediate, accurate and reliable readings in a variety of applications or environments.

Tempilabels can be quickly affixed to almost any surface and used to quickly indicate when a precise temperature is reached. Available in pack of 210 labels, or in rolls of 1000 labels.



PART NR.		TEMP. — °C / °F		PART NR.		TEMP. — °C / °F	
	( 210 pcs. roll / 1000 pcs. roll )			26262 / 26286		104°C / 220°F	
	26250 / 26275		38°C / 100°F	26263 / 26287		110°C / 230°F	
	26251 / 26276		43°C / 110°F	26264 / -		116°C / 240°F	
	26252 / 26277		49°C / 120°F	26265 / 26288		121°C / 250°F	
	26254 / 26278		54°C / 130°F	26266 / 26289		127°C / 260°F	
	26255 / 26279		60°C / 140°F	26267 / 26290		132°C / 270°F	
	26256 / 26280		71°C / 160°F	26268 / 26291		138°C / 280°F	
	26258 / 26282		82°C / 180°F	26269 / 26292		143°C / 290°F	
	26259 / 26283		88°C / 190°F	26270 / 26293		149°C / 300°F	
	26260 / 26284		93°C / 200°F	26271 / -		204°C / 400°F	
	26261 / 26285		99°C / 210°F	26272 / -		260°C / 500°F	



# TEMPILAQ® ADVANCED

## FAST-INDICATING SURFACE TEMPERATURE COATING

Tempilaq® Advanced is an accurate temperature indicating liquid that verifies the achievement of a specific temperature. It leaves a visible mark that dries fast prior to heating then liquefies at the stated temperature. The easy to mix formula can be applied on both horizontal and vertical surfaces. It is an efficient method that does not require calibration and it is optimal for heat-treating, preventive maintenance and any other temperature sensitive application.

- Melts at designated temperature leaving a noticeable different mark
- Dries fast on horizontal and vertical surfaces
- Enhanced formula to reduce settling
- Excellent accuracy within +/- 1% of fahrenheit and +/- 3% of celsius
- Wide temperature range from 300°F(149°C) to 1500°F(816°C)
- N-Propyl Bromide free formula
- Tempilaq Advanced thinner is available to dilute or replace evaporated solventy
- Made in U.S.A.



PART NR.	TEMP. — °C / °F	PART NR.	TEMP. — °C / °F
<b>Tempilaq® 2 Ounce (59 ml)</b>		<b>Tempilaq® 2 Ounce (59 ml) — continued</b>	
24405	149 °C / 300 °F	24427	510 °C / 950 °F
24407	163 °C / 325 °F	24428	538 °C / 1000 °F
24408	177 °C / 350 °F	24430	566 °C / 1050 °F
24410	191 °C / 375 °F	24431	593 °C / 1100 °F
24411 *	204 °C / 400 °F	24432	621 °C / 1150 °F
24413	232 °C / 450 °F	24433	649 °C / 1200 °F
24414	246 °C / 475 °F	24435	704 °C / 1300 °F
24416	260 °C / 500 °F	24438	816 °C / 1500 °F
24421	343 °C / 650 °F	<b>Tempilaq® Thinner (59 ml)</b>	
24422	371 °C / 700 °F	24597	
24423	399 °C / 750 °F	<b>Tempilaq® Quart (946 ml)</b>	
24424	427 °C / 800 °F	24565	593 °C / 1100 °F
24425	454 °C / 850 °F	24566	621 °C / 1150 °F
24426	482 °C / 900 °F	24567	649 °C / 1200 °F



\* : The IMDS (International Material Data System) is the automobile industry's material data system. In the IMDS, all materials present in finished automobile manufacturing are collected, maintained, analysed and archived. IMDS facilitates meeting the obligations placed on automobile manufacturers, and thus on their suppliers, by national and international standards, laws and regulations.



# TEMPIL® HIGH TEMPERATURE COATING

## WELDABLE PRIMER AND HEAT-ABSORBING COATING

TEMPIL® has developed specific products where heat causes troubles, from protecting NASA's Space Shuttle Orbiter to solar panels. TEMPIL® has also developed special weldable Primer to save time in the welding processes.

## BLOXIDE®

### AN ALUMINUM-BASED WELDABLE PRIMER

Bloxide® is a versatile weldable primer with a unique aluminum-based formula that eliminates cleaning or removal before welding, thus saving time and labor costs. Enhanced by corrosion preventative features, Bloxide® can be applied to a wide range of metals for extended periods of storage, assisting in producing X-Ray quality welds.

- **Enhanced corrosion resistance for extended periods of storage**
- **Aluminium-base formula allows for welding without removal, reducing downtime and rework contamination**
- **High temperature resistant to 800°F (427°C)**
- **Can be sprayed, brushed or parts can be dipped into it**



## ANTI-HEAT®

### HEAT-ABSORBING COMPOUND



Anti-Heat® is specially formulated to eliminate heat damage and discoloration on materials exposed to high temperatures. Engineered to absorb and dissipate the heat generated by welding, brazing, or soldering from traveling through the metal surface, Anti-Heat® efficiently stops heat related damages such as buckling, cracking, warping or other metal distortions from occurring.

- **Absorbs and dissipates heat to eliminate damage and discoloration**
- **Prevents heat migration through metal surfaces**
- **Non-toxic & Non-hazardous**
- **Asbestos-free and odorless**
- **Adheres to horizontal, vertical and overhead surface**




## PYROMARK®

### HIGH-TEMPERATURE RESISTANT COATING



Pyromark® is a specially formulated coating for metal surfaces intended for high heat exposure. The silicone based coating provides long-lasting protection against oxidation and corrosion. Ideal for solar energy or any application that requires efficient heat transfer, the flat black formula is engineered with solar absorptivity of 0.95, which makes Pyromark® an almost perfect black box absorber.

- **Silicone based coating for long-lasting protection against oxidation and corrosion**
- **Pyromark® 1200 withstands 1000°F(538°C)**
- **Pyromark® 2500 withstands 2000°F(1093°C)**
- **Improves heat transfer in infra-red heating applications due to high emissivity properties.**
- **Solar absorptivity of 0.95 is an ideal black box absorber.**
- **Only use Pyromark® Thinner to dilute or replace evaporated solvent**

	PART NR.	PART NR.	PART NR.	PART NR.
	24100 Bloxide 3,79 L	24104 Bloxide 355ml (spray)	24003 Anti-Heat (355ml)	25002 Pyromark® 1200 Flat Black 3,79L

As manufacturer, we cannot control the conditions under which our products are being used or the many factors that have an effect on the use and application of our products. We disclaim liability for any damages caused by using our products. Please always perform compatibility tests to your application/material demands.

## **Introducing Markal® Plus Series !**

Premium performance items are joining our new "Plus (+) Series" product line. These highly engineered tools are designed to perform in specific applications and environments.



# **MARKAL®**

**THE MARK OF WORK™**

**LACO Industries, Llc.**

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