

**ENNIS-FLINT<sup>®</sup> by PPG**  
Beyond the Lines



# THERMALINE<sup>®</sup>

Preformed thermoplastic



**ENNIS-FLINT**® by **PPG**  
Beyond the Lines



**THERMALINE**®  
Preformed thermoplastic



## About us

PPG Traffic Solutions (PPG TS) was established following PPG's acquisition of Ennis-Flint, Inc. in December 2020. Since then, we have been committed to protecting and beautifying the world.

PPG TS EMEA (Europe, Middle East, Africa) is equipped to serve and fulfill our customers' traffic safety and pavement marking requirements with our full range of quality products, vast geographic reach, and unmatched customer support.

Our areas of expertise include, but are not limited to:

- Road Markings
- Airfield Markings
- Micro-mobility
- Decorative Markings
- Off-Highways Markings
- High Friction Surfacing
- Road Studs
- Bridge Expansion Joints
- Joint and Crack Sealants

# About

## THERMALINE®

Preformed thermoplastic

Thermaline® is our preformed thermoplastic marking range which is distinguished by its high performance, durability, and colour stability. Formulated with high quality resins, binders, aggregates and pigments, Thermaline® markings are easy to apply by propane torch and can be trafficked soon after installation.

The Thermaline® preformed thermoplastic range has been designed to adapt to a wide range of areas, from regulatory line marking and symbols for roads and highways, to decorative applications. For all purposes, we provide a full range of letters, numbers, symbols, roadline tapes as well as customised designs for business logos and playgrounds. We also offer decorative pavement marking for urban areas.

Thermaline® markings are manufactured in the UK and supplied across Europe and other regions in the EMEA.

Thermaline® preformed thermoplastic is made for use on public streets, highways, local roads and cycling lanes, as well as parking lots and roadways at shopping centres, school campuses, business parks and more.

### KEY BENEFITS

- Range has been designed to meet the needs of application areas
- Can be supplied in sheets, strips, and rolls, ready to use from the box
- High durability with a long service life
- Engineered to last 6-8 times longer than paint
- Easy to apply without the need for specialist machinery
- Varied colour offering with pigments resistant to decolouration
- Excellent skid resistant properties
- Can be applied on asphalt and concrete with adequate primer



## Our mission

We work hard to ensure our products are made to the highest quality, which includes ensuring they meet certification standards.

### Commitment to the United Nations Sustainable Development Goals

- Our UK manufacturing site is ISO EN 14001 certified and uses electricity from 100% renewable sources.\*
- Our thermoplastic products contain 98% bio-based resin and use up to 45% recycled materials.
- Our commitment to product performance and durability reduces the frequency of reapplication.

### Certification

- Thermaline® preformed thermoplastic is compliant with BS EN 1436 Road Marking Performance for road users, BS EN 1790 Road Marking Materials – Preformed Road Marking, and BS EN 1871 Road Marking Materials – Physical Properties
- Thermaline® material has also been assessed for durability at road trials to BS EN 1824 and to EN 13197, as well as being CE marked . .
- All of our manufacturing facilities in EMEA hold an ISO EN 9001 certification for Quality Management Systems.

\*UK Power Generation | Electricity Production | EDF (edfenergy.com)



## Product Range

# THERMALINE®

Preformed thermoplastic

### Regulatory

The Thermaline® Regulatory Product Range is comprised of letters, numbers, lines, rolls and pre-cut symbols to meet the specifications of the Traffic Signs Regulations and General Directions (TSRGD). Thermaline® preformed thermoplastic is designed for enhanced night visibility, skid resistance and durability, making it suitable for marking both highly and low-trafficked areas.

Our Thermaline® Car Park Range also offers high-performing and cost-effective solutions, that are available in a wide range of colours and can be customised upon request.

### Decorative

The Thermaline® Decorative marking range is designed to fill schoolyards and playgrounds with creativity and colours. Thermaline® Decorative markings also have excellent slip resistant properties to make playtime safer. The range offers a wide range of standard and bespoke designs in a variety of colours.

As part of our customised offering, we have extensive experience creating bespoke designs, particularly logos for businesses, clubs, associations, and schools. We can provide custom designs in our range of standard colours. Other colours are possible on request.

REGULATORY

# Individual Characters

Letters

A B C D E F G H I J  
K L M N O P Q R S  
T U V W X Y Z

Numbers

0 1 2 3 4 5 6 7 8 9

Special Characters

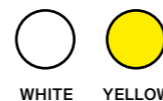
& ( ) / " ' : • - , .

Individual Characters

Dimensions	Units / Pack
300 mm	6
600 mm	3
1000 mm	3
1200 mm	2
1600 mm	2
2400 mm	2
5000 mm	1
6000 mm	1

\* Elongated characters available

Standard colours:



WHITE YELLOW

REGULATORY

# Lines

### Longitudinal Lines



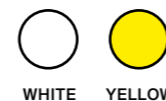
### Longitudinal Lines

Dimensions	Units / Pack
600 x 100 mm	50
600 x 150 mm	25
600 x 200 mm	25
1000 x 50 mm	60
1000 x 75 mm	40
1000 x 100 mm	30
1000 x 150 mm	20
1000 x 200 mm	15
1000 x 300 mm	10

### Rolls

Dimensions	Units / Pack
5000 x 50 mm	12
5000 x 100 mm	6

### Standard colours:



WHITE YELLOW

REGULATORY

# Arrows



Direction



Turn



Straight



Straight + turn



Bi-directional

Deflection



Diagram 1014 - 1

Diagram 1014 - 2

Guidance



Bifurcation

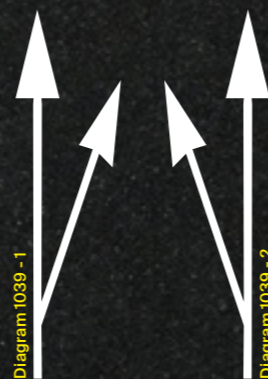


Diagram 1039 - 1

Diagram 1039 - 2

Direction Arrows: Straight

Dimensions	Units / Pack
2000 mm	5
4000 mm	2
6000 mm	1
9000 mm	1

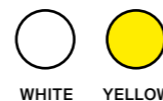
Direction Arrows: Straight+Turn

Dimensions	Units / Pack
4000 mm	2
6000 mm	1
9000 mm	1

Deflection Arrows

Dimensions	Units / Pack
4500 mm	2
6000 mm	1
9000 mm	1

Standard colours:



WHITE YELLOW

Direction Arrows: Turn (Left and Right)

Dimensions	Units / Pack
2000 mm	5
4000 mm	2
6000 mm	1
9000 mm	1

Direction Arrows: Bi-directional

Dimensions	Units / Pack
4000 mm	2
6000 mm	1
9000 mm	1

Guidance Arrows

Dimensions	Units / Pack
3025 mm	2
4450 mm	1

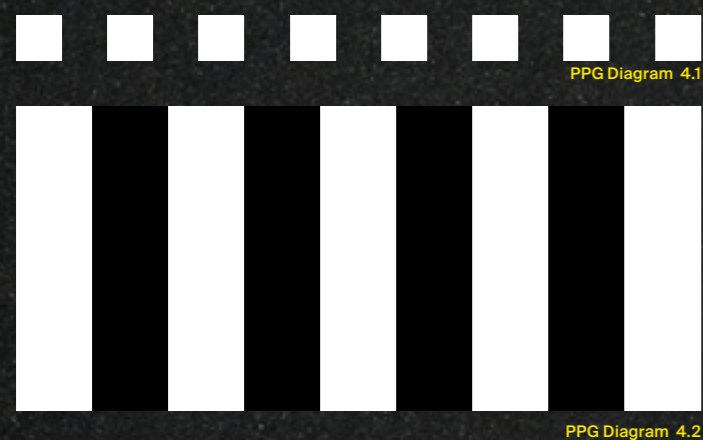
Bifurcation Arrows

Dimensions	Units / Pack
8000 mm	1

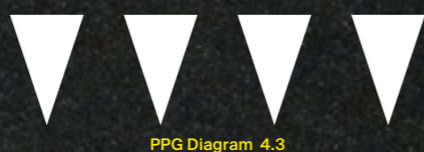
REGULATORY

# Traffic Management

Pedestrian & Adjacent Crossing



Shark Teeth



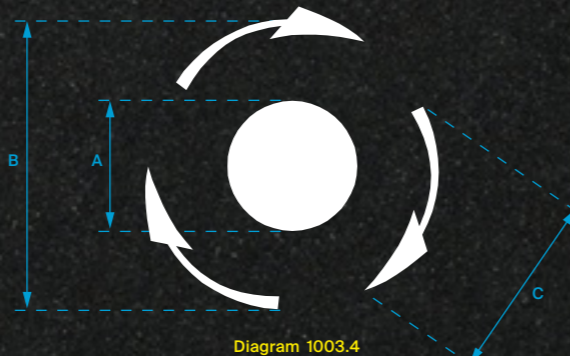
Road Hump



Giveaway Triangle



Mini Roundabouts



Pedestrian & Adjacent Crossings

Dimensions	Units / Pack
300 x 300 mm	30
1000 x 500 mm	1

Road Hump

Dimensions	Units / Pack
1850 x 750 mm	2

Giveaway Triangle

Dimensions	Units / Pack
1875 x 625 mm	3
3750 x 1250 mm	1

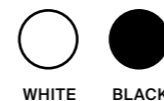
Shark Teeth

Dimensions	Units / Pack
250 x 250 mm	40
600 x 400 mm	25
600 x 500 mm	20
900 x 500 mm	10

Mini Roundabouts

Dimensions	Units / Pack
A: 1000 mm B: 2400 mm C: 3025 mm	1
A: 2500 mm B: 4000 mm C: 4450 mm	1

Standard colours:



REGULATORY

# Warning Signs



### Triangular Symbols



Diagram 545



Diagram 544.2



Diagram 544.1



Diagram 548



Diagram 551



Diagram 512-1



Diagram 556



Diagram 544



Diagram 557.1



Diagram 553.1



Diagram 512-2



Diagram 516



Diagram 521



Diagram 510



Diagram 950



Diagram 524.1



Diagram 523.1



Diagram 602

### Triangular Symbols

Dimensions	Units / Pack
1000 x 1000 mm	1
1500 x 1000 mm	1
2400 x 1200 mm	1
3000 x 2000 mm	1
4000 x 2000 mm	1
6000 x 2000 mm	1

REGULATORY

# Mandatory Signs



Roundel Symbols



Diagram 601.1



Diagram 606-1



Diagram 606-2



Diagram 606-3



Diagram 953.1



Diagram 616



Diagram 609-1



Diagram 609-2



Diagram 955



Diagram 672



Diagram 617



Diagram 953



Diagram 956



Diagram 642



Diagram 670



Diagram 612



Diagram 613



Diagram 951



Diagram 619.2



Diagram 619.1



Diagram 619



Diagram 952



Diagram 625.1



Diagram 622.6



Elongated

Roundel Symbols

Dimensions	Units / Pack
600 mm	1
750 mm	1
1000 mm	1
1500 mm	1
2000 mm	1
3200 x 1600 mm	1

REGULATORY

# Information Signs



Square Symbols



Diagram 963-1



Diagram 963-2



Diagram 963-3



Diagram 963.2 - 1



Diagram 963.2 - 2



Diagram 963.2 - 3



Diagram 958.1

Square Symbols

Dimensions	Units / Pack
900 x 600 mm	1
1000 x 1000 mm	1
1200 x 600 mm	1
1200 x 800 mm	1
1500 x 1500 mm	1
2000 x 1500 mm	1
2700 x 1700 mm	1

REGULATORY

# Symbols without Borders



Symbols without Borders



PPG Diagram 8.1



PPG Diagram 8.2



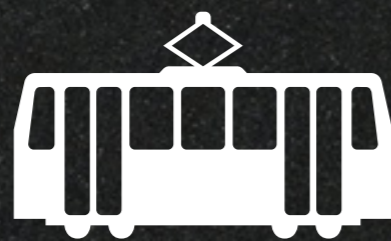
PPG Diagram 8.3



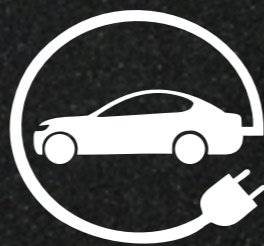
PPG Diagram 8.4



PPG Diagram 8.5



PPG Diagram 8.6



PPG Diagram 8.7

Symbols without Borders

Dimensions	Units / Pack
1000 x 900 mm	1
1300 x 1000 mm	1
1800 x 1000 mm	1
2750 x 1700 mm	1

REGULATORY

# Car Park Symbols



Car Park Symbols



PPG Diagram 9.1



PPG Diagram 9.2



PPG Diagram 9.3



PPG Diagram 9.4



PPG Diagram 9.5



PPG Diagram 9.6



PPG Diagram 9.7



PPG Diagram 9.8

Square Symbols

Dimensions	Units / Pack
600 x 600 mm	1
1000 x 1000 mm	1
1200 x 800 mm	1
1500 x 1500 mm	1
1700 x 2700 mm	1
2000 x 1500 mm	1

Roundel Symbols

Dimensions	Units / Pack
600 mm	1
750 mm	1
1000 mm	1
1500 mm	1
2000 mm	1
3000 mm	1

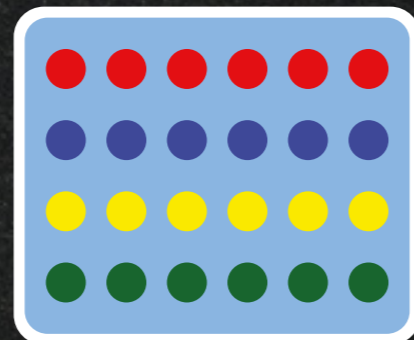
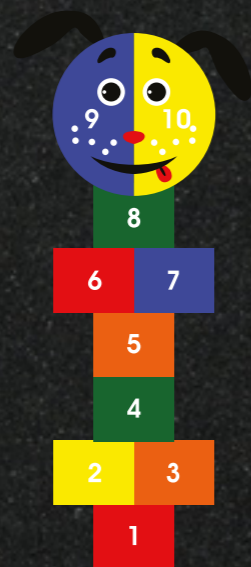
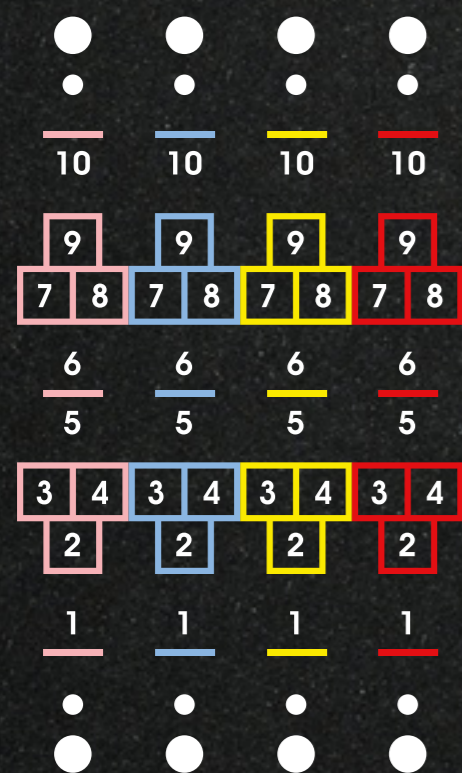
Standard colours:



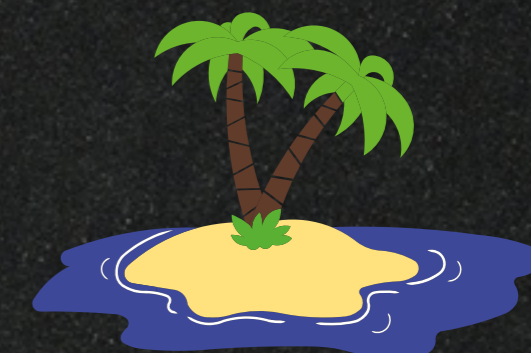
DECORATIVE

# Playground Markings

### Playground Games



### Playground Designs



Decorative Markings offer a wide range of standard and bespoke designs in a variety of colours for playgrounds. Whether your preference is classic games like hopscotch, snake and ladders, or just fill play-time with colour and fun, we can provide you with the best quality design to stimulate creativity and imagination. Please contact us to learn more about our offering range.

#### Standard colours:



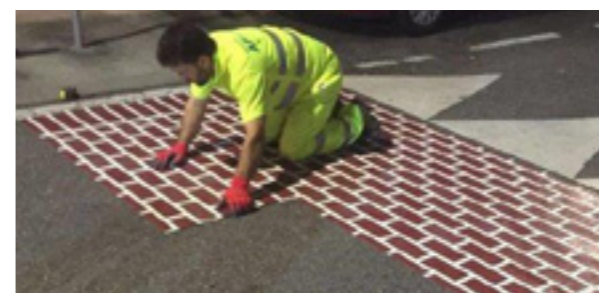
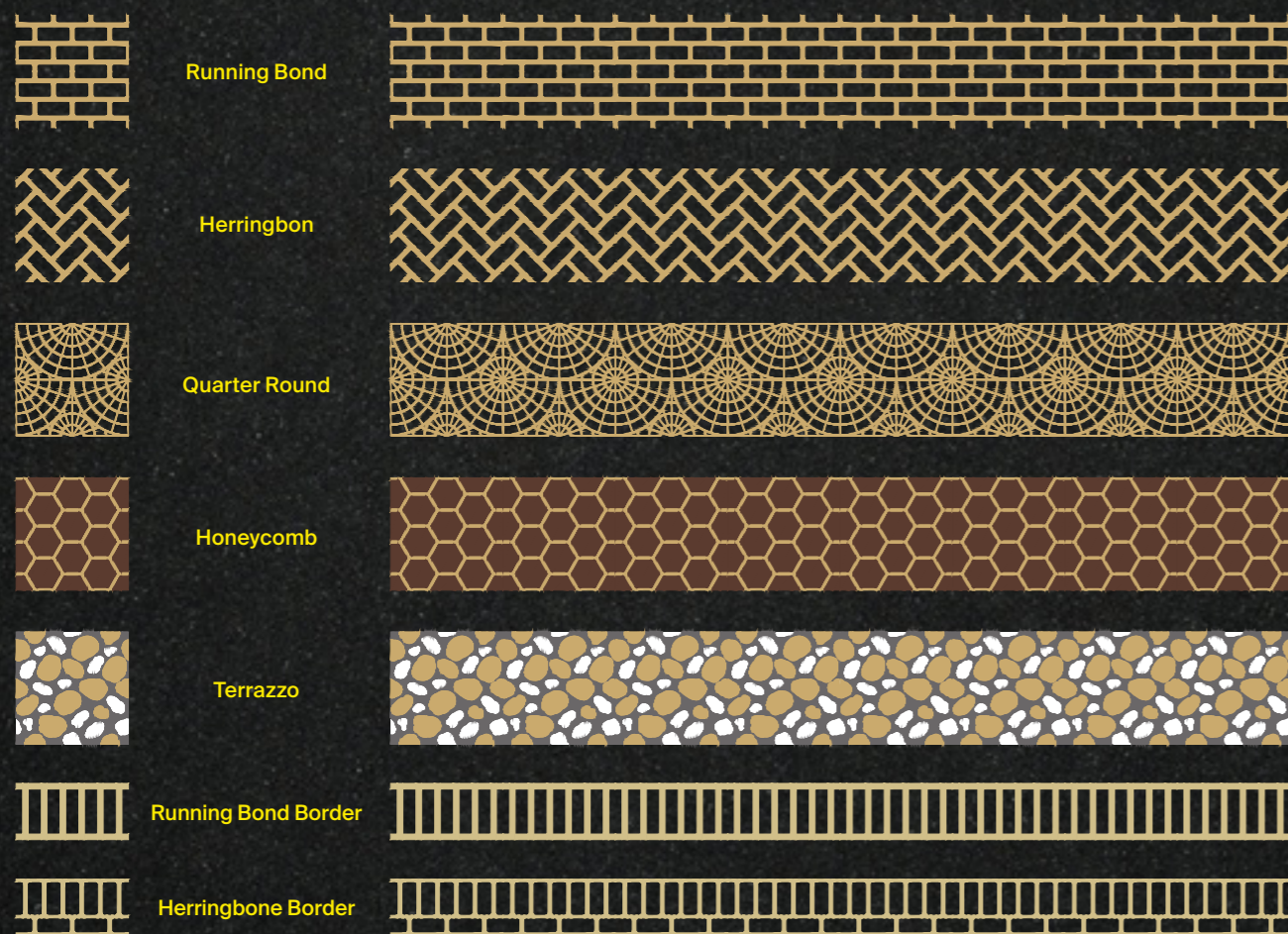
DECORATIVE

# Urban Patterns™

## KEY BENEFITS

- Supplied in interconnected sheets ready to use from the box
- Contains glass bead and glass grains for enhanced night visibility and skid resistance to help ensure road users' safety
- Highly durable, reducing the frequency of replacement
- Variety of designs simulating traditional pavement without the high cost and hassle of application
- Sheets of interconnected material are surface applied without the need for stamping templates or grids. Border segments can be added for design variability.
- Easy application without the need for specialist operator or machinery.

### Urban Patterns



Our **Urban Patterns™** product line is engineered to improve traffic safety at intersections and multi-use paths. Urban Patterns™ preformed thermoplastic can be used for traffic calming purposes in pedestrian crossings and parking areas.

**Urban Patterns™** markings create attractive pathways whilst keeping the aesthetic of traditional and picturesque urban landscapes.

#### Urban Patterns: 2 Colours

Dimensions	Units / Pack
600 x 600 mm	10

#### Urban Patterns: 3 Colours

Dimensions	Units / Pack
600 x 600 mm	10

#### Urban Patterns: Borders

Dimensions	Units / Pack
600 x 300 mm	20

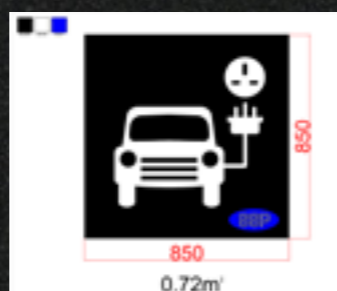
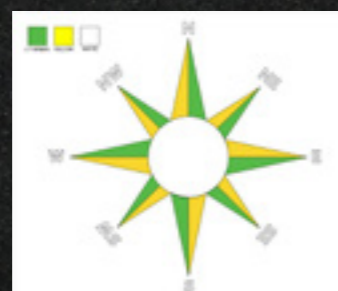
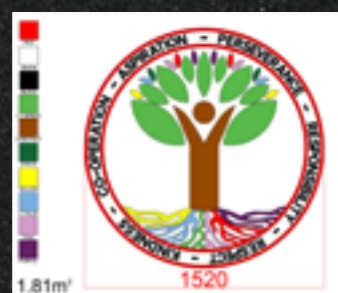
#### Standard colours:



# Customised Designs



## Customised Designs



We have an extensive experience delivering bespoke designs for corporative logos, sport clubs, education centres, small business and car parks, among others. Whenever you want place your logo in a large square or a small yard, we can customise your design to your requirements. Please contact us to learn more about this service.

### Standard colours:



## Contact

[TS-CHO-Info@ppg.com](mailto:TS-CHO-Info@ppg.com)

[www.ppg.com](http://www.ppg.com)  
[ennisflint.com](http://ennisflint.com)

@PPG on social media:

