

# PERMASTORE® TANKS & SILOS

SPECIFICATION GUIDE • SPECIFICATION GUIDE



Niagara



Spring Run



Hannover



Florence



Alberta



Siletz



Kelly's Green

## Glass - Fused - to - Steel

# Glass-Fused-to-Steel:

As Hard as Quartz.  
As Inert as Silica.  
As Strong and  
Flexible as Steel.

Just some of the characteristics of Glass-Fused-to-Steel which is proven to be the most reliable and durable modular tank material.

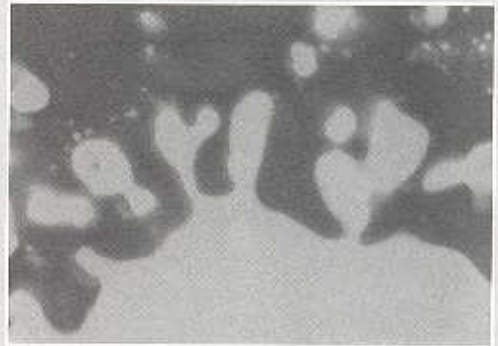
The only tank finish where two materials are fused together to achieve the best of both materials– **the strength and engineering flexibility of steel and the corrosion resistance of glass, inside and out.** Glass-Fused-to-Steel is not a coating, but the fusion of two materials to become as one.

A material able to withstand the rigours of the construction site and provide a lifetime's protection in almost any water and waste water treatment application, including aggressive industrial effluents.

A material with over 35 years of application experience, supported by one of the longest established tank manufacturers in the world.

A truly modular tank system based on a material you can rely on. No wonder Permastore tanks have a reputation for:

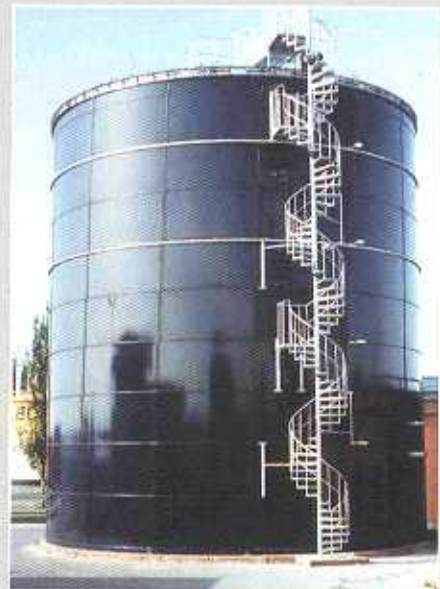
- **Long Life**
- **Low Maintenance**
- **Low Cost**



**Fusion of Glass and Steel. A bond for life.**



**Zero Defect Glass Fusion technology. Our commitment to quality.**



**A lifetime's use.**

# Tank protection for life

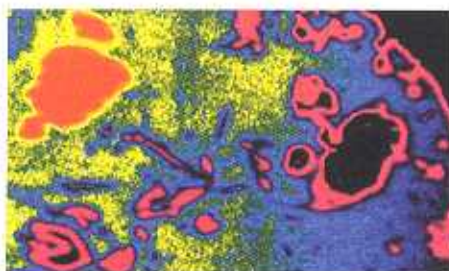
## Zero Defect Glass Fusion technology.

Long lived and durable – a reputation that can only be gained by a dedication to the highest quality and a commitment to ZERO DEFECT glass fusion. A philosophy enshrined in our procedures and our culture at Europe's largest dedicated Glass-Fused-to-Steel tank manufacturing facility.



All of Permastore's Glass-Fused-to-Steel is manufactured under strict ISO 9001 procedures which exceed the requirements of International Enamelling

standards. All Industrial grade finishes are subject to 100% inspection of the contact face and all sheets which fail inspection are rejected. We mean what we say:



Probing the Interface - fundamental materials research at Fusion promotes innovation and ensures quality and economy.

### "ZERO DEFECT GLASS FUSION".

From sheet steel preparation through glassing to packing and shipping, over 16 inspections ensure that quality is continuously delivered.

Many steel finishes may look good, but don't be fooled. With Glass-Fused-to-Steel beauty really isn't only skin deep. Just take a look at the bonding achieved between glass and steel; no paint or epoxy finish can compete with this. Glass-Fused-to-Steel offers a lifetime's protection; you'll never need to recoat or repaint again. That's why detailed specification and quality control is so important. Without it you are buying on looks alone.

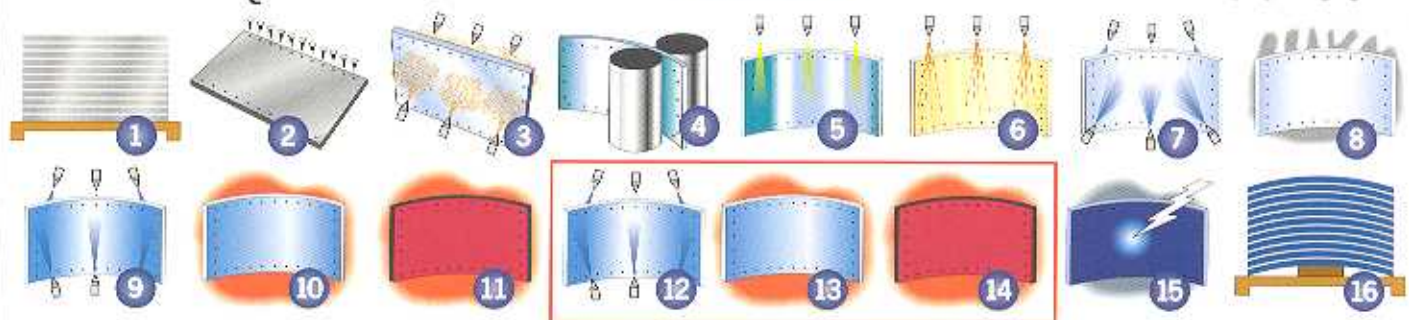
## The FUSION Family of Glasses – Unrivalled Storage Solutions.

With over 35 years' experience and a commitment to fundamental materials research and development, Permastore draws upon a knowledge base unrivalled in our industry. We aim to optimize the cost of tank ownership by offering a choice of glass specification to match the needs of your application, ensuring minimum capital costs and virtually eliminating maintenance costs.

Ecofusion™, Isofusion®, Trifusion® and Trifusion® Plus provide cost effective storage solutions in applications from storage of agricultural manure to very demanding industrial effluents. The panel below explains our process.

For application guidance see the back of this leaflet.

## THE UNIQUE PERMASTORE® FUSION PRODUCTION PROCESS



### FROM RAW STEEL TO FINISHED SHEET IN ONE CONTINUOUS PROCESS

- |  |   |  |
|--|---|--|
| <b>1</b> RAW STEEL   | <b>7</b> APPLICATION OF NICKEL RICH PRE-COAT    | <b>12</b> APPLICATION OF DEDICATED TRIFUSION® LAYER          |
| <b>2</b> PUNCHING AND CUT-OUTS                               | <b>8</b> DRYING OVENS                           | <b>13</b> BISQUE OVEN  |
| <b>3</b> GRIT BLASTING OF STEEL TO SA 2 1/2 STANDARD/SSPC-10 | <b>9</b> APPLICATION OF COBALT RICH GLASS LAYER | <b>14</b> FIRED AGAIN THROUGH FURNACE AT OVER 1500°F         |
| <b>4</b> ROLLING OF PANELS                                   | <b>10</b> BISQUE OVEN                           | <b>15</b> CONTINUITY TESTING - ONE OF 16 QUALITY INSPECTIONS |
| <b>5</b> CHEMICAL CLEANING                                   | <b>11</b> FIRED THROUGH FURNACE AT OVER 1500°F  | <b>16</b> SHEETS PACKED ON INDIVIDUAL PROJECT BASIS          |
| <b>6</b> PRE-PROTECTIVE DOUSING                              |   |  |

## Your application

### Ecofusion™ for

- Livestock effluent tanks
- Moist grain silos
- Light duty industrial solids

Application: pH 4 - 8

Type: 2 coat, 1 fire

Thickness: 180 - 280 Micron

Test regime: BS 7793 part 1

### Isofusion® for

- Potable water
- Municipal sewage treatment
- Fire water
- Forage silos
- Bulk solids

Application: pH 3 - 9

Type: 2 coat, 1 fire

Thickness: 180 - 280 Micron

Test regime: Zero discontinuities at 9V

wet swab salt solution

Exceeds requirements of DEZ 4.12

### Trifusion® for

- Industrial effluents
- Underground slurry pits
- Tank floors

Application: pH 2 - 11

Type: 3 coat, 2 fire

Thickness: 280 - 380 Micron

Test regime: Zero discontinuities at 1000V

Exceeds requirements of DEZ 4.13 and

BS 7793 part 2, 1996

### Trifusion® Plus for

- More aggressive industrial applications

Application: pH 1 - 14

Type: 3 coat, 2 fire

Thickness: 340 - 420 Micron

Test regime: Zero discontinuities at 1500V

Exceeds requirements of DEZ 4.13 and

BS 7793 part 2, 1996

*A detailed specification is available on request. A Zero Defects policy applies to Isofusion®, Trifusion® and Trifusion® Plus for the tests shown. All applications are subject to concentration and temperature considerations. All specifications relate to the internal surfaces only.*

## Your Permastore Solution



## Internal Color

20 - C - 40  
(RAL 5013)  
MUNSELL 5PB 2/4

20 - C - 40  
(RAL 5013)  
MUNSELL 5PB 2/4

14 - C - 40  
(RAL 7009)  
MUNSELL 5G 2/2

14 - C - 40  
(RAL 7009)  
MUNSELL 5G 2/2

## STANDARD EXTERNAL COLORS

A limited range of alternative external colors is available on request. All color identification numbers are the closest visual match only. All panel exteriors are Glass-Fused-to-Steel environmental specification.

12 - B - 29  
(RAL 6006)  
MUNSELL 2.5 GY 2/2

20 - C - 40  
(RAL 5013)  
MUNSELL 5PB 2/4

## EDGE PROTECTION: PERMAFUSION™ FOR TOTAL INTEGRITY

## WORLDWIDE CONTAINMENT SOLUTIONS

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