



UNITRAY SAFE TRAY SYSTEM TECHNICAL STATEMENT

PURPOSE & FUNCTION

The UNITRAY Safe Tray System is a safe tray system and base support designed to collect and drain any accidental overflow from hot water cylinders (HWC) that specifically utilise a controlled heat source.

SYSTEM DETAILS

The UNITRAY Safe Tray System is made from UV resistant, high-density polyethylene Qenos (HDPE 0390), which is lightweight and meets the performance characteristic values of BS EN 1778:2000. The safe tray is warranted for 20 years and is available in three sizes:

- Small (475 mm internal diameter)
- Medium (580 mm internal diameter)
- Large (690 mm internal diameter)

BASE SUPPORT

The UNITRAY safe tray can be supported on up to six 118 mm diameter x 100 mm height elevating posts (to suit the location of the drainage waste and associated plumbing) or placed directly on a stable, flat surface. UNITRAY safe trays may be used either internally or externally depending on the location and placement of the HWC.

TUNDISH ACCESSORIES

The UNITRAY Safe Tray System comes complete with a tundish assembly that fits the tray's 50 mm diameter waste outlet. This assembly consists of easily assembled parts plus adaptors, if required, to suit the relief drain's diameter. The tundish (with regulated air gap) is located at the tray outlet and prevents siphoning of water back into the HWC; thus providing a visible means for checking that relief drains are functioning correctly.

CONDITIONS OF USE

UNITRAY installation is subject to the following conditions:

- ✓ UNITRAY accepts either 15 mm or 20 mm relief drains depending on the model of HWC.
- ✓ The safe tray can support a filled HWC of up to 400 kg weight (restricted to HWC capacity of 315 L).
- ✓ The UNITRAY system must be installed by, or supervised by, a registered plumber / gas fitter in accordance with the UNITRAY Design & Installation Guide.
- ✓ The UNITRAY System is not for use where the HWC is connected to a wet-back or other uncontrolled heat source.

Scope	Limitations
LOCATION All buildings	The floor must have been designed to support the applied loads. The water supply system has been installed to comply with the NZ Building code. The drainage system has been installed comply with the NZ Building code. Overflow protection to neighbouring properties has been installed. The HWC is connected to a controlled heat source.





PERFORMANCE CLAIMS

When designed, installed and maintained in accordance with all UNITRAY Safe Tray System requirements, the UNITRAY Safe Tray System will comply with or contribute to compliance with the following performance claims:

NZ Building Code clauses	BASIS OF COMPLIANCE	
	Compliance statement	Demonstrated by
B1 Structure B1.3.1 B1.3.2 B1.3.3 (a, b, c, e, f, j & q)	ALTERNATIVE SOLUTION Leap PTY limited Test Report Rev 2: 140519 JD, June 2014.	To determine load carrying capability of the UNITRAY through: ✓ Assessment of ARMA Standard for Polyethylene Underground Storage Tanks ✓ Comparison with BS/EN 1778:2000: <i>Characteristic values for welded thermoplastics construction.</i>
B2 Durability B2.3.1 (c) B2.3.2 (a)	ALTERNATIVE SOLUTION Salt Product Design Test Report CPS-0001, 20 April 2017. Leap PTY Limited Test Report rev 2: 140519 JD, June 2014.	Reports considered: ✓ Thermal stability at 90°C ✓ Structural load bearing during failure of HWC ✓ Creep modulus ✓ Serviceability assessment over period of 20 years.
E3 Internal Moisture E3.3.2	ACCEPTABLE SOLUTION E3/AS1	Prevents accidental free water overflow from sanitary fixtures.
F2 Hazardous Building Materials F2.3.1	ALTERNATIVE SOLUTION	Does not contain or emit harmful materials.
G13 Foul Water G13.3.1 (b & d)	ACCEPTABLE SOLUTION G13/AS3 AS/NZS 3500.2	Foul water conveyed to an appropriate outfall.

SOURCES OF INFORMATION

- AS/NZS 3500.2. *Plumbing and Drainage.*
- BS/EN 1778:2000. *Characteristic values for welded thermoplastic. Determination of allowable stresses and moduli for design of thermoplastic equipment.*
- Leap Pty Ltd. [2014]. Test report-140519 JD. *Static & Creep Analysis.*
- Salt Product Design. [2017]. UNITRAY Test-CPS-0001 *Structural load bearing during HWU failure.*

USEFUL INFORMATION

For information on the design, installation and maintenance of the UNITRAY Safe Tray System and for our warranty refer to www.unitray.co.nz.

PRODUCT & SUPPLIER INFORMATION

The UNITRAY System is not subject to a warning or ban.
 The UNITRAY System is imported and distributed in NZ by:

Unitray NZ Ltd

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