

Product Name: TERMINADE RESIDUAL TERMITICIDE AND INSECTICIDE
APVMA Approval No: 63502/142319



Label Name:	TERMINADE RESIDUAL TERMITICIDE AND INSECTICIDE
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 100 g/L FIPRONIL
Mode of Action:	GROUP 2B INSECTICIDE
Statement of Claims:	For the protection of structures from subterranean termite damage and for the control of subterranean termites around domestic and commercial structures. For the Control of Ants, Domestic Cockroaches, Earwigs, Houseflies, Web-Spinning Spiders, Daddy-Long-Legs Spiders, Millipedes, Pill Bugs, and House Crickets around domestic and commercial structures. As specified in the Directions for Use Table. TO BE USED BY LICENSED PEST CONTROL OPERATORS ONLY
Net Contents:	2.5 L - 200 L
Restrains:	Restrains: DO NOT apply to excessively wet soils, immediately after or during heavy rain; to avoid runoff of the chemical. DO NOT apply at less than label rates.
Directions for Use:	This section contains file attachment.

General Instructions:	This section contains file attachment.
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Resistance Warning:	INSECTICIDE RESISTANCE WARNING GROUP 2B INSECTICIDE For insecticide resistance management Terminade Residual Termiticide and Insecticide is a Group 2B insecticide. Some naturally occurring insect biotypes resistant to Terminade Residual Termiticide and Insecticide and other Group 2B insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Terminade Residual Termiticide and Insecticide or other Group 2B insecticides are used repeatedly. The effectiveness of Terminade Residual Termiticide and Insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use, PCT Holdings Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant insects. Terminade Residual Termiticide and Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier or PCT Holdings Pty Ltd representative or local agricultural department agronomist.
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Precautions:	PRECAUTIONS Termiticide uses. Residents and pets should not be allowed in a room being treated. Any spills should be cleaned up before leaving the room (refer to the SDS). Ensure all heating/air conditioning ducts, air vents, plumbing pipes, sewer lines, floor drains, heating pipes and electrical lines/conduits are known and identified before commencing any application of termiticide. Do NOT puncture or contaminate any of these. Urban Uses Avoid application around edible plants. RE-ENTRY PERIOD Public DO NOT allow public access until the spray has dried. Workers DO NOT re-enter treated areas until spray has dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). Clothing must be laundered after each day's use.
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Protections:	PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT Highly toxic to fish and aquatic organisms. Do NOT apply to areas where surface water is present. Rinse waters and runoff from treated areas MUST be prevented from entering drains or waterways. Do NOT apply if heavy rains are expected to occur within 48 hours of application. Do NOT contaminate streams, rivers or watercourses with the chemical or used containers. Dangerous to bees. PROTECTION OF PETS AND LIVESTOCK Before spraying remove animals and pets from the areas to be treated. Cover or remove any open food and water containers. Cover or remove (as applicable) fish ponds, aquariums etc before spraying.
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Storage and Disposal:	STORAGE AND DISPOSAL Store in the closed, original container in a cool, well-ventilated area. Do NOT store for prolonged periods in direct sunlight. Triple rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals onsite. If recycling replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.
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Safety Directions:	SAFETY DIRECTIONS Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. Wash hands after use. When opening the container, preparing spray and using the prepared spray wear chemical resistant clothing buttoned to the neck and wrist, washable hat, half-facepiece respirator with combined dust and gas cartridge and elbow-length PVC or nitrile gloves. After each day's use, wash gloves, contaminated clothing and respirator and if rubber wash with detergent and warm water.
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First Aid Instructions:	FIRST AID If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.
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First Aid Warnings:	
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DIRECTIONS FOR USE:

SITUATION	PEST	RATE	CRITICAL COMMENTS
Pre-construction: Chemical soil treated zones around existing buildings and structures	Subterranean termites including (but not limited to) <i>Coptotermes acinaciformis</i> , <i>Mastotermes darwiniensis</i> , <i>Schedorhinotermes</i> spp.	600 mL in 100 L water (0.06% a.i. mix)	Application by LICENSED PEST CONTROL OPERATORS: Mix the required quantity of Terminade with the specified volume of water and apply to form a continuous chemical soil treated zone (horizontal and vertical or as an external perimeter) around and under the structure to be protected as per AS3660.2. The treated zone may be created using a combination of conventional spraying and trenching and via the Camilleri Underslab and Perimeter and Altis reticulation systems. Soil injection equipment (rodding) must only be used where trenching and treating the backfill is not possible or practical. Immediately following treatment, the moisture resistant membrane should be positioned over the treated zone to prevent disturbance. Chemical treated zones that have been disturbed will need to be reapplied to restore the complete treated zone. For more details refer to General Instructions.
Post-construction: Chemical soil treated zones around existing buildings and structures	Subterranean termites including (but not limited to) <i>Coptotermes acinaciformis</i> , <i>Mastotermes darwiniensis</i> , <i>Schedorhinotermes</i> spp.	600 mL in 100 L water (0.06% a.i. mix)	Application by LICENSED PEST CONTROL OPERATORS: Mix the required quantity of Terminade with the specified volume of water and apply to form a continuous chemical soil treated zone (horizontal and vertical or as an external perimeter) around and under the structure to be protected as per AS3660.2. The treated zone may be created using a combination of conventional spraying and trenching and via the Camilleri Underslab and Perimeter and Altis reticulation systems. Soil injection equipment (rodding) must only be used where trenching and treating the backfill is not possible or practical. Application of chemical treated zones beneath concrete slabs and paths will require drilling and injection of termiticide using rodding equipment. Construction practices, soil subsidence, difficult to wet soils and other factors may create situations where the use of non-ionic wetting agents or foam generating equipment may be useful. Chemical treated zones that have been disturbed will need to be reapplied to restore the complete treated zone. For more details refer to General Instructions.

Reticulation systems: Pre- and post-construction (Camilleri Underslab and perimeter and Altis perimeter systems only)	Subterranean termites including (but not limited to) <i>Coptotermes acinaciformis</i>, <i>Mastotermes darwiniensis</i>, <i>Schedorhinotermes</i> spp.	600 mL in 100 L water (0.06% a.i. mix)	Application by LICENSED PEST CONTROL OPERATORS: The system must be installed according to the manufacturer's specifications and be capable of distributing the termiticide emulsion according to this label (see General Instructions) and the Australian Standard AS 3660 series. Mix the required quantity of Terminade with the specified volume of water. Apply by pumping through the system according to the manufacturer's specifications. Use a minimum delivery volume of 100 L of emulsion per cubic metre of appropriate soil, (e.g. evenly compacted sandy loam soil). Delivery pipes must be placed in such a position to ensure that the requirements for both horizontal and vertical treated zones as specified in the Australian Standard AS 3660 series are met. Special attention must also be afforded to the position of the delivery pipes to ensure that the resultant treated zone is continuous and complete.
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SITUATION	PEST	RATE	CRITICAL COMMENTS
Protection of poles and fence posts	Subterranean termites including (but not limited to) <i>Coptotermes acinaciformis</i> , <i>Mastotermes darwiniensis</i> , <i>Schedorhinotermes</i> spp.	600 mL in 100 L water (0.06% a.i. mix)	Application by LICENSED PEST CONTROL OPERATORS: Only posts and poles in contact with soil need to be treated. For existing posts and poles create a continuous Terminade treated zone 450 mm deep and 150 mm wide around the post or pole by trenching and puddle treating the backfill. Soil injection equipment (rodding) must only be used where trenching and treating the backfill is not possible or practical. Use 100 L of prepared spray per cubic metre of soil around the pole or post. Note that it is impossible to treat the soil at the bottom of a sound post or pole so future attack via this route cannot be ruled out. If new posts or poles are being installed, then the bottom of the hole and the backfill should be treated at installation.
Nests in poles and trees	Subterranean termites including (but not limited to) <i>Coptotermes acinaciformis</i> , <i>Mastotermes darwiniensis</i> , <i>Schedorhinotermes</i> spp.	600 mL in 100 L water (0.06% a.i. mix)	Application by LICENSED PEST CONTROL OPERATORS: Locate the nest by drilling holes into the pole or tree. Ensure the full dimension of the nest is known, particularly the highest extremity. Flood the nest with prepared Terminade spray. Volume will vary depending on the nest size. To aid distribution throughout the nest or in areas of difficult access, the use of foam generating equipment may be useful. Drill holes should be sealed after treatment. Do not treat trees bearing edible fruit or nuts.
Wall cavity treatment	Subterranean termites including (but not limited to) <i>Coptotermes acinaciformis</i> , <i>Mastotermes darwiniensis</i> , <i>Schedorhinotermes</i> spp.	6 mL in 1 L water	Application by LICENSED PEST CONTROL OPERATORS: Mix the required volume of Terminade in water plus foaming agent to achieve a final foam expansion ratio of 15:1. Locate the termite activity by drilling holes into the wall cavity. Foam directly into the termite carton material until saturated. Application to wall cavities behind plasterboard may result in some staining. Only apply to wall cavities where live termites are present. Foaming of Terminade into wall cavities is not designed and should not be used as a stand-alone treatment. Accordingly, a continuous chemical treatment applied to the soil as per Australian Standard AS 3660.2 should be applied immediately following successful eradication of termite activity in the structure.

SITUATION	PEST	RATE	CRITICAL COMMENTS
External areas and surrounds of domestic, commercial, public and industrial buildings and structures.	Nuisance ants Including but not limited to: Argentine ant (<i>Linepithema humile</i>), Black house ant (<i>Ochetellus glaber</i>), Pedicel ant/odorous house ant (<i>Tapinoma</i> spp.), Pharaoh's ant (<i>Monomorium pharaonis</i>), Whitefooted house ant (<i>Technomyrmex albipes</i>)	6 mL in 1 L of water	Mix in the required volume of Terminade in water. Treat surfaces 300 mm out from where the building or structure touches the ground. Apply at the rate of 1 L of prepared suspension per 25 lineal metres. Pay particular attention to potential entry points, such as weep holes, cracks and crevices. Also apply to ant trails and where ants are active away from the nest. Structures may include retaining walls, fences, garden beds, sheds etc.
Spot application in domestic situations	Nesting ants Including but not limited to: Funnel ant (<i>Aphaenogaster pythia</i>), Greenhead ants (<i>Rhytidoponera</i> spp.), Meat ants (<i>Iridomyrmex</i> spp.), Red imported fire ant (<i>Solenopsis invicta</i>), Yellow crazy ant (<i>Anoplolepis gracilipes</i>).	6 mL in 1 L of water	Mix in the required volume of Terminade in water. Treat the nest entrance or mound and where ants are active away from the nest. Apply at the rate of 1 L of prepared suspension per 16 m ² , or 60 mL per m ² .
External areas and surrounds of domestic, commercial, public and industrial buildings and structures.	Domestic Cockroaches American Cockroaches (<i>Periplaneta americana</i>), Australian Cockroaches (<i>Periplaneta australasiae</i>), Oriental Cockroaches (<i>Blatta orientalis</i>), Smokybrown Cockroaches (<i>Periplaneta fuliginosa</i>)	6 mL in 1 L of water	Treat external surfaces 300 mm up and 300 mm out from where the building or structure touches the ground. Apply at the rate of 1 L of prepared suspension per 25 lineal metres. Pay particular attention to potential entry points, such as weep holes, cracks and crevices. Also apply to where pest(s) may be active away from the building including retaining walls, fences, garden beds, sheds etc. Apply at the rate of 1 L of prepared suspension per 16 m ² .
	Web-spinning Spiders Including: Black House Spider (<i>Badumna insignis</i>), Redback Spider (<i>Latrodectus hasselti</i>)		Spray spiders, their webbing and areas where spiders may hide at the rate of 1 L of prepared suspension per 16 m ² .
	Daddy-long-legs Spiders (<i>Pholcus phalangioides</i>), Millipedes (<i>Julus herperus</i>), Pill Bugs (<i>Armadillidium vulgare</i>), House Crickets (<i>Acheta domesticus</i>), Earwigs (<i>Forficula auricularia</i>)		Apply directly onto spiders, millipedes, pill bugs, house crickets and earwigs as a spot treatment.
External covered areas and surrounds of domestic, commercial, public and industrial buildings and structures.	Houseflies (<i>Musca domestica</i>)		Apply to external surfaces where flies are likely to rest at the rate of 1 L of prepared suspension per 16 m ² .

NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

GENERAL INSTRUCTIONS

Urban uses

Terminade will control ants, domestic cockroaches, web-spinning spiders and houseflies by direct contact and residual activity on treated surfaces. Terminade will control earwigs, daddy-long-leg spiders, millipedes, pill bugs and house crickets by direct contact (spot treatment) only.

Ant Control

Terminade will control ants by direct contact and residual activity on treated surfaces. When applied as a surface spray as directed, Terminade will provide up to 3 months control of ants and is best applied as ant activity increases in early spring. A follow up application during summer may be required.

Termite Control

Chemical treatment for termite control around existing buildings should be considered to be part of an integrated approach to reduce the risk of termite attack and should be conducted by LICENSED PEST CONTROL OPERATORS. The steps below best describe the procedure for optimum termite management:

- The building owner should try to minimise water entering under and around the building and improve drainage to reduce moisture accumulating in these areas.
- Ventilation of subfloor areas should also be optimised to reduce moisture accumulation.
- The area under the floor should be kept free from any debris-timber such as off-cuts of wood or firewood.
- Treat with a residual chemical zone treatment such as Terminade in compliance with AS3660.2.
- Regular inspections should be carried out (at least annually as recommended by AS3660 Series).
- If any additional subsequent building or landscaping work causes disruption to the chemical soil treated zone it must be restored to maintain protection.

MIXING

Half fill the spray tank with water and then add the required quantity of Terminade. Stir and then top up the spray tank to the required volume. The use of this product in a tank mix with other insecticides is not recommended as the behaviour and efficacy of the product may be affected. Ensure equipment is free of leaks and clean from residues of other chemicals before mixing Terminade.

SOIL PREPARATION

Some soils will be difficult to wet (e.g. heavy clay soils) and there will be a greater chance of runoff of liquid from the surface; in these situations it will be necessary to loosen the soil to allow spray solution to percolate to form the treated zone; the soil should be scarified to a depth between 50 – 80 mm. In situations with very heavy soils the complete removal and replacement of the soil with a sandy loam type is recommended in order to form the treated zone. The replacement soil can be treated with Terminade before placing into the trench via the use of appropriate soil mixing vessels. If soil replacement is not possible then the water volume should be reduced to ensure that runoff is minimised. A reduction in the water volume used should not be associated with a reduction in the mix rate of Terminade – the same amount of active ingredient should be applied per given area or volume of soil; an increase in concentration of termiticide will therefore be required. The tables below indicate

mix rates if application volumes need to be reduced. It is not recommended that water volumes below 3 L/m² are used.

Horizontal Treated zones

Water Rate /m²	Dilution rate	Concentration	Application rate
5 L/ m ²	600 mL /100 L water	0.6 g/L	3.0 g a.i./ m ²
4 L/ m ²	600 mL /80 L water	0.75 g/L	3.0 g a.i./ m ²
3 L/ m ²	600 mL /60 L water	1 g/L	3.0 g a.i./ m ²

Vertical Treated zones

Water Rate /m²	Dilution rate	Concentration	Application rate
100 L/ m ²	600 mL /100 L water	0.6 g/L	60 g a.i./ m ³
90 L/ m ²	600 mL /90 L water	0.666 g/L	60 g a.i./ m ³
80 L/ m ²	600 mL /80 L water	0.75 g/L	60 g a.i./ m ³
70 L/ m ²	600 mL /70 L water	0.85 g/L	60 g a.i./ m ³

If the treated zone is being applied to a building on a slope a furrow should also be formed of a similar depth along the contour of the slope to prevent runoff of the termiticide.

In situations where the surface is very dry or with sandy or porous soils the area will require moistening prior to application of chemical to prevent loss of chemical through piping or excessive percolation. Difficult to wet soils may create situations where the use of non-ionic wetting agents may be useful.

The use of rodding equipment in heavy clay soil can result in an uneven distribution of chemical; in such situations the preferred method of installing a treated zone is to trench and backfill.

APPLICATION

Treated zones to protect both new and existing buildings may be installed using a combination of conventional spraying and trenching. Spray equipment should be calibrated to deliver a low-pressure high volume coarse spray.

It is recommended that the minimum thickness of any treated soil treated zone is 80 mm.

Treated zones that have been disturbed by construction, excavation and other soil disturbing activities will need reapplication to restore site to original condition.

Horizontal Treated Zones

Horizontal treated zones are to be applied to deter termites from gaining concealed vertical access to the building substructure.

Horizontal treated zones should cover all areas of soil beneath suspended floors where there is inadequate access or where there is less than 400 mm clearance. The treated zone should also be continuous beneath a concrete slab-on-ground or on fill. The treated zone should surround any connection between the building and the soil and completely abut any internal vertical treated zone around any substructure. Otherwise install perimeter treated zones around each individual pier, stump, penetration point and substructure wall.

Horizontal treated zones must be a minimum depth of 80 mm. It may be necessary to loosen the soil to allow spray solution to percolate to form the treated zone; the soil should be scarified to a depth between 50 – 80 mm. Apply 5 L of prepared Terminade spray per square metre of soil.

When termiticide needs to be injected through a concrete slab to create a horizontal treated zone, suitable equipment should be used to inject termiticide through predrilled holes. As uneven distribution of termiticide is likely when applying by this method under the slab, the application volume should be increased per square metre up to 10 L of spray solution. To ensure an even treated zone is created, it is also recommended that maximum drill spacings and minimum application volumes consistent with the following table be adopted. Use a slab injector fitted with a multi-directional tip. When applying through such structures, the rod should be held vertically at 90° to the slab and rotated during application. Ensure a strong seal with the top of the drill hole to minimise leakage and that drill holes are plugged after treatment.

Soil type	Hole Spacing (mm)	Number of holes per square metre	Volume per hole to achieve 10 L/ m ²
Heavy Clays	150 mm	36	0.3 L (300 mL) (36 x 0.3 = approx. 10 L/m ²)
Medium soils	200 mm	25	0.4 L (400 mL) (25 x 0.4 = approx. 10 L/m ²)
Sands	300 mm	11	0.9 L (900 mL) (11 x 0.9 = 10 L/m ²)

Foam applications

Construction practices, soil subsidence under concrete slabs and other factors may create situations where a continuous horizontal zone cannot be achieved using conventional liquid treatments alone. In such situations conventional liquid application methods can be supplemented through the use of foam generating equipment.

Terminade mix rate	Litres of prepared Terminade spray	Foam expansion ratio	Volume of finished foam required/m ²
600 mL / 100 L of water plus recommended quantity of foaming agent	5	5:1	25 L
	10 (under concrete)	5:1	50 L
	5	10:1	50 L
	10 (under concrete)	10:1	100 L
	5	25:1	125 L
	10 (under concrete)	25:1	250 L

If sufficient foam volumes cannot be applied to achieve the recommended rate of Terminade required, apply additional prepared liquid solution to ensure the correct amount of active constituent (fipronil) is present per square metre of treated area.

Vertical Treated Zones

Vertical treated zones are designed to deter termites from gaining concealed horizontal access to a building or structure. Apply at least 100 L of prepared spray per cubic metre of soil. Vertical treated zones should be a minimum of 150 mm wide and applied to a depth 50 mm below the top of the footing. Where a horizontal treated zone is installed, the vertical treated zone should be installed to be continuous with it. The most effective method of creating an even and continuous treated zone is by trenching and treating the soil as it is backfilled. Soil injection equipment (rodding) must only be used where trenching and treating the backfill is not possible or practical.

Trenching

Excavating a trench, treating the exposed trench, back filling and treating the backfill is the preferred method of installing a vertical treated zone. The trench needs to be a minimum of 150 mm wide and continue to at least 50 mm below the top of the footing. Assuming a 150 mm wide trench with a 300 mm distance to the top of the footing, this would equate to a 150 mm x 350 mm trench in which 5.25 L of prepared spray would be applied per lineal metre of trench. Any variation of dimensions needs to be recalculated on the basis of applying 100 L of prepared spray per cubic metre of soil.

Rodding through concrete

When applying a vertical treated zone underneath a concrete obstruction (eg. a path), a soil rod with a 3 or 4 way multi-directional tip should be used. The rod should be rotated during application (90° for a 4-way tip and 120° for a 3-way tip). The tip should be inserted down as close to the footing as possible to ensure a complete vertical treated zone. Ensure that chemical is applied during insertion and withdrawal of the rod. As uneven distribution of termiticide is likely when applying by this method under concrete, the application volume should be increased to 200 L spray solution per cubic metre of soil. Rod spacing should not exceed 300 mm and application volume should be adjusted depending on soil type (as indicated in the table below) and the depth of the footing. Assuming a 300 mm depth to the top of the footing and 200 mm spaced holes, 2 L of prepared spray is to be applied per hole. Any variation of dimensions needs to be recalculated on the basis of applying 200 L of prepared spray per cubic metre of soil.

Under concrete rodding

Soil type	Hole Spacing (mm)	Volume per hole
Heavy Clays	150 mm	1.5 L
Medium soils	200 mm	2.0 L
Sands	300 mm	3.0 L

External Perimeter Treated zones

An external perimeter treated zone should be a minimum of 150 mm wide, a minimum of 80 mm deep and extend not less than 50 mm below the lowest point where the construction below ground could allow concealed termite ingress (or not less than 50 mm below the top of the footing where the building fabric could allow concealed termite ingress). Application considerations should reflect the installation of vertical treated zones.

Reticulation systems

At the time of registering this label, the available data only allows use of:

- Camilleri Systems Underslab and Perimeter Reticulation System.
- Altis Reticulation System – (perimeter only)

AUSTRALIAN STANDARDS

Licensed Pest Control Operators installing a chemical soil treated zone around an existing building should be familiar with the Australian Standard 3660.2, which provides information relating to installation of chemical soil termite treatment zones.

PERIOD OF PROTECTION

Data currently available indicates that this product, when applied as a soil treatment in accordance with this label, will be effective at deterring concealed entry into a building or structure by subterranean termites for a minimum period of eight years. Delayed mortality effects may be observed meaning termites may live and continue to be active several weeks after penetrating the treated zone. To re-establish the treated zone after the 8 year period of protection, re-application at full rates is required.

The actual protection period will also be affected by factors such as termite pressure, climatic and soil conditions and subsequent soil disturbance.

REINSPECTION

As with all chemical termiticides, regular inspections (at least annually) by a competent Licensed Pest Control Operator are recommended as bridging and breaching of treated zones can occur. The need for retreatment should be determined as a result of these inspections.