



Churton Pacific Limited
Leaders in Timber Protection

CD50 Extreme Technical Data Sheet December 2014



The CD50 Family of CD50 Timber Protection Oils

The CD50 Timber Protection Oils, are formulated to penetrate deeply into dry timber, and protect from the inside out.

CD50 was developed over 20 years ago here in New Zealand, primarily for cedar weatherboards. CD50 has been developed and improved over the years, incorporating advances in technology.

The CD50 Timber Protection Oils available today

- Use proven unique formulation technology
- Use state of the art Colourtone technology
- Are successfully used in many other countries including USA, Canada, SE Asia and Europe.
- Are continually being evaluated and improved, with advances in technology being incorporated when appropriate.

Common features of the CD50 Family of Timber Protection Oils:

- They are water repellent and, most importantly, assist with the control of gas phase moisture (moisture in the air – humidity and dampness)
- The control of water movement into and out of timber helps stabilise timber and reduce warping, cupping, splitting and checking, resulting in a general improvement in long term dimensional stability.
- CD50 oils are excellent proven wood preservatives that also assist with the control of surface mould and fungi.
- CD50 Oils are formulated with low mammalian toxicity and low environmental impact as a priority.
- The CD50 Oils are not like conventional film forming wood coatings in that they will not crack, peel or flake



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- CD50 Oils enhance the timber – they bring out the beauty of timber while not hiding the grain
- They are easy to apply – spray, brush or roller on to clean, dry bare timber
- They are easy to maintain – just wash with SARAClean and reapply – there is no need to sand between coats
- CD50 Oils have an accumulative protective effect in the timber with multiple re-applications
- CD50 Timber Protection Oils are made in New Zealand for our harsh NZ climate

Choosing the correct CD50 Timber Protection Oil

CD50

- Is the oil of choice for weatherboards and timbers up to approximately 50 mm depth. For example – weatherboards, board and baton, shingles, joinery, trellis, garage doors etc
- Can be used on any species of timber, and on new, or old, tanalised timber and plywood. (do not use on veneers as the top layer will be thin, and underlying glue lines may show through)

CD50 Extreme penetrates faster and deeper than CD50 and has been especially formulated for more challenging environments, substrates and requirements, so is used for:

- Timber thicker than approx 50mm – posts, poles, beams, pergolas
- Log Buildings
- Hardwoods
- Decking – pine, hardwood etc
- Factory Pre-Coating, and when less time is available between 1st and 2nd coats
- Extreme conditions of humidity or dampness eg indoor swimming complexes, boardwalks over water, bush environments etc

Note: For use of CD50 Extreme on Bamboo, Accoya and other modified timbers – contact Churton Pacific before use 0800 107 555.

CD50 Extreme Timber Protection Oil

Use Clear

CD50 Extreme is a clear oil.

Clear CD50 Extreme can be used on timbers where silvering is desired.

Silvering of the timber is caused by effect of UV light on the surface fibres. If Clear CD50 Extreme is used, silvering will gradually occur on the surface, while deep within the timber, the CD50 is protecting the timber.

If silvering is the desired effect, the timber can be lightly SARACleaned as needed. Every 3 years, SARAClean the timber to remove any dirt and kill any surface mould and reapply CD50 Extreme.

If the natural timber look of the timber is wanted, a low cost and low maintenance alternative to applying colour to the timber is to apply clear CD50 Extreme to the timber, then wash the timber regularly with SARAClean to remove the silvered fibres. This will bring



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back the woody colour of the timber and keep the timber clean. This is particularly effective for helping maintain the beautiful colour and character of cedar, kwila and other many timbers.

or Use CD50 Extreme with a Colourtone

To retain or enhance the colour of the timber, Colourtones are used. The Colourtone is added to the CD50 Extreme before use.

Colour samples in printed material are a guide only – different timbers will affect the final appearance of the Colours. Testspots are available and we advise you try before deciding, on a small piece of the timber you will be using.

Allow for some lightening to take place over the first 3-8 months as the oil moves away from the surface, and weathering occurs. The final colour is obtained after 2 coats of Coloured CD50 Extreme. Colour retention is more durable on rough sawn timber and band sawn timber, as there is more surface area to absorb the oil. Dressed timber will absorb more oil if it has been lightly and evenly sanded.

Use the correct size Colourtone for the pail or can of CD50 Extreme. Shake & stir the Colourtone to ensure it is evenly dispersed before adding to the CD50 Extreme. Add all of the Colourtone to the appropriate size pail or can. Stir thoroughly before use and frequently during use. This is especially important when using greys and light colours.

Double and triple colours can be used – but please contact Churton Pacific for advice before attempting this, and trial first on a scrap of timber.

Colours can be mixed together, but again, please contact Churton Pacific for advice as we can work out a formula for you, reducing chances of an error when attempting to match the colour later.

Application

Before use:

The CD50 Products work by penetrating deep into the timber, therefore, before application:

Ensure there are no sealants, barriers or any other products that could affect the penetration of CD50 Extreme

LOSP treated timbers must have had sufficient time for the treatment to dry or evaporate off – do not apply if an odour is still present. On dressed LOSP timber – brush first coat on sparingly.

If any previous coating has been used, it must be thoroughly removed by sanding or stripping before applying CD50 Extreme.

Timber must be dry - the retained moisture content of the timber must be no more than 17%.

Do not apply if rain is expected within 6-8 hours.

When used on some plywoods with a thin top layer, CD50 Extreme may accentuate characteristics in the underlying layers. The use of Colourtones will tend to camouflage this. (Do not use on veneers for this reason) CD50 Extreme may penetrate only to the glue line.



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Coverage:

These figures represent typical averages for common cladding timbers: Cedar, Pine, Douglas Fir, Macrocarpa etc.

Timber Type	Square metres per litre
New dressed timber	12-15
New rusticated or bandsawn timber	7-9
Old restored dressed timber	7-9
Old restored rusticated or bandsawn timber	4-7
Shingles and shakes	2-5
Hardwoods	12-15

Application:

Do not dilute, add thinners or alter in any way.

Protect surfaces below and adjacent with drop cloths – these should be folded to triple thickness as CD50 will pass through a single thickness drop cloth. If CD50 inadvertently comes in contact with concrete, clean off immediately with SARAClean Liquid.

Apply CD50 Extreme to all sides of weatherboards before fixing (where possible)

Apply evenly with brush, speed brush, roller or spray – remove excess drips and runs. **Timber should be only slightly oily after application.** Allow to “dry” before allowing foot traffic, if on a deck.

If spraying – use an airless sprayer with a 0.010” tip.

Stir thoroughly before use and frequently during use.

Avoid contact with plants and waterways.

Wash up in detergent or turps.

Apply second coat according to the summary table below - after 1 to 6 weeks (depending on timber porosity and environmental conditions)

If dusty earthworks are being carried out e.g landscaping, new subdivision, apply second coat after completion of all earthworks (timber may require light wash with SARAClean to remove dirt)



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Weather and Temperature:

Cold temperatures will affect the viscosity of CD50 Extreme and will tend to slow down the rate of absorption. In cold weather, hold containers in a warm place immediately prior to application to help alleviate this problem.

Timbers to be coated with CD50 Extreme must be clean and dry, with residual moisture content of no higher than 17%.

Do not apply CD50 Extreme to exterior timbers if rain is likely within 6-8 hours of application.

Protection of adjacent materials:

Where plasterboard, plaster, or any other absorbent material abuts timber protected with CD50 Extreme Oil, 'stripe' the mating edges or surfaces of the timber with two coats of Churton Pacific's WETSHIELD to prevent the CD50 Extreme Oil migrating into the absorbent materials. On level surfaces where objects may be placed e.g. shelving, apply WETSHIELD to prevent CD50 Extreme migrating into the objects.

Timber protected with CD50 Extreme can become stained if in constant contact with bituminous-type materials. Exterior painted or plastered wall surfaces situated below timbers protected with CD50 Extreme may be stained with leachate from above. To minimise this, paint edges underneath timber with 2 coats of Churton Pacific's WETSHIELD.

Joinery:

The first application of CD50 Extreme can be factory dipped or sprayed onto frames and sashes prior to site delivery. Apply the 2nd coat onsite.

If glazing with linseed oil putty or similar, 'stripe' the glazing rebate with one or two coats of Churton Pacific's WETSHIELD. When fully cured, glaze as normal.

Interior Use – Protection from Splash Stains:

Timber surfaces coated with CD50 Extreme may show splash or spilling marks if contacted by chemically staining products such as wine, cleaners, contaminated water, or strong chemicals. At risk areas include kitchens, bathrooms, and spa pools. Churton Pacific's WETSHIELD can be used in these situations to give a protective coating which can be wiped clean.

WETSHIELD should also be used over CD50 on level surfaces such as shelves, so the oil does not migrate into absorbent objects placed on those surfaces.

Adhesives:

Recommended adhesives for use on CD50 Extreme protected timber are Holdfast Fix-All, Bostik Seal n Flex, Bostik SAFESTud, Holdfast Gorilla Glue or 3M Scotchseal 5300.

Application and Maintenance

Summary Chart

Timber	Preparation	Application	Maintenance	Reapplication*
<p>New Timber</p> <p>Restored or Cleaned Timber</p> <p>Decking</p> <p>Outdoor furniture</p>	<p>Ensure there are no coatings or other products on the timber that would inhibit free diffusion</p> <p>Ensure surface is clean & dry A light SARAClean wash may be required to remove dirt accumulated during construction</p>	<p>If CD50 Extreme applied at a Precoating factory</p> <p>Apply second coat of CD50 Extreme to accessible surfaces after construction or up to 6 weeks after precoating</p> <p>CD50 Extreme applied on site</p> <ol style="list-style-type: none"> 1. Apply first coat of CD50 Extreme to all sides and ends (apply sparingly to new hardwoods) 2. Apply second coat to accessible surfaces after 1- 6 weeks (depending on timber porosity and environmental conditions) 	<p>Regular cleaning is recommended to remove pollen, dust, dirt, soot, salt etc</p> <p>CD50 Extreme with colourtone</p> <p>Lightly wash with SARAClean</p> <p>CD50 Extreme without colourtone</p> <p>Timber can be left to silver naturally - lightly wash with SARAClean when necessary (DEEPClean if very dirty or stained)</p> <p>If silvering is not the desired look - wash with SARAClean every 12 -18 months or earlier if necessary</p>	<p>Reapply CD50 Extreme every 2 – 6 years depending on exposure to weather and sunlight, and timber type</p> <p>Coastal and exposed situations 2-3 years</p> <p>Protected situations 4-6 years</p> <p>Decks if using Clear CD50 Extreme 2-3 yrs</p> <p>Decks & handrails with colourtone 12-24 months</p> <p>(Wash with SARAClean (use DEEPClean if very dirty or stained) and, when dry, apply one coat of CD50 Extreme)</p>
<p>Old, Dirty or Weathered Timber</p>	<p>If there are no coatings on the timber – wash with SARAClean (DEEPClean if very dirty or stained)</p>	<p>When clean & dry:</p> <ol style="list-style-type: none"> 1. Apply first coat of CD50 Extreme 2. Apply second coat after 1 to 6 weeks (depending on timber porosity and environmental conditions) 		
<p>Existing or Failed Coatings</p> <p>(conventional stains, paint, polyurethane varnish and oils)</p>	<p>Remove (sand or strip with Naked Stripper) any coatings from the timber</p> <p>Or phone Churton Pacific for professional advice (see below)</p>			



Important Points

CD50 and CD50 Extreme are compatible. CD50 Extreme can be used as the first coat (pre-coated or applied on site), followed by CD50 for the next coat.

Due to the harsh NZ sunlight and high UV, timber exposed to greater amounts of sun will be under significant stress and require more regular application of CD50 Extreme. These situations include northerly aspects, reflections off water, white sand or concrete, and horizontal surfaces) In these situations, the first sign will be fading of the colour. Simply wash the timber with SARAClean, and reapply one coat of CD50 Extreme as needed.

Old failed surface coatings can be removed with Naked Stripper. It is recommended that highly skilled and trained operators carry out this restoration process. The restoration process is followed by the application of CD50 or CD50 Extreme. Timbers that are warped and cupped will tend to return to near original profile and flatness. The dimensional stability and natural appearance of the timber will be maintained for many years with maintenance applications of CD50 or CD50 Extreme. Contact Churton Pacific Ltd for Restoration Advice.

Log Buildings:

AP5 Anti Sap Stain should be used on newly felled logs when first debarked or sawn, to control sap stain. (See the TDS for AP5 for instructions)

If newly felled logs are to be treated, apply CD50 Extreme once the surface has started to dry, leaving the ends or preferably the interior untreated to allow moisture to be driven out. This will slow drying and help prevent checking on log ends. Apply one liberal coat and leave to soak for up to one week. Repeat application according to thickness of the log/timber. This allows time for CD50 Extreme to migrate through the fibres as timber eliminates moisture.

Apply at a rate of 5-7 sq m per litre, with 1 application (minimum) per 100mm diameter of log, ie 4 coats for a 400mm diameter log. For dry logs and thick timber, applications can be a day apart, in ideal conditions – dry, warm weather.

CD50 Extreme or CD50 is then used as a maintenance application, with one coat (5-7 sq m per litre) at least once every 3 years.

If using a colourtone, use the colourtone in all coats as colour retention will be increased.

Thick Timber (poles, posts, beams, slabs)

Apply at a rate of 5-7 sq m per litre, with 1 application (minimum) per 100mm diameter of log, ie 4 coats for a 400mm diameter log. For thick timber, applications can be a day apart, in ideal conditions – dry, warm weather.

CD50 Extreme or CD50 is then used as a maintenance application, with one coat (5-7 sq m per litre) at least once every 3 years.

If using a colourtone, use the colourtone in all coats as colour retention will be increased.



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Surface Mould & Fungus:

Timber must be free of mould and mould spores before application. Even clean looking timber may be contaminated with mould spores. If CD50 is applied over mould spores, dark stains may appear. If in doubt, clean timber with SARAClean and let dry before applying CD50. If staining appears, contact Churton Pacific Ltd or your local supplier for DEEPClean stain remover. See our notes on SARAClean and DEEPClean for removal of surface stains, mould, and fungus.

Garage Doors:

CD50 Oils will soften rubber-based adhesives. If coating a timber garage door, and the glue holding the timber to the frame is either a rubber based adhesive, or you are uncertain, run a bead of glazing sealer along the back of the door where the timber meets the frame. This will ensure that the timber will remain intact if the CD50 Extreme weakens the adhesive.

Rubber and Butynol:

CD50 Extreme will soften Butynol and rubber surfaces if not wiped off soon after contact is made. When CD50 Extreme is applied to wooden shingles, it does not normally affect the rubber underlay.

Drinking Water:

Where drinking water is to be collected from run off surfaces, use CD50 rather than CD50 Extreme.

Downpipes should be disconnected before cleaning and application, and left disconnected until there has been significant rainfall before reconnecting to the tanks, to prevent oil taint affecting the drinking water.

Storage:

Store CD50 Extreme pails in a cool dry place out of reach of children with the lid on tightly. Do not store for longer than 1 year, as pails may split. Do not store where damage could result if the product is spilled or the pail fails. Check pails regularly and transfer to a new pail if sucking in occurs. Do not let the pails get too hot (over 50 degrees) or expose pails to fluctuations in temperature

Fastenings:

CD50 Extreme will not corrode galvanised iron, silicon bronze, stainless steel or copper nails. Colourtones may lightly stain lead flashing and other substrates contacted by leachate.



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Safety Information

Warning – Combustible Liquid

Hazard statements

Danger. May be fatal if swallowed and enters airways

May cause an allergic skin reaction. Harmful if inhaled

Toxic to aquatic life with long lasting effects

Precautionary Statements

If medical advice is needed, have product container or label at hand

Keep out of reach of children. Read label before use

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Do not breathe dust/fume/gas/mist/vapours/spray

Wear protective gloves/protective clothing/eye protection/face protection

Do not get in eyes, on skin, or on clothing – causes serious skin and eye irritation

First Aid: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye or skin irritation persists: Get medical advice/attention

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Fires in enclosed spaces should be dealt with by trained personnel wearing approved breathing apparatus.

Environmental: Avoid release to the environment. Contain and recover spilled material

Storage: Store in a well-ventilated place. Keep cool

Disposal: Dispose of via an authorised person/licensed waste contractor in accordance with local regulations. Incineration may be carried out under controlled conditions provided that local regulations for emissions are met. Dispose of product and container responsibly. Do not dispose of near waterways, down drains or into soil.

Transport: Not Classified as DG for transport

Conditions Of Supply: All goods supplied by Churton Pacific Ltd., are produced under rigidly controlled procedures which assure the purchaser that at the time of sale, products are physically suitable for use in the manner stated. However, as we cannot exercise control over the mixing and use of products, and the weather conditions, no responsibility will be accepted for any damage or injury, which may arise from careless storage, handling, application or use.

While CD50 products have proven to be highly successful for many years and in many countries, and are manufactured to the highest standards, Churton is unable to offer any specific performance warranties for the CD50 products because of the wide variation in applications possible. These variables include but are not limited to; the age and porosity of the timber, species, situation, design and structure, aspect, differing exposure to the weather and adequacy of preparation. If you have any reservations about using CD50 we recommend testing prior to use in sensitive applications. Please contact your closest retailer or contact Churton for a free test sample to enable you to determine the suitability of our products for your application.

Information: Specific information relating to the application and handling of this product may be obtained solely from Churton Pacific Limited, 17C Vega Place, Mairangi Bay Industrial Estate, AUCKLAND. Phone/Fax (09) 478-4370, 0800 107 555.

SDS sheets are available from Churton Pacific Ltd or www.cd50.com

Emergency numbers: 021 989229, 021 2714026