

The Use of Chemisys Products for the Restoration of Timber

Peter Reid

Chemisys Australia Pty Ltd

Revision 23/6/05

Introduction

Chemisys Australia Pty Ltd manufactures products that are designed to restore, preserve, and enhance the natural character and beauty of old and new timber.

This documentation is specifically concerned with the restoration of old weathered timber and timber structures that have been previously coated or left uncoated, and the correct product selection and procedures necessary to complete this timber restoration.

Chemisys Australia Pty Ltd manufactures three products that are used in the cleaning and preparation of old coated and uncoated timber, and it is important that the correct product is selected according to the specific restoration circumstances. This document will outline the application and uses of each of these products so that correct specification can be made.

1. CD77 Supa Stripper

Basic Use

CD77 stripper is a water soluble gel designed to remove multiple layers of latex paints, stains, varnishes, linseed oils and other **film forming** coatings that hide the original color and texture of wood. CD77 allows you to start over from the beginning, by restoring wood to a similar condition to new, timber before application of the **non-film forming** Cutek timber preservative system. CD77 is designed to restore timber without damaging the cell structure or interfering with future coatings on the newly stripped surface. CD77 also removes finishes from all types of surfaces, including masonry and metal.

Technical Data

Color/form: semi transparent gel

Coverage: 0.5-1.5 sq metres/litre depending on the nature of the previous coating and smoothness and porosity of the substrate

Packaging: 20 litre containers.

Preparation

It is important to prepare the surface to allow for the proper action of CD77, and to protect the environment. If dirt or a heavy chalk film exists on the surface, rinse thoroughly with water first and leave to dry before applying CD77.

CD77 is a toxic chemical, so when it is used consideration must be given to containment of dissolved residue so that vegetation is not destroyed or waterways contaminated.

Accordingly, we recommend the use of impervious plastic drop sheets to collect the stripped residue.

CD77 will strip coatings off virtually any substrate including powder coated joinery, therefore it is recommended that any surface that is not being restored but is at risk of exposure to the product be masked off completely.

Because of the wide variety of coatings and film thicknesses that are encountered, a test area should always be stripped prior to commencement of the project to determine how much time the restoration procedure will require, and how much CD77 will be required. This enables an accurate application procedure to be determined and cost estimated. It is important for the user to determine the suitability of the product for its intended application.

Application

Using a synthetic brush, roller, or low-pressure high volume airless sprayer apply a thick coat of CD77 to the surface. Let CD77 remain on the surface until all of the old coating has softened uniformly across the coated surface. It is important to avoid premature rinsing. If CD77 has to remain on surface for 10 minutes or longer, it may dry prematurely. In this instance re-moisten dry areas with a further generous application of CD77. A reapplication of the entire process may be necessary for overhangs, corners, windows and the like where CD77 tends to move downwards and away from the substrate therefore reducing product effectiveness.

Removal

Once the CD77 has dissolved the previous coating, it must be power water rinsed (hot water works best) off. For best results wash off with high-pressure water at 1000 –1300 p.s.i. pressure. Clean from the **lowest point and work upwards** methodically. ALWAYS clean off with a water jet that produces a 'putty knife' shaped fan that is 40 – 50mm wide about 100mm out from jet. Adopt a continuous 'mowing action' working with power water fan-jet 100mm from the face of the substrate. DO NOT use 'turbojets' on timber. CAUTION must be used when cleaning soft timber to reduce the pressure and avoid scouring of sapwood. The longer that CD77 is left on the substrate, the greater the rinse time required.

Additionally, certain types of wood surfaces may leave a raised grain effect after stripping is completed. Sanding or poly pad scrubbing may be required to smooth out this condition.

Cleanup and Precautions

CD77 is slippery when applied to surface so use caution when walking on horizontal surfaces. Do not walk on surfaces coated with CD77. Water flush all equipment, vegetation, paths, concrete, asphalt, and other adjacent surfaces immediately upon contact. Leave job site free of any trace amounts of CD77. Always remember that CD77 is a toxic chemical, and refer to the health and safety considerations listed in the MSDS sheet¹ prior to

¹ Appendix 1

commencing any project. Fully protect adjacent surfaces including vegetation and be aware of wind drift in car or pedestrian traffic when rinsing or applying. Never leave behind any containers or equipment, and appropriately label any containers of residue for disposal.

Recoating

Following the restoration of the timber with CD77, it is important to complete the restoration process by coating the timber with the **Cutek timber preservation system**.² Application of Cutek eliminates the need for any future stripping because it is **not** a varnish or a film forming coating. It has been specifically designed to maximise the dimensional stability and aesthetic qualities of natural timber, while providing protection against ultraviolet degradation, moisture and fungus growth. Always remember that film-forming coatings can peel and may need to be sanded, stripped, or scraped when reapplication is necessary.

It is important that the restored timber is completely dry before the application of Cutek timber preservative. Allow 3-4 days of hot, fine drying weather. If unsure, use a moisture meter to measure the moisture content (must be <18%) of the restored timber before coating.

Failure to treat the wood after restoration will result in the weathering process occurring more rapidly than it took prior to restoration.

2. WAO Weathered and Stained Wood Restorer

Basic Use

WAO was developed because exterior wood surfaces including structures, shingle roofs, decks, cladding etc. become discoloured from dirt and general weathering and greying. WAO counteracts the weathering process by eliminating years of discoloration and fungus from all species of timber. It cleans, brightens and restores wood surfaces back to the appearance of new timber. In addition it is exceptional at removing stubborn stains such as tannin stains, resin stains, fungal & algae stains, green CCA stains, oil & grease stains, surface greying and many other chemical stains that may destroy the natural beauty of wood.

It is important to note that the use of high-pressure water alone to clean timber will create damage to the wood fibres as well as uneven start and stop marks. Water alone will not remove fungus growth from the timber.

It is also important to understand that the use of commercial and household cleaning solutions that contain bleaching agents such as Sodium Hypochlorite etc should be avoided.

² See separate brochure and data sheet

These chemical cleaners will harm the environment and will damage the timber tissue. Additionally, using bleach to clean timber may produce a film forming reaction in the outer wood fibres that causes a subsequent coating failure. WAO weathered wood restorer on the other hand is significantly safer, more effective, and biodegradable.

WAO may also be used to remove mill glaze from freshly sawn smooth timber.

Limitations

WAO is formulated for use on uncoated weathered timber surfaces or coated timber surfaces where the coating has eroded completely away. WAO will not remove any paint, stain or clear finish that is in sound condition. In these situations CD77 must be used. WAO may dull painted and metal surfaces if it is not rinsed off quickly.

Technical Data

Color/form: semi transparent viscous liquid

Coverage: 5-8 sq metres/litre depending on the smoothness and porosity of the substrate.

Rough sawn timber will require more product.

Packaging: 4 and 10 litre containers.

Preparation

Unlike bleach and detergents, WAO is not considered a strong defoliant, however, the use of drop cloths to protect delicate and/or adjacent vegetation is recommended.

Because of the wide variation in discoloration and timber species that are encountered, a test area should always be cleaned prior to commencement of the project to determine how much time the restoration procedure will require, and how much WAO will be required. This enables an accurate application procedure to be determined and cost estimated. It is important for the user to determine the suitability of the product for its intended application.

It is preferable to use WAO as supplied and it must always be mixed well before use. Sometimes however, the use of hot water rinsing combined with an easy to clean surface, means that WAO can be diluted with water. If a choice to dilute the product is made, always test to determine if the dilution being used is effective in cleaning. If the timber is proving easy to clean, it might be more cost effective to use **Saraclean** instead of WAO on a large project.

Application

Apply WAO liberally to a **pre-wetted** timber substrate with brush, roller, or garden sprayer. Let WAO do most of the work by letting it dwell on the surface for 10 minutes – 8 hours, or

such time as deemed to be necessary by the test procedure. It may be necessary to scrub stubborn stains moderately with a stiff fibre brush.

Removal

Once the WAO has cleaned the timber, it must be water rinsed (hot water works best) off. For best results wash off with high-pressure water at 60-80 bar (500-1000 p.s.i.) pressure. Clean from the highest point and work down methodically. ALWAYS clean off with a soft 'even fan shaped' water jet. DO NOT use 'turbojets' on timber. CAUTION must be used when cleaning soft timber to reduce the pressure and avoid scouring of sapwood. The longer that WAO is left on the substrate, the greater the rinse time required.

If WAO is being used to remove mill glaze (a smooth glossy surface found on smooth newly sawn timber which is impervious to most coatings) use the same procedure as above.

Cleanup and Precautions

WAO is slippery when applied to surfaces so use caution when walking on horizontal surfaces, especially shingle roofs. Do not walk on surfaces coated with WAO. Water flush all equipment, vegetation, paths, concrete, asphalt, and other adjacent surfaces immediately upon contact. Please refer to the health and safety considerations listed in the MSDS sheet³ prior to commencing any project. Be aware of wind drift in car or pedestrian traffic when rinsing or applying. Never leave behind any containers or equipment, and appropriately label any containers of residue for disposal.

Coating

Following the restoration of the timber with WAO, it is important to complete the restoration process by coating the timber with the **Cutek timber preservation system**.⁴ Application of Cutek eliminates the need for any future stripping because it is **not** a varnish or a film forming coating. It has been specifically designed to maximise the dimensional stability and aesthetic qualities of natural timber, while providing protection against ultraviolet degradation, moisture and fungus growth. Always remember that film-forming coatings can peel and may need to be sanded, stripped, or scraped when reapplication is necessary.

It is important that the restored timber is completely dry before the application of Cutek timber preservative. Allow 3-4 days of hot, fine drying weather. If unsure, use a moisture meter to measure the moisture content (must be <18%) of the restored timber before coating.

³ Appendix 2

⁴ See separate brochure and data sheet

Failure to treat the wood after restoration will result in the weathering process occurring more rapidly than it took prior to restoration.

3. Saraclean

Basic Use

Saraclean is designed as a cost effective, biodegradable cleaner for the restoration of uncoated, dirty and weathered timber. Saraclean is less powerful than WAO, however it is non hazardous, and will not damage substrates or vegetation adjacent to the timber surface being restored, eliminating the need for containment or masking.

It is important to note that the use of high-pressure water alone to clean timber will create damage to the wood fibres as well as uneven start and stop marks. Water alone will not remove fungus growth from the timber.

It is also important to understand that the use of commercial and household cleaning solutions that contain bleaching agents such as Sodium Hypochlorite etc should be avoided. These chemical cleaners will harm the environment and will damage the timber tissue. Additionally, using bleach to clean timber may produce a film forming reaction in the outer wood fibres that causes a subsequent coating failure. Saraclean on the other hand effectively sterilises and cleans timber without these problems.

Saraclean is excellent as a pre recoat wash for timber previously coated with the Cutek timber preservative system that is due to be recoated (after four years), because it effectively removes accumulated dirt and loose pigmentation from the surface fibres of the timber.

Saraclean can also be used for the cleaning of dirt, grime, oxidised paint, mould, fungi, moss and decayed material from wood, tiles, bricks, fibrolite, paths, driveways etc.

Limitations

Saraclean is designed to be used as a cleaner and sterilizer on uncoated weathered timber surfaces, and other substrates. Saraclean will not remove any paint, stain or clear finish that is in sound condition. In these situations CD77 must be used. When restoring a weathered timber structure with Saraclean, it may be necessary to treat resistant areas with more powerful WAO as required.

Technical Data

Color/form: white powder

Coverage: 5-8 sq metres/litre of made up solution depending on the smoothness and porosity of the substrate. Rough sawn timber will require more product.

Packaging: 100gm packets.

Preparation

Unlike bleach and detergents, Saraclean is biodegradable and will not damage vegetation or adjacent surfaces, so containment and masking is unnecessary.

Because of the wide variation in discoloration and timber species that are encountered, a test area should always be cleaned prior to commencement of the project to determine how much time the restoration procedure will require, and how much Saraclean will be required. This enables an accurate application procedure to be determined and cost estimated. It is important for the user to determine the suitability of the product for its intended application.

Saraclean must be prepared by mixing one packet of the powdered concentrate with 10L of clean water and stirring well until dissolved. If the made up solution is to be applied through a water blaster venturi system then ensure that the solution concentration is increased to compensate for water dilution through the machine.

Application

Apply Saraclean liberally to the timber substrate with brush, roller, garden sprayer, or water blaster venturi system. Let the Saraclean solution dwell on the surface for 10-15 minutes, or such time as deemed to be necessary by the test procedure. It is important not to let the substrate dry out.

Removal

Once the Saraclean has cleaned and sterilized the timber, it must be water rinsed (hot water works best) off. For best results wash off with high-pressure water at 60-80 bar (500-1000 p.s.i.) pressure. Clean from the highest point and work down methodically. ALWAYS clean off with a soft 'even fan shaped' water jet. DO NOT use 'turbojets' on timber. CAUTION must be used when cleaning soft timber to reduce the pressure and avoid scouring of sapwood. The longer that Saraclean is left on the substrate, the greater the rinse time required.

Cleanup and Precautions

Water flush all equipment, vegetation, paths, concrete, asphalt, and other adjacent surfaces immediately upon contact. Please refer to the health and safety considerations listed in the MSDS sheet⁵ prior to commencing any project.

⁵ Appendix 3

Coating or Recoating

Following the restoration of the timber with Saraclean, it is important to complete the restoration process by coating the timber with the **Cutek timber preservation system**.⁶ Application of Cutek eliminates the need for any future stripping because it is **not** a varnish or a film forming coating. It has been specifically designed to maximise the dimensional stability and aesthetic qualities of natural timber, while providing protection against ultraviolet degradation, moisture and fungus growth. Always remember that film-forming coatings can peel and may need to be sanded, stripped, or scraped when reapplication is necessary.

If Saraclean is being used as a pre recoat wash for timbers previously coated with Cutek timber preservative, then only one coat of Cutek timber preservative is required to complete the restoration process.

It is important that the restored timber is completely dry before the application of Cutek timber preservative. Allow 3-4 days of hot, fine drying weather. If unsure, use a moisture meter to measure the moisture content (must be <18%) of the restored timber before coating.

Failure to treat the wood after restoration will result in the weathering process occurring more rapidly than it took prior to restoration.

4. Restoration Product Selection Chart

Situation	Product
Timbers coated four years previously with Cutek have faded and need a recoat.	Saraclean
Timber structure coated with mostly failed anti-graffiti coating, needs to be restored and coated with Cutek timber preservative system.	CD77 & WAO
Uncoated, weathered grey cladding on house or timber structure needs restoration and coating with Cutek timber preservative system.	Saraclean & WAO
Natural timber garage door has graphite stains in the timber.	WAO
Acid splashes from exposed aggregate drive have damaged natural timber cladding or garage door.	WAO
Exterior paintwork on structure is dirty and mouldy and needs water blast cleaning	Saraclean
Natural timber cladding previously coated with linseed oil coating has gone black.	CD77
Timbers previously coated with clear or semi clear varnish that has failed and is peeling.	CD77

⁶ See separate brochure and data sheet

Timbers previously coated with "penetrating stain" are peeling	CD77
Hardwood decking has gone black with lifting butt joints.	WAO
Water or tannin stains on natural timber cladding	WAO

Appendix 1

Material Safety Data Sheet

1. Product and Company Identification

Product Name: CD77 SUPA Stripper

Trade Name: CD77 SUPA Stripper

Revision Date: 25/03/2005

Company Name: Chemisys Australia Pty Ltd

Address: P. O. Box 3604
Loganhome
QLD 4129
Australia
Mobile 0438 923248 Fax 07 32877288
Phone 07 32877266

Hazardous according to the criteria of Worksafe Australia

2. Composition/Information on Ingredients

Ingredients considered hazardous according to the criteria of Worksafe Australia:

Chemical Name	CAS #	Proportion	EU Classification
Methylene Chloride	[75-09-2]	30-60%	Xn; R40
Formic Acid	[64-18-6]	10-<30%	C; R34

Ingredients determined not to be hazardous to 100%

Notes on EU Symbols: Xn Harmful, C Corrosive

3. Hazards Identification

Harmful: Possible Risks of Irreversible Effects

Corrosive: Causes Burns

4. First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. IMMEDIATE medical attention is necessary

Ingestion:

Give patient as much water as possible short of vomiting. IMMEDIATE medical attention is necessary. Tell doctor that liver and kidney failure may occur.

Inhalation:

Remove victim to fresh air. Persons administering first aid to overexposure victims should carefully wash off any visible product from the victims face. Do not give anything by mouth to an unconscious person. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult administer oxygen. Get medical attention IMMEDIATELY.

Skin:

Wash with plenty of soap and water. Remove contaminated clothing and footwear. Wash clothing and contaminated footwear before reuse. Seek medical attention.

5. Fire-Fighting Measures

Flash Point: N/A

Extinguisher Media: Foam, carbon dioxide, dry chemical.

Unusual Fire and Explosion Hazards: None known

Special Protective Equipment: Fires in confined spaces should be dealt with by trained personnel wearing approved breathing apparatus.

6. Accidental Release Measures

Steps to be taken if material is released or spilled:

Wear appropriate protective clothing. Eliminate all ignition sources. Restrict access to contaminated area. Stop spill at source. Dike to prevent spreading. Collect free liquid into a recovery vessel. Absorb remainder with sand or clay and place in a properly labelled waste receptacle. Follow all government and local body regulations for disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes and other bodies of water.

Container Disposal:

DO NOT reuse container. Dispose of safely.

7. Handling and Storage

Handling:

Avoid contact with eyes and skin

Do not breathe vapour

Wear gloves and suitable protective clothing

Storage:

Store in a cool, dry place locked out of reach of children in lacquer, plastic or poly-lined containers. A pressure build up may occur. If this happens release the bung slowly until hissing has stopped.

8. Exposure Controls/Personal Protection

Ventilation Requirements:

Ventilate via mechanical methods (general or local exhaust) to maintain exposure below 5mg/m³. Good industrial hygiene practise dictates that indoor work areas should be isolated and provided with adequate local exhaust ventilation.

Respiratory Protection:

Filtered masks must be worn

Eye Protection:

Safety glasses with a side shield or full-face shield must be worn

Skin Protection:

PVC Gauntlet gloves must be worn, along with a plastic apron

Other precautions:

This product may produce severe skin burns and is harmful by ingestion and inhalation. DO NOT SMOKE when using this product

9. Physical and Chemical Properties

Appearance:	Semi transparent gel
Odour:	Significant solvent odour.
Boiling Point	40 degrees Celsius
Specific Gravity:	1.24 @ 20 degrees Celsius
Solubility in Water:	Partially soluble
Flash Point:	N/A

10. Stability and Reactivity

Stability:	High temperature may contribute to instability
Incompatibility:	Will attack many plastics and bitumen but is otherwise stable. Corrosive to most metals
Hazardous Decomposition Products:	Chloride and Phosgene fumes.
Hazardous Polymerisation:	Will not occur

9. Toxicological Data

Acute over exposure to this product could be fatal and may see the development of shock, followed by unconsciousness, accompanied by liver and kidney failure as late complications. LD50 Oral Rat: >1610 mg/kg (estimate based on raw material data)

Eyes:

Severe pain and corneal burns will occur, and possible irreversible damage

Ingestion:

Nausea, vomiting and sweating with burns to the mouth, oesophagus and stomach may occur. Unconsciousness may follow. Ingestion is harmful and may be fatal.

Inhalation:

Dizziness and shortness of breath occur from mild poisoning. In severe cases, congestion, shock, unconsciousness and convulsions may occur.

Skin:

Severe burns may result from contact with skin. These are painless and show up as white and later red blotches. Blistering and loss of skin may result. This product is absorbed through the skin.

12. Ecological Information

Hazard:

When using this product outside, use containment procedures to avoid unnecessary contact with the environment

This product is toxic to marine organisms.

13. Disposal Considerations

Dispose of via an authorised person/licensed waste disposal 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 and carefully.

Do not dispose of near waterways, down drains or into soil.

14. Transport Information

Classified as hazardous for transport (ADG, UN, IATA/ICAO)

Dangerous Goods Class: 6.1 Subsidiary Risk 8 Toxic Liquid, Corrosive, Organic, NOS

15. Regulatory Information

Australian Classifications:

UN Number: 2927
 HAZCHEM Code: 2XZ
 Poison Schedule: 6
 Dangerous Goods Class 6.1 Subsidiary Risk 8 Toxic Liquid, Corrosive, Organic, NOS
 Packaging Group: III
 EC Labelling: Harmful: Possible Risks of Irreversible Effects
Corrosive: Causes Burns

	S (1, 2);	Keep locked up and out of reach of children
	S 24, 25	Avoid contact with eyes and skin
	S 23	Do not breathe vapour
	S 36, 37	Wear gloves and suitable protective
clothing		
	S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
	S 45	In case of accident or if you feel unwell seek medical advice immediately and show this container or label.

16. Other Information

Compiled by:

Chemisys Australia Pty Ltd

P. O. Box 3604

Loganholme

QLD 4129

Australia

This data sheet and the health, safety and environmental information it contains is considered to be accurate as of the date specified. However no warranty or representation, expressed or implied is made as to the accuracy or completeness of the data and the information in this data sheet.

Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The Chemisys Group shall not be responsible for any damage of injury resulting from abnormal use of this

material, from any failure to adhere to recommendations or from any hazards inherent in the nature of the material.

Appendix 2

Material Safety Data Sheet

1. Product and Company Identification

Product Name: WAO Timber Restoration Agent

Trade Name: WAO

Revision Date: 12/07/2004

Company Name: Chemisys Australia Pty Ltd
A.C.N. 096 578 013

Address: P. O. Box 3604
Loganholme
QLD 4129
Australia
Phone 0438 923248 Fax 07 38064433

Hazardous according to the criteria of Worksafe Australia

2. Composition/Information on Ingredients

Ingredients considered hazardous according to the criteria of Worksafe Australia:

Chemical Name	CAS #	Proportion	EU Classification
Oxalic Acid	[144-62-7]	10-<30%	Xn; R21/22

Ingredients determined not to be hazardous to 100%

Notes on EU Symbols: Xn Harmful

3. Hazards Identification

Harmful in contact with skin

Harmful if swallowed

4. First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Seek medical attention as soon as possible.

Ingestion:

DO NOT induce vomiting. If vomiting occurs spontaneously, keep airway clear. Seek medical attention IMMEDIATELY. NEVER induce vomiting or give anything by mouth to an unconscious patient.

Inhalation:

Remove victim to fresh air. Persons administering first aid to overexposure victims should carefully wash off any visible product from the victims face. Do not give anything by mouth to an unconscious person. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult administer oxygen. Get medical attention IMMEDIATELY.

Skin:

Wash with plenty of soap and water. Remove contaminated clothing and footwear. Wash clothing and contaminated footwear before reuse. Seek medical attention if irritation persists.

Note to doctor:

Treat symptomatically.

5. Fire-Fighting Measures

Flash Point: Not Applicable

Extinguisher Media: Not Applicable

Unusual Fire and Explosion Hazards: Reacts with strong oxidising materials

Special Protective Equipment: Not Applicable

Combustion Products: Not Applicable

6. Accidental Release Measures

Steps to be taken if material is released or spilled:

Wear appropriate protective clothing. Eliminate all ignition sources. Restrict access to contaminated area. Stop spill at source. Dike to prevent spreading. Collect free liquid into a recovery vessel. Absorb remainder with sand or clay and place in a properly labelled waste receptacle. Follow all government and local body regulations for disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes and other bodies of water.

Container Disposal:

DO NOT reuse container. Dispose of safely.

7. Handling and Storage

Handling:

Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practises. Wash hands thoroughly after contact.

Storage:

Store in a cool, dry place out of reach of children.

8. Exposure Controls/Personal Protection

Ventilation Requirements:

Ventilate via mechanical methods (general or local exhaust) to maintain exposure below 5mg/m³. Good industrial hygiene practise dictates that indoor work areas should be isolated and provided with adequate local exhaust ventilation.

Respiratory Protection:

None normally required if good ventilation is maintained. If mist is generated during application process, use a disposable mist respirator.

Eye Protection:

If accidental eye contact is possible then wear goggles or a face visor.

Skin Protection:

This product is corrosive to tissue. Unnecessary skin contact should be avoided and good personal hygiene practises observed. If skin contact is anticipated then protective clothing including impervious gloves should be worn.

9. Physical and Chemical Properties

Appearance:	Semi-transparent liquid
Odour:	Odourless
PH Range:	1.5 - 3.5
Specific Gravity:	1.05 @ 20 degrees Celsius
Solubility in Water:	Complete
Flash Point:	Not Applicable

10. Stability and Reactivity

Stability:	Products of this type are stable and unlikely to react in a hazardous manner under normal conditions.
Incompatibility:	Strong Oxidising Agents, alkalies, chlorides and hypochlorites
Hazardous Decomposition Products:	CO ₂ & Formic Acid
Hazardous Polymerisation:	Will not occur

11. Toxicological Data

Oxalic acid is corrosive to tissue. When ingested it removes calcium from the blood. Kidney damage can be expected as the calcium is removed from the blood in the form of calcium oxalate. The calcium oxalate then obstructs the kidney tubules.

Eyes:

Can cause severe irritation, redness, tearing, and blurred vision. Can cause irreversible damage on prolonged contact.

Ingestion:

Can cause gastro-intestinal irritation, nausea, vomiting, and diarrhoea, kidney damage

Inhalation:

At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. Can cause serious corrosive damage to the mouth, throat and stomach.

Skin:

Prolonged or repeated contact may result in itching, defatting, dermatitis or more serious irreversible skin disorders.

12. Ecological Information

This product is biodegradable in composition.

13. Disposal Considerations

Dispose of via an authorised person/licensed waste disposal 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 and carefully.

Do not dispose of near waterways, down drains or into soil.

14. Transport Information

Not classified as hazardous for transport (ADG, UN, IATA/ICAO)

15. Regulatory Information

Australian Classifications:

UN Number:	NA
HAZCHEM Code:	NA
Dangerous Goods Class	NA
Packaging Group:	NA
EC Labelling:	S24, S25, S2: Avoid contact with eyes and skin. Keep out of reach of children

16. Other Information

Compiled by:

Chemisys Australia Pty Ltd

A.C.N. 096 578 013

P. O. Box 3604
Loganholme
QLD 4129
Australia

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Appendix 3

Material Safety Data Sheet

1. Product and Company Identification

Product Name: SARAClean

Trade Name: SARAClean

Revision Date: 20/08/2004

Company Name: Chemisys Australia Pty Ltd
A.C.N. 096 578 013

Address: P. O. Box 3604
Loganholme
QLD 4129
Australia
Phone 0438 923248 Fax 07 38064433

Not hazardous according to the criteria of Worksafe Australia

2. Composition/Information on Ingredients

Ingredients considered not hazardous according to the criteria of Worksafe Australia:

Chemical Name	CAS #	Proportion	EU Classification
Sodium Carbonate/Sulphate	[497-19-8/7757-8]	10-<30%	Xi; R36, R38
Disodium peroxydicarbonate	[15630-89-4]	to 100%	Xi; R36

Notes on EU Symbols: Xi Irritant

3. Hazards Identification

Irritating to eyes and skin. 1% aqueous solution is non-irritant

4. First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Seek medical attention as soon as possible.

Ingestion:

May irritate gastrointestinal tract. If ingested decomposition may occur in the stomach leading to the production of oxygen gas. Give water to drink and rinse out the mouth with water. DO NOT induce vomiting. If vomiting occurs spontaneously, keep airway clear. Seek medical attention IMMEDIATELY. NEVER induce vomiting or give anything by mouth to an unconscious patient.

Inhalation:

Remove victim to fresh air. Persons administering first aid to overexposure victims should carefully wash off any visible product from the victims face. Do not give anything by mouth to an unconscious person. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult administer oxygen. Get medical attention IMMEDIATELY.

Skin:

Wash with plenty of soap and water. Remove contaminated clothing and footwear. Wash clothing and contaminated footwear before reuse. Seek medical attention if irritation persists.

Note to doctor:

Treat symptomatically. Aspiration of material into lungs due to vomiting may cause chemical pneumonitis.

5. Fire-Fighting Measures

Flash Point:

Is not combustible, and therefore will not burn

Unusual Fire and Explosion Hazards: When exposed to moisture or subjected to heat from combustion of other material, will decompose to liberate oxygen. This may cause other materials to burn more fiercely. Under confinement may cause pressure bursts due to release of gases of decomposition.

6. Accidental Release Measures

Steps to be taken if material is released or spilled:

Contain spillage. Dilute small quantities with water and flush to drain. Follow all government and local body regulations for disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes and other bodies of water.

7. Handling and Storage

Handling:

Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practises. Sensitive individuals may develop skin irritation on prolonged or repeated contact. Wash hands thoroughly after contact.

Storage:

Store in a cool, dry place out of reach of children. Maximum storage temperature 35 degrees Celsius. Seal packs when not in use.

8. Exposure Controls/Personal Protection

Ventilation Requirements:

Ventilate via mechanical methods (general or local exhaust) to maintain exposure below 5mg/m³. Good industrial hygiene practise dictates that indoor work areas should be isolated and provided with adequate local exhaust ventilation.

Respiratory Protection:

None normally required if good ventilation is maintained. If mist is generated during application process, use a disposable mist respirator.

Eye Protection:

If accidental eye contact is possible then wear goggles or a face visor.

Skin Protection:

Unnecessary skin contact should be avoided and good personal hygiene practises observed. If skin contact is anticipated then protective clothing including impervious gloves should be worn.

9. Physical and Chemical Properties

Appearance:

White free flowing powder.

Odour:	Nil
PH Range:	9.0-10.0
Specific Gravity:	1.0 @ 20 degrees Celsius
Solubility in Water:	150g/litre @ 20 degrees Celsius
Flash Point:	N/A

10. Stability and Reactivity

Stability:	Stable under ambient temperature to 35 degrees Celsius
Incompatibility:	Acids, alkalis, reducing agents, oxidising agents, rust, transition metals and their compounds (such as iron, copper, brass, bronze, cobalt, nickel, lead) as well as organic and combustible materials.
Hazardous Decomposition Products:	Liberates oxygen which will support combustion. Evolves steam and liberates heat
Hazardous Polymerisation:	Will not occur

9. Toxicological Data

Eyes:

Can cause severe irritation, redness, tearing, and blurred vision.

Ingestion:

Acute Toxicity (Rat): LC50 more than 4580mg/l. Designed for use as a 1% aqueous solution. Can cause gastro-intestinal irritation, nausea, vomiting, and diarrhoea.

Inhalation:

At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility.

Skin:

Acute Toxicity (Rat): LD50 900-2100 mg/kg. Prolonged or repeated contact may result in itching, defatting, dermatitis or more serious skin disorders.

12. Ecological Information

Hazard:

N/A

Mobility:

N/A

13. Disposal Considerations

Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations.

Dispose of product and container responsibly and carefully.

Do not dispose of near waterways, down drains or into soil.

14. Transport Information

Not classified as hazardous for transport (ADG, UN, IATA/ICAO)

15. Regulatory Information

Australian Classifications:

UN Number: NA

HAZCHEM Code: NA

Dangerous Goods Class NA

Packaging Group: NA

EC Labelling: Xi; R36, R38 Irritating to eyes and skin

16. Other Information

Compiled by:

Chemisys Australia Pty Ltd

A.C.N. 096 578 013

P. O. Box 3604

Loganholme

QLD 4129

Australia

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