Section 1 - Identification of Chemical Product And Company

CDK STONE NZ Ltd	**Emergency Phone:**	**0800 764766**
2/40 Canaveral Drive	**NZ Emergency Services:**	**111**
Rosedale		
Auckland	**Phone:**	**0800 803 932**
NEW ZEALAND	**Fax:**	**+64 9 479 2424**

Substance: **Cleaner**

Trade Name: **Lithofin KF Active Clean**

Product Use:

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: HAZARDOUS SUBSTANCE: according to the criteria of HSNO.
REGULATED under NZS5433:2007 Transport of Dangerous Goods on Land

HSNO Signal Word: DANGER

Emergency Overview

Physical Description & colour: Light green liquid

Odour: Perfumed

Hazard Classification:

Metallic Corrosivity	Category 1	8.1A
Acute Oral Toxicity	Category 4	6.1D
Acute Dermal Toxicity	Category 5	6.1E
Skin Effects	Category 1B	8.2B
Eye Effects	Category 1	8.3A
Acute Aquatic Hazard	Category 2	9.1B
Vertebrate Hazard	Category 3	9.3C

Signal Word DANGER

Hazard Statements:

H290	May be corrosive to metals
H302	Harmful if swallowed
H313	May be harmful in contact with skin
H314	Causes severe skin burns and serious eye damage
H401	Toxic to aquatic life
H433	Harmful to terrestrial vertebrates

Precautionary Statements

Prevention

P234	Keep in original packaging
P260	Do not breathe mists/ vapours/ sprays
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
P270	Do not eat, drink or smoke whilst using this product
P273	Avoid release to the environment

Response

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+361+352 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of water and soap.
P332+313 If skin irritation occurs. Get medical attention
P363 Wash contaminated clothing before reuse
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
P337+313 If eye irritation persists. Get medical attention
P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P308+311 If exposed or concerned. Call a POISON CENTRE/ doctor/ physician/ first aider

Storage

P405 Store locked up

Disposal

P501 Dispose of content/ container to an authorised hazardous or special waste collection point in accordance with local regulation

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc.%
Phosphoric acid	7664-38-6	20 - 30 %
Isopropanol	67-63-0	1 - 10 %
Poly(oxy-1,2-ethanediyl),α-tridecyl-ω-hydroxy-, branched	69011-36-5	1 – 10 %
Poly(oxy-1,2-ethanediyl),α-isotridecyl-ω-hydroxy	9043-30-5	1 – 10 %

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 0800 764766 from anywhere in New Zealand (13 1126 in Australia) and is available at all times. Have this SDS or product label with you when you call.

Eye Contact: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact: Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.

Inhalation: Remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay. Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested. Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. This must definitely be left to a doctor or person authorised by him/her.

Ingestion: For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or

	place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness, i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay. Avoid giving milk or oils. Avoid giving alcohol.
Note to Physician:	Treat symptomatically

Section 5 - Fire Fighting Measures

Extinguishing Media:	Preferred extinguishing media are water spray or fog, dry chemical, BCF or foam
Fire and Explosion Hazards:	WARNING: In use may form flammable/ explosive vapour-air mixtures. Combustible. Slight fire hazard when exposed to heat or flame. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. Heating may cause expansion or decomposition leading to violent rupture of containers. May emit acrid smoke and corrosive fumes.
Fire Fighting:	Alert Fire & Emergency New Zealand and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Equipment should be thoroughly decontaminated after use
Fire Decomposition:	Carbon monoxide (CO), Carbon dioxide (CO_2) Phosphorus Oxides (PO_x) and other pyrolysis products typical of burning organic material.

Section 6 - Accidental Release Measures

Minor Spills:	Environmental hazard - contain spillage. Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material Check regularly for spills and leaks. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills:	Environmental Hazard – contain spillage. Clear area of personnel. Alert Fire & Emergency New Zealand and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment as required. Prevent spillage from entering drains or water ways. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal. Wash area and prevent runoff into drains or waterways. If contamination of drains or waterways occurs, advise emergency services.

Section 7 - Handling and Storage

Handling:	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Storage:	Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:
Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure limits

CAS no.	Substance or ingredient	WES-TWA	WES-STEL
7664-38-2	Phosphoric acid	1 mg/m^3	
67-63-0	Isopropanol	983 mg/m^3 400 ppm	1230 mg/m^3 500 ppm

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Engineering Controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh

Personal Protective Equipment

Eye Protection:

Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly

Skin Protection:

Wear elbow length chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber Overalls. PVC Apron. PVC protective suit may be required if exposure severe.

Protective Material Types:

We suggest that protective clothing be made from the following materials:

Neoprene

Nitrile

Respirator:

Type AB-P Filter of sufficient capacity

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Light green liquid
Odour:	Perfumed
pH:	no data
Vapour Pressure:	300 kPa
Relative Vapour Density:	not available
Viscosity	not available
Boiling Point:	96 °C
Volatiles:	no data %
Water Solubility:	miscible
Freezing/Melting Point:	-5 °C
Specific Gravity:	1.3 g/ml
Flashpoint	no data °C
Auto ignition temp:	no data °C
Evaporation Rate:	not available
Coeff Octanol/water distribution	no data

Section 10 - Stability and Reactivity

Stability	Product is considered stable
Conditions to Avoid:	Avoid contact with ignition sources
Incompatibilities:	Segregate from alkalis, oxidising agents and chemicals readily decomposed by acids i.e. cyanides, sulfides, carbonates. Avoid reaction with oxidizing agents, i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result
Polymerisation:	This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Inhaled:

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. Aliphatic alcohols with more than 3-carbons cause headache, dizziness, drowsiness, muscle weakness and delirium, central depression, coma, seizures and behavioural changes. Secondary respiratory depression and failure, as well as low blood pressure and irregular heart rhythms, may follow. Inhalation of the vapour may cause choking, coughing, headache, weakness and dizziness, and with long term exposure, fluid accumulation in the lungs and blueness, initially in the fingertips. The odour of isopropanol may give some warning of exposure, but odour fatigue may occur. Inhalation of isopropanol may produce irritation of the nose and throat with sneezing, sore throat and runny nose. High concentrations cause inflamed airways and watery swelling of the lungs with oedema.

Ingestion

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident.

Skin Contact

Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Most liquid alcohols appear to act as primary skin irritants in humans. Significant percutaneous absorption occurs in rabbits but not apparently in man. Open cuts abraded or irritated skin should not be exposed to this material Entry into the bloodstream, through for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye Contact

Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely. If applied to the eyes, this material causes severe eye damage.

Chronic Health Effects

Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Long term, or repeated exposure of isopropanol may cause incoordination and tiredness. Repeated inhalation exposure to isopropanol may produce sleepiness, incoordination and liver degeneration. Animal data show developmental effects only at exposure levels that produce toxic effects in adult animals. Isopropanol does not cause genetic damage. There are inconclusive reports of human sensitisation from skin contacts with isopropanol. Chronic alcoholics are more tolerant of the whole-body effects of isopropanol. Animal testing showed the chronic exposure did not produce reproductive effects.

TOXICITY AND IRRITATION

Ingredient	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
Phosphoric acid	1250 mg/kg	>1260 mg/kg	0.0255 mg/L/4h
Isopropanol	4396 mg/kg	12800 mg/kg	72.6 mg/l/4h
Tridecanol, branched ethoxylate	1080 mg/kg		
Isotridecyl alcohol, ethoxylated			

Section 12 - Ecological Information

Harmful to aquatic organisms
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.

Ingredient	Fish	Crustacea	Algae
Phosphoric acid	$LC_{50\ 96hr}$ 75.1 mg/L	$EC_{50\ 48hr}$ >5.62 mg/L	$EC_{50\ 96hr}$ 15.29 mg/L $EC_{10\ 72hr}$ 37.7 mg/L NOEC $_{72hr}$ 3.71 mg/L
Isopropanol	$LC_{50\ 96hr}$ 9-640 mg/L NOEC $_{5760hr}$ 0.02 mg/L	$EC_{50\ 48hr}$ 12500 mg/L $EC_{0\ 24hr}$ 5-102 mg/L	$EC_{50\ 96hr}$ 933.232 mg/L
Tridecanol branched, ethoxylated	$LC_{50\ 96hr}$ 2.5 mg/L	$EC_{50\ 48hr}$ 1.5 mg/L	$EC_{50\ 72hr}$ 2.3 mg/L

	Persistence H_2O/ Soil	Persistence Air	Bioaccumulation	Mobility
Phosphoric acid	HIGH	HIGH	LOW	HIGH
Isopropanil	LOW	LOW	LOW	HIGH

Section 13 - Disposal Considerations

Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product.
DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Consult Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled. The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. Only dispose to the environment if a tolerable exposure limit has been set for the substance. Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

Section 14 - Transport Information

HAZCHEM	2X

Land Transport UNDG

Class or division	8
Subsidiary Risk	None
UN Number	**3264**
UN Packing Group	II
Special Provisions	274
Limited Quantity	1 Lt
Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains phosphoric acid)

Air Transport IATA

ICAO/IATA Class	8
ICAO/IATA Subrisk	None
UN/ID Number	**3264**
ERG Code	8L
Packing Group	II
Special provision	A3 A803
Cargo only	
Packing instructions	855
Maximum Qty/pack	30 Lt
Passenger and Cargo	
Packing instructions	851
Maximum Qty/pack	1 Lt
Passenger & Cargo Limited Quantity	
Packing instructions	Y840
Maximum Qty/pack	500 ml
Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains phosphoric acid)

Marine Transport IMDG

IMDG Class	8
IMDG Subrisk	None
UN Number	**3264**
UN Packing Group	II
EmS Number	F-A S-B
Special provisions	274
Limited quantities	1 Lt
Marine pollutant	Yes
Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains phosphoric acid)

Section 15 - Regulatory Information

HSNO Approval: **HSR002658** **Surface Coatings & Colourants (Corrosive)**

Group Standard conditions and other regulations:

Condition	Requirement
SDS	Safety data sheet must be available to a person handling the substance within 10 minutes.
Emergency plan	Required when quantities exceed 500 Lt
Certified handler	Not required
Tracking	Not applicable
Bunding and secondary containment	Required dependent on pack size and total volume
Signage	Required when present in quantities exceeding 500 Lt
Location Compliance Certificate	Required when quantities exceed 250Lt
Hazardous Area	Not required
Fire extinguisher	Not required

National Inventories

Australia	AICS	Y
Canada	DSL	Y
Canada	NDSL	Y
China	IECSC	N
Europe	EINEC/ELINCS/NLP	Y
Japan	ENCS	N
Korea	KECI	Y
New Zealand	NZIOC	Y
Philippines	PICCS	Y
USA	TSCA	Y
Taiwan	TCSI	Y
Mexico	INSQ	N
Vietnam	NCI	Y
Russia	ARIPS	Y

Section 16 - Other Information

Revision History

August 2020	Initial Preparation

Acronyms:

CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially fire-fighters
HSNO	Hazardous Substances & New Organisms Act
IARC	International Agency for Research on Cancer
ICAO Technical Instruction	International Civil Aviation Organization Technical Instructions
IMDG Code	International Maritime Dangerous Goods Code controlled by the International Maritime Organisation (IMO)
LC_{50}	Lethal concentration 50% - concentration fatal to 50% of a population
LD_{50}	Lethal dose 50% - concentration fatal to 50% of a population
NZS 5433	New Zealand Standard 5433 (Standard for the Transport of Dangerous Goods on Land)
SDS	Safety Datasheet
STEL	Short Term Exposure Limit
TWA	Time Weighted Average (typically measured as 8-hours)

UN Number	United Nations Number
WES	Workplace Exposure standard

References

Chemical properties and HSNO classifications derived from the New Zealand chemical classification information database (CCID).
www.epa.govt.nz
Workplace exposure limits derived from Workplace Exposure Standards and Biological Exposure Indices 11th Edition (November 2019).

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material in combination with any other material or in any process, unless specified in the text.

This SDS was prepared by Collievale Enterprises Ltd in accord with the Hazardous Substances (Safety Data Sheets) Notice 2017
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End of SDS