



C-Complex™

GUIDELINES FOR CONCRETE GRINDING & POLISHING

DIAMOND TOOL PERFORMANCE ADDITIVE FOR CONCRETE CUTTING & GRINDING

C-Complex™ is a next-generation, concentrated performance additive designed to substantially increase concrete grinding, polishing and cutting speed and lengthen diamond tool life. C-Complex™ radically improves diamond tool effectiveness and lifespan, shortening jobs, lowering tool costs and raising profit margins.

Key Concrete Grinding & Polishing Applications

- Cutting back trowelled / hardened / densified slabs – those jobs where your diamonds are skating over the slab and not getting a purchase. Normally you might shot blast and then have still have to use diamond pads to flatten the concrete and get a reasonable surface to apply a coating or an underlay. 1% C-Complex in your water and your metal bond diamond pad will cut in easily
- Easier removal of coatings, even coatings with aluminium oxide or other hard aggregates. The additive cuts through easier and also prevents the polymer from gumming up your diamond pads.
- Normal grinding a polishing. Grind and polish faster. You should be able to move your machine faster across the slab and get the same result.

How C-Complex™ optimizes cutting / grinding speed AND diamond tool life:

- Exploits a physical property called the Rehbinder Effect, softening the substrate ahead of the tool.
- Maximizes effective torque at the tool–surface interface while reducing machine torque and tool vibration.
- Enables greater increase in penetration speed with increased cutting speeds and pressure.
- With pressure and heat, the additive forms a protective coating around each exposed diamond which minimizes diamond wear and retains sharpness.
- Preferentially fills micro fractures in diamonds as they occur during use, reducing hydraulic pressure inside the cracks and slowing disintegration of the diamonds.

Silica Safety

C-Complex™ is non-toxic, low odor and biodegradable, used at approximately 1% concentration with water.

There has been a worldwide shift toward wet grinding and cutting of concrete in response to global recognition of the health risks from breathing in silica dust released from concrete and granite aggregate. In many countries, dry processing of concrete and natural stone outdoors has been outlawed and indoor dry processing must adhere to strict ventilation protocols in controlled factory environments.

If you're grinding and polishing dry you are risking terrible health issues. We understand there are some great vac systems out there, but with high lumen spotlights we still notice plenty of very tiny silica s

C-Complex™ Technical Benefits

- Low cost concentrate – dilution of approximately 1% with water.
- Easy to use for both wet and low water grinding and with simple or sophisticated equipment
- Increased tool life up to 40%
- Concrete grinding and polishing: significant increase in grinding speed. Recommended for grinding back coatings or polished concrete with densifiers / hardeners.
- Concrete cutting: Multiple x increase in concrete cutting and coring speed – we have achieved greater than 6x cutting speed on real life projects.
- Increased machine life: C-Complex™ increases torque at the cutting interface while reducing load on the machine and tool vibration.
- Biodegradable
- Anti-fouling, bacterial growth resistant
- Built in anti-rust / corrosion inhibitors

How to Use: Concrete Polishing

- Option 1 – mix 1% C-Complex™ with water, then apply solution to concrete floor.
- Option 2 – In situations where you have system which releases water onto the floor as you go, premix 1% C-Complex™ with the water in your tank or use an electronic doser/fertigation equipment to add 1% C-Complex™ into the mix as you go.
- Typical Application Rate: is 0.8 to 1% C-Complex™ mixed with water. 1% works very well for most projects.

Additional How to Use tips:

- Make wet grinding easier with M-Protect™ and M-Clean™:
- M-Protect™ is a release agent which is sprayed onto machinery prior to use and allows easier removal of dried concrete slurry.
- M-Clean™ is a high-tech acid wash which enables quick removal of dried concrete slurry from machinery without corrosion to exposed metals.
- W-Protect™ is a release agent which is sprayed onto walls to protect them from stone slurry and rinses off easily with water.
- If you use more than 1% C-Complex™ in a recycling system where the water is recycled or agitated in some way, you may get more than a desirable amount of foaming – then use Rache AF-NC7™ Anti-Foam. At concentrations of 1% or less this can usually be avoided.

Precautions

- Eye / Face: Wear splash-proof goggles.
- Hands: Wear PVC or rubber gloves.
- Body: When using large quantities or where heavy contamination is likely, wear coveralls.
- Respiratory: Where an inhalation risk exists, wear a Type A (Organic vapour) respirator.
- Do not take internally.
- Avoid spraying in windy conditions.
- Wash hands thoroughly.

First Aid

Eye: If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
 Inhalation: If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
 Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
 Ingestion: If swallowed, do not induce vomiting.

For advice, immediately contact a doctor, ambulance, or, a Poison Information Centre:

Australia - 13 11 26 (Australia Wide)
 USA - American Association of Poison Control Centres 1-800-222-1222
 Canadian Poison Centres – Ontario (24/7): Telephone: 416-813-5900; Toll free: 1-800-268-9017
 UK - England and Wales: NHS 111 - dial 111; Scotland: NHS 24 - dial 111; Republic of Ireland: 01 809 2166

Accidents

- Spillage – Take up mechanically or with absorbent material such as sand, earth or vermiculite.

Transport

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

Contact Details

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Mix Ratios

0.8% Concentration (1:125 Dilution)

Metric:

- 80mL C-Complex™ per 10L water
- 0.8L C-Complex™ to 100L water
- 8L C-Complex™ to 1000L water

Imperial:

- 10fl. Oz C-Complex™ to 10G water
- 3.2Qt. C-Complex™ to 100G water
- 8G C-Complex™ to 1000G water

1% Concentration (1:100 Dilution)

Metric:

- 10mL C-Complex™ per 10L water
- 0.1L C-Complex™ to 10L water
- 1L C-Complex™ to 100L water

Imperial:

- 5 Oz C-Complex™ to 1G water
- 1Qt. C-Complex™ to 6G water
- 1G C-Complex™ to 24G water

Pack Sizes

- 5L (1.3G); 20L (5.3G); 200L (53G); 1000L (264G) – for factory / OEM only.

Shelf Life and Storage Guidelines

- Best within 3 years of manufacture date.
- Keep container tightly sealed, in a well-ventilated place, at 36 - 100° Fahrenheit of 2 - 38° Celsius

Technical Data

- Specific Gravity: 1.04
- Colour: Clear colourless to light straw yellow liquid
- Weight: 5L (1.3G) = 5.5Kg (12.1Lb), 20L (5.3G) = 21.4Kg (47Lb, 200L (53G) = 56.5Kg (24Lb) incl. pallet.
- VOCs: 343g/L (using EPA method 24)

Country of Manufacture:

Australia