



"We make pool care easy"

INFORMATION RELEASE

Advanced Synergy Technology for Pool, Spa, & Fountains

Startup-Tec® Proactive Guidelines

As of April 2017

This is a technical reference manual for Startup-Tec® advanced proactive Startup treatment. Startup-Tec's® all-polymer sequestrant technology eliminates the conventional reactive startup process by preventing damage to newly plastered (concrete) surfaces before it's allowed to occur. Startup-tec® nearly eliminates calcium / plaster dust formation, costly laborious brushing, mottling discoloration and provides for a superior interior surface (plaster) finish.



For the Startup Technician:

Product Overview,
Application Guidelines,
Startup Tips,
and
Questions & Answers

Successfully tested at The National Pool Industry Research Center (NPIRC)
California Poly Technical State University, San Luis Obispo, CA – 2008 & 2009

Overview: Startup History and Startup-Tec® Treatment

In the past, one of the primary purposes for performing a *new pool startup* has been the removal of calcium or plaster dust on pool surfaces. This required daily surface brushing and the addition of sequestrants (usually high phosphates) to help remove the plaster dust buildup. The reduction of surface mottling discoloration, metal staining, and surface scaling were also additional startup concerns. With the introduction of the Startup-Tec® Proactive Startup Treatment, many of these startup issues have been greatly minimized and the amount of acid needed for quartz and pebble startups have been noticeably reduced. Follow manufacturer or industry standard exposure techniques on all types of plaster (cement) finishes.

With Startup-Tec®, most of the calcium / plaster dust formation has been eliminated. Weeks of surface brushing has been reduced to as little as three days or less. Color pigmented pools (grey, black, and blues) can now be finished with the confidence of color consistency and less mottling. Startups with Startup-tec® provides for a more brilliant, uniform surface finish with less labor, time, acid usage and cost. The pool builder, render / plaster, and startup company can now deliver to the new pool owner the pool they envisioned at time of purchase.

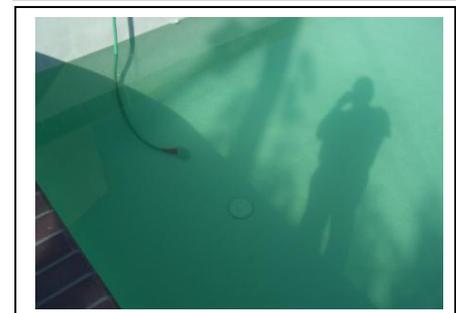
Startup-tec Application Directions

DURING pool filling:

- a) For best results, check for low pH, alkalinity or hardness values in fill water. Correct aggressive condition(s) within 48 hours of filled pool to prevent surface damage. For white cement / plaster, pigmented and quartz finishes: begin filling newly plastered pool with potable water. For exposed quartz or pebble type finishes: properly prepare pool surfaces for potable water and correct dosage of Startup-tec. For exposed aggregate and pebble type finishes: begin filling newly plastered pool after manufacturer or industry standard exposure techniques is completed. Add correct dosage of Startup-tec. Additional acid may be required if an exposure correction is needed.
- b) At the 300 to 500 gallon level (1200 to 2000 litres), add Startup-Tec® “Startup Dosage” to the pool basin for your size of pool and type of finish. *For color marcite finishes, add Startup-tec dosage at a mimimum of 500 gallons and disperse uniformly throughtout the bowl area.*
- c) Use plastic water can, PVC pipe or suspend bottle with small puncture on the bottom over pool and add product uniformly into pool bowl area - avoid splashing onto pool surfaces.
- d) Disperse the Startup-Tec® dosage as evenly as possible throughout the deep end of the bowl area. Continue filling the pool *without stopping* as this will also prevent an undesirable surface ring from forming. No other treatment is usually required.

AFTER pool is filled:

- a) Lightly brush all pool surfaces and move any remaining calcium / plaster dust towards the main drain. Brush-vac pool bottom to remove all traces of plaster dust - do not use roller type vac or pool cleaner for the first week. For several days, brush pool walls and bottom surfaces to remove any remaining dirt, debris, and dust matter. *Follow National Plaster Council guidelines for best results.*
- b) Exposed quartz and pebble type finishes may require brushing with a combo type brush to help remove loose plaster dust and debris within aggregate matrix. If an installation exposure correction is needed, acid additions can now begin with pool full.
- c) For all pools, balance pool water: adjust pH level, alkalinity (TA) and calcium hardness values. Add stabilizer conditioner and sanitizer as per label directions.



Note: For Pools filled without Startup-Tec®: Startup-Tec® must be added at the initial pool filling; if not used, add the product **Beautec® Scale & Stain Controller to remove calcium / plaster dust as soon as the pool is filled.**

1. Startup-Tec® must be added within the first 300 to 500 gallons (1200 to 2000 litres) of fill water to achieve proper results. Otherwise, plaster dust will form as pool is filling, mottling and discoloration and re-adhesion of plaster dust (calcium) is likely to occur.
2. For best results, *evenly distribute* Startup-Tec® throughout the bowl area as pool fills.
3. For color pigmented finishes; to ensure best exposure and minimize calcium mottling discoloration, use maximum dosage of one 64 oz. (2 litre) bottle per 10,000 gallons (37,000 litres).
4. To avoid splashing product onto pool surfaces use a watering can or perforate bottle seal with small holes to add Startup-Tec® directly into pool and throughout the fill area.
5. Brush ool surfaces for the first 3 days to ensure removal of calcium dust, dirt, and debris that may have settled during filling process, especially on exposed aggregate and pebble type finishes.
6. Add the product **Scaletec Plus®** (super-metal sequestrant and calcium dissolver) per 20,000 gallons (75,000 litres) of pool water in addition to Startup-Tec® under these conditions:
 - a. High dosage of calcium chloride set accelerator (during colder season and for pigmented finishes).
 - b. High metal content of iron, manganese, copper and/or calcium content in source fill water.

Commonly asked questions about pool startups with Startup-Tec®

1. **Q: Why must you add Startup-Tec® at the beginning of the new pool fill.**
A: *In order to block the formation of plaster dust, prevent mottling discoloration, this proactive product must be added as early as possible. Chemical reactions in hydrating cement occur as filling begins and continue through the curing process.*
2. **Q: Are acid additions still necessary once the pool is full?**
A: *Yes, all types of interior finishes will increase pH, alkalinity and calcium hardness values during the filling and curing process. Check fill water before plastering (or rendering) pool, adjust any aggressive conditions within 48 hours. Balance pool to reach a saturation index of 0.0 preferably. Additional acid may be required if an initial exposure is needed.*
3. **Q: How is a hot-startup used to achieve final exposure on aggregate and pebble type finishes?**
A: *Startup-Tec's® multi-polymer formula has proven extremely effective in preventing the formation of calcium plaster dust as well as calcium based precipitants from forming a film or "haze." Hot startups may be required to improve initial exposure pre-formed during the original plaster (or rendering) process.*
4. **Q: How does Startup-Tec® function?**
A: *As the new plaster is curing during the emersion water filling process, calcium and hydroxides in the plaster transport to the surface matrix edge and the high pH (from hydroxides), calcium, and water react to cause the formation of calcium carbonate plaster dust. This precipitation occurs at pH 8.3. Startup-tec's polymers sequester or grab the calcium molecule and prevent its precipitation when it would otherwise cause calcium dust. The product also helps disperse plaster cream residue and other particulate matter to provide a better, more uniform surface finish.*
5. **Q: I arrived at a pool to do a startup and the pool was already filled. What should I do now?**
A: *Do not use Startup-Tec®, instead use the product called Beautec® Scale-Stain-Scum Controller for effective removal of calcium / plaster dust buildup and any surface stains. This product should be added to the pool water as soon as possible. Distribute Beautec evenly around the pool perimeter. The product is completely compatible with all pool treatment chemicals*

6. **Q: How soon can I operate the pool cleaner and pool heater?**
A: *Normally, the pool cleaner vac can be started in 1 week after startup. Some pools free of plaster dust can operate cleaner in about 3 or 4 days after startup. The pool heater should be started as per manufacturer's instructions – most recommend starting heater no sooner than two weeks.*
7. **Q: After the pool is filled, what else should be done?**
A: *Balance the pool water: adjust pH level, alkalinity (TA) and calcium hardness especially in low alkalinity and/or hardness fill water. Add stabilizer conditioner and sanitizer as per label directions.*
8. **Q: How soon can salt be added to a salt pool after a startup is performed with Startup-Tec®?**
A: *The salt should not be added for a least four weeks as per National Plaster Council guidelines. This allows the necessary curing process of the plaster's porosity before the aggressive salts are added.*
9. **Q: I have to perform a startup on a large commercial pool. What is the best way to add Startup-Tec® to the pool while it is filling?**
A: *The product may be added using a variety of feed methods. Startup-Tec® may be slug (by hand) slowly into the fill water as soon as the first 300 to 500 gallons (1200 to 2000 litres) of water begin entering the pool. A chemical feed pump may be used to inject product into the fill water basin, hose siphon method or simply a PVC pipe to deliver product to pool without splashing on surfaces.*
10. **Q: Is pool water treated with Startup-Tec® safe for swimmers and can children or pet drink treated pool water?**
A: *Absolutely. Treated water is safe for swimmers and pets once the pool is filled.*
11. **Q: The Startup-Tec® label recommends a product called Beautec® scale and stain controller. How soon should it be added after completing a startup with Startup-Tec®?**
A: *Generally, Beautec® monthly maintenance dosage should be started within 30 days.*
12. **Q: How does Startup-Tec® prevent mottling discoloration on colored pigmented finishes?**
A: *Startup-Tec® reduces most abnormal discoloration on colored finishes due to effective prevention of most plaster dust formation. Because the product is added during the initial filling stage and not after the pool is filled, the normal discoloration of finishes can be greatly be prevented.*
13. **Q: I used Startup-Tec® to startup a new pool and I got lots of plaster dust. What happened?**
A: *Several possibilities could have caused this unusual condition to occur: **a)** one reason is either insufficient initial dosage and/or not adding the product at the initial filling stage; **b)** calcium chloride ratio in the concrete / plaster mixture exceeded the 2% maximum level; **c)** insufficient distribution of product as the pool filled may have also caused a problem; **d)** water / cement ratio was too high – too much water results in too much "cream" and plaster dust. **e)** Startup-tec was put in the main drain sump(s) without proper fill water buffer, product has migrated into plumbing lines without dispersion. **f)** Startup-tec was added too late during the filling stage, chemical reactions in hydrating cement and plaster dust (calcium) formation already occurring.*
14. **Q: How effective is Startup-Tec® on exposing aggregate finishes such as SpectraQuartz®, Australia Quartzon®, DiamondBrite®, GemStone®, Pebbletec® and GemStone®, etc?**
A: *Very effective. Both factory and field testing has demonstrated that pools with these types of finishes had virtually no plaster dust (calcium) or trapped calcium byproducts imbedded in aggregate / pebble surface matrix. Product controlled films or "haze" formations through curing process producing a more brilliant, colorful and uniform final result. Startup-Tec® is not a substitute for manufacturer or industry standard exposure techniques, proper acid washing, water brushing or water wandng that still must be done correctly.*
15. **Q: Can I substitute another sequestrant type scale and stain product for Startup-Tec® during the pool filling process?**
A: *Yes. However, some products are quickly degraded in the pool water once chlorine is added and some polymer based products offer weak metal control.*

For additional information regarding Startup-Tec®, please call customer technical support at 1-800-289-7660 ext. 224, Monday thru Friday 8:30 AM to 5 PM PST or email customersupport@easycarewater.com.
For after business hour assistance, call 1-559-246-3719.