



CLOW VALVE COMPANY – TGIC PROTECTIVE COATING

FAQ

1. **Q: What is TGIC?**

Answer: *Triglycidyl Isocyanurate* (TGIC) is a reference to the cross-linking agent in this polyester coating formula. TGIC powder coatings are widely used including applications in automotive, heavy machinery and air conditioning industries.

2. **Q: Why is Cure Time important in manufacturing hydrants?**

Answer: Cure time, the amount of time required for cross-linking, is an indication of when a coating will achieve design criteria. Manufacturers must risk damage to “soft” coatings during assembly or increase lead times to accommodate extended cure times.

3. **Q: How is Hardness determined and why is it important?**

Answer: Hardness quantifies how well a coating resists scratching and scuffing. Measured in accordance with ASTM D3363, a scratch test utilizing pencils of specified hardness. The rating scale, from softest to hardest; 6B – B, HB, F, H – 6H.

4. **Q: How is Direct Impact determined and why is it important?**

Answer: Direct Impact quantifies how well a coating prevents an impact from reaching the subsurface. Measured in accordance with ASTM D2794, coating is impacted with increasing force until subsurface is detected.

5. **Q: How is Chip Resistance determined and why is it important?**

Answer: Chip Resistance quantifies how well a coating resists damage from a sudden impact. Measured in accordance with ASTM D3170, an amount of specifically sized gravel is shot at a coating. Results are based on the number of chips (10 being the best) and size of chips (A being the smallest).

6. **Q: How is Gloss Retention determined and why is it important?**

Answer: Gloss Retention is an indication of how the coating retains aesthetic properties. Also known as Accelerated Weathering, panels were analyzed after 9 months exposure in Miami, FL.

7. **Q: How is Salt Spray determined and why is it important?**

Answer: Salt Spray quantifies how well a coating protects substrate from corrosive environment. Measured in accordance with ASTM D1654, coating is subjected to salt spray until creep extends 3mm from a scribe line.

8. **Q: What are VOCs and why are they important?**

Answer: Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids, including paints. VOCs include a variety of chemicals, some of which may have short and long-term adverse health effects.

9. **Q: Which colors are available?**

Answer: Clow will provide 7 TGIC colors standard. Contact Clow Sales Representative for details.

10. **Q: What should I consider if specifying coating thickness?**

Answer: Coating in excess of manufacturer recommendations increase potential of chipping.

11. **Q: Can I paint over TGIC with enamel?**

Answer: Yes, solvent or oil-based enamels will adhere to TGIC and can still be used in the field.



Hydrant Coating Comparison Chart



	Industry Standard	Competitor Upgrade	CLOW TGIC
Primer	Solvent-Based Enamel	Wet Epoxy (2 part)	TGIC Powder
Top Coat	Solvent-Based Enamel	Wet Urethane (2 part)	TGIC Powder
Cure Time* (Days)	15 - 30	10	0
Hardness*	HB - F	H	H - 2H
Direct Impact* (in/lbs)	40	40 - 60	120 - 160
Chip Resistance*	7A - 8B	9B - 9A	9C - 10A
Gloss Retention* <small>9 month South Florida test</small>	20 - 30%	60 - 80%	60 - 80%
Salt Spray Typical Hours* <small>3mm Creep Average from Scribe</small>	200	500	750
Chemical Resistance	Good	Excellent	Excellent
VOC's* (typical lbs/gal)	2.8 - 3.5	2.8 - 3.5	0

*Refer to FAQ questions 2 - 8 for details of testing procedures

Did You Know?

The Clow Valve Company Metal Casting Facility was the first iron and brass foundry operation in the nation to be awarded OSHA's VPP Merit Site status, and has since been awarded Star status.



www.clowvalve.com



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