

CONCOTE PRODUCTS

Features:

- Desired Surface Finish
- Good Lubricity & Insulation
- Good Release Properties
- Prevents Premature Die Failure
- Anti-Weld Properties
- Easily Applied

Hill and Griffith **CONCOTE™** products are permanent mold coatings formulated with special refractories, binders, wetting agents, and preservatives. **CONCOTE™** products provide a thin continuous film between the surface of the die and the castings.

Typical Product Data:

PRODUCT	COLOR	REFRACTORY
R200	RED	Mineral Blend containing Red Iron Oxide, Titanium Dioxide & other minerals
201	WHITE	Mineral Blend containing Titanium Dioxide, Barium Sulfate & other minerals
202	TAN	Mineral Blend containing Vermiculite, Mica and other materials
206	BLACK	Mineral Blend containing Talc, Graphite and other materials
R210	RED	Mineral Blend containing Talc, Red Iron Oxide and other materials
220	WHITE	Mineral Blend containing Titanium Dioxide, Talc and other materials
224	TAN	Mineral Blend containing Alumina, Talc and other materials
234	TAN	Mineral Blend containing Talc, Mica and other materials
242	PALE	Vermiculite suspension
257	TAN	Mineral Blend containing Vermiculite, Mica and other materials
R1276	RED	Mineral Blend containing Red Iron Oxide, Alumina and other materials
1282	WHITE	Mineral Blend containing Titanium Dioxide, Barium Sulfate and other materials

Concote™ Product Dilution Recommendations: Concote™ to Water Use Recommendations

R200	1:2	Insulating coating, best surface finish of Concotes™
201	2:3	Insulating coating that can be used in a top coating application
202	1:2	Insulating coating, use on large castings, riser coating, aluminum alloys
206	1:1	Coating, with an improved surface finish in aluminum, magnesium, zinc, brass & bronze
R210	1:4	Highly durable coating that works well as a base coating in multiple coating applications
220	2:3	Insulating coating that can be used in an application requiring a "rougher" surface
224	1:3	Medium Insulating coating that works well as a base coating in multiple coating applications
234	1:3	Rough insulating coating, slightly smoother than Concote™ 224
242	1:3	Medium surface finish, excellent riser coating
257	1:2	High insulation with good surface finish
R1276	1:2	Red insulating coating when a good durability application is required
1282	2:3	Insulating coating that can be used in as a top coating in a multiple coating application



CONCOTE PRODUCTS

Application: Prior to spraying the die surface, the surface should be cleaned to remove any adhering die coat and/or metal. Wire brushing or shell blasting is preferred. Remove all grease and oil and do not touch die with bare hands once cleaned. Dies should be preheated to the desired spraying temperature (350 - 500° F). The **CONCOTE™** product of choice should be diluted accordingly to recommended dilutions given previously. These dilution ratios are only a guideline and better performance may be realized with different dilution ratios depending on the job. A paint stirrer attached to an electric drill will adequately mix the product. The dilutions give smoother, harder coatings, whereas thicker mixtures result in softer, more insulating coatings. The clean, preheated die is placed on a rotating table in front of a spraying cabinet in a well-ventilated area. Use a very fine spray, air pressure at 36-60 p.s.i., and constant sprayer movement started away from the die face when coating the die. Make adjustments in the spray to a fairly concentrated, small cone. The spray gun should be as close to the die face as possible without forming drips or runs. A course finish may be obtained by a heavy spray from a distance. Coated dies should be stored at 200° F to prevent moisture absorption. Touch up can be accomplished on the machine with a long nozzle spray gun. If touch up is too frequent, plugging of vents and cooling the dies may result. Recoating is indicated when scrap rates increase, or metal starts to build up on die.

Cleaning Spray Equipment: Some means should be installed for flushing the spraying systems to remove silicate deposits which may form between pumping's. Dilute caustic soda solution (5 – 10% by wt.) aids in dissolving silicate deposits. Keeping lines filled with water when not in use helps prevent the silicate binder from curing. Lines should be thoroughly rinsed with clear water before refilling with any **CONCOTE™** product.

Finishing Operations: It has been proven in service that this family of permanent mold coatings does not interfere with paint adhesion thereby eliminating the need for any steps, other than normal cleaning procedures, before painting the part. These coatings have also been used successfully to cast parts, which are to be subsequently plated, anodized or chemically treated. Thorough cleaning of the part is requisite to obtaining a good adhesion of the finish coating in any operation.

Handling Suggestions: **CONCOTE™** products have been designed to be efficient under most conditions. However, in order to optimize savings and increase molding efficiency, the following handling methods are recommended.

Hard Water Dilution: **CONCOTE™** products are usually stable in hard water. However, softened or boiler condensate is recommended as a diluent.

Mixing with other Materials: **CONCOTE™** products are compatible with many other release agents and additives. Certain of these, however, will break the concentrate. Any mixture of **CONCOTE™** products with other materials should be thoroughly tested before it is put into factory use.

Storage Temperature: While **CONCOTE™** products will redisperse with agitation after freezing, it is recommended that freezing of the products be avoided. For best results, store between 40° and 80° F.

Safety Precautions: In general, **CONCOTE™** products are manufactured using components having low order of toxicity. Fluid or vapor in the eyes may cause transitory irritation that disappears with 24 hours. Flushing the eyes with flowing water will usually prevent discomfort. If irritation persists, consult a physician. Material Safety Data Sheets outlining known hazards and safety precautions associated with the products are available and should be used accordingly.