The invention claimed is:

1. A slurry composition comprising:

a chromium source consisting essentially of elemental chromium powder;

a non-nitrogen halide activator characterized by the absence of ammonium halide;

a buffer material selected from the group consisting of cobalt, aluminum, titanium, zirconium, manganese, silicon, hafnium, yttrium and any combination thereof; and further comprising nickel powder and

a binder solution, said binder solution comprising a binder material dissolved in a solvent, said solvent compatible with each of the non-nitrogen halide activator and the binder material.

2. The slurry composition of claim 1, wherein said chromium source is in a range from about 10% to about 90% of the slurry weight, said halide activator is in a range from about 0.5% to about 50% of the chromium source weight, said binder solution is in a range from about 5% to about 50% of the slurry weight and said buffer material is in a range from about 0.5% to about 100% of the chromium source weight, wherein the aggregate of said chromium source, said halide activator, said binder solution and said buffer material is equal to 100% of the slurry weight.

3. The slurry composition of claim 1, wherein said chromium source is in a range from about 30% to about 70% of the slurry weight, said halide activator is in a range from about 2% to about 30% of the chromium source weight, said buffer material is in a range from about 3% to about 50% of the chromium source weight; said binder solution in a range from about 15% to about 40% of the slurry weight, wherein

the aggregate of said chromium source, said halide activator, said binder solution and said buffer material is equal to 100% of the slurry weight.

4. The slurry composition of claim 1, further comprising an inert filler material.

5. The slurry composition of claim 1, wherein said activator comprises aluminum trifluoride.

6. The slurry composition of claim 1, wherein the halide activator further comprises the absence of alkali metal halides and alkaline earth metal halides.

7. The slurry composition of claim 1, wherein said solvent is deionized water.

8. A chromium diffusion coating prepared by the process comprising the steps of:

providing a substrate;

providing slurry constituents comprising: a chromium source consisting essentially of elemental chromium powder;

a non-nitrogen halide activator characterized by the absence of ammonium halide;

a buffer material selected from the group consisting of cobalt, aluminum, titanium, zirconium, manganese, silicon, hafnium, yttrium and any combination thereof; and further comprising nickel powder

a binder solution, said binder solution comprising a binder material dissolved in a solvent;

mixing said constituents to from a slurry composition;

applying said slurry composition onto the substrate;

heating said slurry composition from about 1600 F to about 2100 F for a duration ranging up to about 24 hours; and

forming said chromium diffusion coating within said substrate.

9. The coating of claim **8**, wherein the step of applying said slurry composition further comprises locally applying said composition to predetermined selective regions without masking any portion of said metallic substrate.

10. The coating of claim **8**, further prepared by the step of flowing argon, hydrogen or a mixture thereof at a sufficient flow rate to purge substantially all of the binder outgassing.

11. An article coated by the slurry composition of claim **1**.

12. The article of claim **11**, said article defined by an internal section having a complex geometry, said complex geometry coated by the slurry composition of claim **1**.