CLAIMS

1. A thermal spray powder comprising:
   a first component A mechanically blended with a second component B,
   wherein the first component A is a solid lubricant clad with at least one of a metal and/or metal alloy, and
   wherein the second component B is one of:
   a metal or
   a polymer clad with at least one of nickel, nickel alloys, nickel chrome alloys, nickel chrome aluminum alloys, nickel aluminum alloys, cobalt and cobalt alloys.

2. The thermal spray powder of claim 1, wherein the first component A is at least one of Ni—Cr—Al clad ABN, Ni—Cr—Al clad HBN, Ni—Cr—Al clad agglomerated hexagonal boron nitride powder with organic binder, Ni—Cr—Al agglomerated hexagonal boron nitride powder with inorganic binder, an MCrAlY type powder where M is at least one of Ni, Co and Fe and agglomerated hexagonal boron nitride powder with inorganic or organic binder, and an intermetallic alloy and agglomerated hexagonal boron nitride powder with inorganic or organic binder.

3. The thermal spray powder of claim 1, wherein the lubricant in the first component A is at least one of hexagonal boron nitride, hexagonal boron nitride agglomerated with a bentonite binder (ABN), graphites, fluorides, and talc.

4. The thermal spray powder of claim 1, wherein component A is Ni 5%-Cr 5%-Al clad ABN.

5. The thermal spray powder of claim 1, wherein the clad of component A comprises clad layers that alloy together.

6. The thermal spray powder of claim 2, wherein the organic binder is at least one of a polyvinyl alcohol, polyvinyl acetate, polyvinyl pyrrolidinone, carboxymethylcellulose and an acrylic latex composition.

7. The thermal spray powder of claim 1, wherein the polymer is at least one of a polyester, polyamides, polyimides and acrylic based polymers.

8. The thermal spray powder of claim 1, wherein the clad polymer is one of a fugitive phase and a porosity former.

9. The thermal spray powder of claim 5, wherein the particle size is 40 to 120 microns.

10. The thermal spray powder of claim 1, wherein the average particle size ratio of component A to component B is approximately 0.5 to approximately 1.5 for d50 size fraction.

11. The thermal spray powder of claim 1, wherein an apparent density for component A is a minimum of 1.5.

12. The thermal spray powder of claim 1, wherein an apparent density of component B is a minimum of 2.5.

13. The thermal spray powder of claim 1, wherein the component A is Ni—Cr—Al clad ABN that has approximately 5% to approximately 15% Cr and approximately 5% to approximately 15% Al.

14. The thermal spray powder of claim 1, further comprising component A′, wherein A′ is Ni 5+x %-Cr 5+y %-Al clad ABN, and wherein x is greater than 5% and y is 0-10%.

15. The thermal spray powder of claim 1, wherein component B is a nickel clad agglomerate of fine polyester and alloy particles.

16. The thermal spray powder of claim 1, wherein the thermal spray powder is four distinctly different phases making the powder a four-phase blend.

17. A method of making the thermal spray powder of claim 1, the method comprising:
mechanically blending powder particles of component A with powder particles of component B in order to form a thermal spray powder.

18. The thermal spray powder of claim 1, wherein when component B is a metal, the blend ratio of the metal component B to the solid lubricant clad component A is between about 10-90 wt %.

19. The thermal spray powder of claim 3, wherein the ABN comprises at least one of zirconia, ytterbia, dysprosia, and metal.

20. The thermal spray powder of claim 18, wherein the blend ratio of the metal component B to the solid lubricant clad component A is between 25-75 wt %.

21. The thermal spray powder of claim 20, wherein the blend ratio of the metal component B to the solid lubricant clad component A is between 40-60 wt %.

22. A thermal spray powder comprising:
a first component A mechanically blended with a second component B;
the first component A being a solid lubricant clad with at least one of a metal and/or metal alloy, and
the second component B being one of:
a metal comprising iron, nickel, cobalt, chromium, or aluminum, or
a polymer clad with at least one of nickel, nickel alloys, nickel chrome alloys, nickel chrome aluminum alloys, nickel aluminum alloys, cobalt and cobalt alloys.

23. A thermal spray powder comprising:
particles of component A mechanically blended with particles of component B;
the component A being one of:
a solid lubricant clad with at least one of a metal and/or metal alloy, and
a polymer clad with at least one of a metal and/or metal alloy, and the component B comprising a metal.

24. A thermal spray powder comprising:
particles of component A mechanically blended with particles of component B;
the component A being a solid lubricant clad with at least one of a metal and/or metal alloy, and

the component B comprising a same metal or metal alloy as that of the clad of component A.

25. A thermal spray powder comprising:

powder particles of component A mechanically blended with powder particles of component B;

the component A being a solid lubricant clad with at least one of a metal and/or metal alloy, and

the component B comprising a polymer clad with at least one of nickel, nickel alloys, nickel chrome alloys, nickel chrome aluminum alloys, nickel aluminum alloys, cobalt and cobalt alloys.