CORIUM 4040 Heavy-Duty Metal Repair Compound

DESCRIPTION

Corium 4040 has been adapted through metallic additives to provided a fully machinable compound, especially adapted for filling cracks, building up metals, and all heavy duty and repair situations requiring rebuilding and machining operations. It has unsurpassed rigidity, heat resistance and machinability.

PHYSICAL PROPERTIES

Corium 4040 is a two-part system, 100% solids by volume, formulated to provide near metallic properties. When cured, its molecular structure is similar to, but stronger than aluminum. It will, when properly mixed and cured, accept higher torque values in a threaded hole than aluminum. Its unique physical properties are the result of its high metallic content. The silver resinous base was developed to provide maximum heat resistance and also, to have a natural affinity for the alloying elements. During curing, the metallic additives actually lead in suspension, interlocking to provide a non porous, dense material that can be subjected to high temperatures.

SPECIFICATIONS

1. Viscosity-Thixotropic paste
2. Colour - Silver Base - Silver Hardener - light brown
3. Clean up - Water
4. Pot life - One hour
5. Set time - Four to eight hours
6. Cure time-Twenty four hours
7. Shear strength - AL/AL 1.05 kg/mm^2
8. Tensile strength - 1.75 to 2.1 kg/mm^2 (2,500 to 3,000 psi)
9. Compressive strength - 6.3kg/mm^2 (9,000 psi)
10. Service temperature - up to 186°F (85.5°C)

HOW TO APPLY

MATERIALS

Corium 4040 Alloyed Adhesives for repairing or building up metal parts is a two part adhesive consisting of a silver gray base material and a light brown reactor.

CLEANING SURFACES

All surfaces which are to be repaired or built up should be cleaned thoroughly before repair. Corium 123 General Purpose Degreaser has been developed primarily for use in preparing the parts before joining with Corium Alloyed Adhesives. All oil, grease or other foreign materials should be removed in accordance with the instructions on the use of Corium 123. If cracks are to be filled, loose materials should be removed from the cavities before Corium 123 is applied.

MIXING MATERIALS

1. Do all cleaning and surface preparation before mixing adhesive.
2. Using separate spatulas, place equal parts of base and reactor on a mixing board or plate. Blend booth parts together thoroughly, to make sure that complete mixing has been accomplished. This can easily be determined when no more streaks of dark or light gray are visible.
3. Mix only enough material which can be applied in 30 minutes.
4. Apply generously to the surface to be repaired or built up.
5. If an area is to be built up first, apply Corium 4040 roughly on the surface and build up in general shape desired. Allow to set for 30 to 60 minutes. Using a waxed spatula or tool, gently mold into the desired shape. Final machining may be completed after 24 hours.
6. To repair a tapped hole:

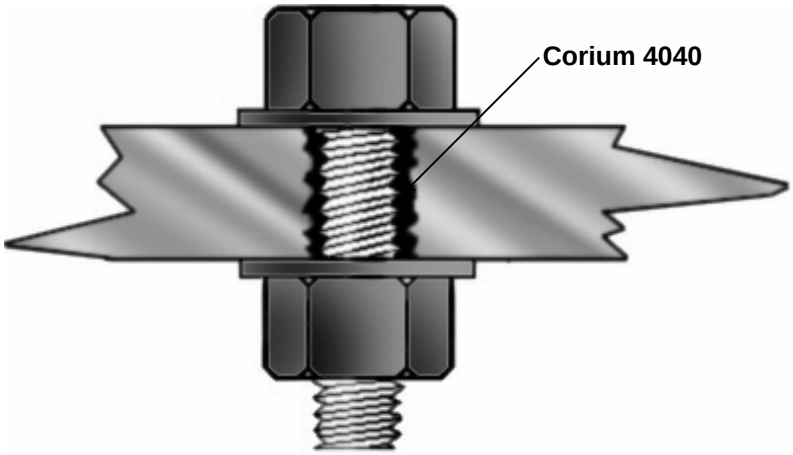
   (a) Obtain a bolt of the size needed for the final hole, a washer and a nut.
   (b) Dip these parts in wax and allow to dry.
   (c) Clean the old stripped hole of any wax or oil chips.
   (d) Fill the hole with Corium 4040.

(e) Place the nut on the bolt to act as a stop and the washer to act as a flange.

(f) Push the bolt into the hole (allow the Corium 4040 to squeeze the sides) until the washer is flat against the original metal surface.

(g) Allow to harden overnight.

(h) After 24 hours, remove the bolt and a new tapped hole will result.



CORIUM 4040

NOTE:

A new tapped hole may also be made by completely filling the hole, allowing the adhesive to harden and re-drilling and tapping after 24 hours.

PRECAUTIONS

1. Always use good working habits when applying Corium Adhesives.
2. Be sure to use separate spatulas for removing the material from the cans. Care should be taken to prevent materials from becoming mixing in the cans.
3. No toxic or skin irritating elements are present in Corium 4040. However, it is recommended that the hands be washed with mild soap to remove any remaining adhesive materials.

GENERAL MAINTENANCE

1. Building up worn or low spots in wooden or metal patterns or models.
2. Repairing stripped threads by filling hole and drilling and tapping a new threaded hole.
3. Rectifying machining errors by building up.

4. On steel floors or slick walking areas, apply Corium 4040 and sprinkle with sand to form non-skid safety deck.
5. Repairing cracked or broken cast iron building radiators.
6. Repairing aluminum dehydrators in General Motors Air Conditioning.
7. Repairing aluminum radiators.
8. Sealing oil leaks in transformers.
9. Sealing oil leaks in cast iron housings.
10. Sealing oil leaks in aluminum housings.
11. Repairing grooves and scratches in machine tool ways.
12. Sealing leaks in plumbing floats.
13. Sealing leaks in pump housings.

AUTOMOTIVE

1. Permanently seal leaks in gasoline tanks without steaming them as would be necessary in soldering and without any possible danger of explosion.
2. Filling holes in auto bodies.
3. Repairing cracked heads, blocks, housings, water pumps, transmission cases, and tail pipes.