

Cutting Fluid During metal cutting heat is generated as a result of the work done. Heat is carried away from the tool and workpiece by means of cutting fluids which at the same time reduce the friction b/w the tool-chip and tool-work and also facilitates the chip formation.

- Functions of Cutting Fluid
- i) It cools the cutting tool and workpiece
 - ii) It lubricates the cutting tool and thus reduces the " μ " b/w chip - tool interface.
 - iii) The use of a cutting fluid result in better surface finish
 - iv) Cutting force required reduce bez of less friction and less power consumption.
 - v) It causes the chips to break up into small pieces.
 - vi) It washes away the chip from the tool.
 - vii) It prevents corrosion of work & machine
 - viii) Reduce thermal distortion of the work and permit improved dimensional control.

- Properties of Cutting Fluid
- i) It should have a high specific heat, high heat conductivity, and high film coefficient.
 - ii) Good lubricant properties to reduce frictional forces.
 - iii) odorless.
 - iv) non-corrosive.
 - v) non-toxic
 - vi) low viscosity to permit free flow of the liquid.
 - vii) Stable in use & storage.
 - viii) Permit clear view of work which is specially desirable in precision work.
 - ix) Safe particularly with regards to fire and accident hazards

Types of Cutting Fluid

