

Welding Consumables: Its Storage, Preservation and Handling Before Using

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We use three types of consumables in most of our fabrication. Flux coated, flux cored and Bare-surface improved by copper coating, high finish, pickled and passivated We can also classify consumables by cut length or continuous.

Cut length can be straight or random, Continuous can be layer wound or coiled.

Each of this category requires a proper ordering, inspection on receipt and then preservation before we make use of them.

Flux coated mainly welding electrodes of different sizes and lengths but some times we do use flux coated wires for TIG/ Gas Brazing... Most of the time except acidic fluxes like 6013 most of them are hygroscopic in nature needs protection to avoid contact with air. Hermetically sealed, vacuum packed, double sealed with silica gel are some of the measures to protect from contact with air. But another important point here is to avoid physical damage as flux may crack so it shall be properly boxed in plastic or 4ply corrugated hard paper. Holding side and burning side both needs to be protected and rod shall be straight. before using we need to dry them and use in portable ovens till you consume. Normally, issue electrodes those will get consumed in one hour.

Bare electrodes require proper treatment before they are packed. Once again like Flux coated electrodes it is good to pack them in hermetically sealed or vacuum or double pack with silica gel. If in cut length order straight to the most

optimum size in plastic cartoon or 4 ply hard paper box. If in spool form, ask for layer wound and with same type of packaging. Size and package weight shall be suited to your machine specifications. Carbon/ Alloy steel wires shall be copper coated, Aluminium shall be with bright finish, Copper, Ni, Ti, Stainless steel shall be pickled and passivated. Bare wire shall be in annealed condition and wound with minimum torque for ease of feeding. Follow ASME/ AWS or other code guidelines on how to inspect it. These wires have to be preserved well if not in use for a long time, specially if, original packing is opened and some quantity has been consumed. While re packing first ensure that spool is in complete dry condition and no dust, oil. Pack it in polythene bag with sufficient silica gel. Before use again inspect surface condition for any oxides, change of colour, corrosion, scratches or any other physical damage.

Flux cored wires are generally layer wound on plastic spools and needs protection from physical damage. Similar precautions shall be taken that of bare wire. Since these wires have flux inside the tube which is aggressive on the metals when molten and hence shall be stored in cool and dry place.

Fluxes also deserve similar care while storage and baking before usage. Any colour change of flux on baking unless and until specified is not acceptable. Fluxes which add alloying elements shall be recirculated with lot of care.