

**BASIC FLUXES**

**HN-590** - HN-590 is an agglomerated basic type flux producing weld deposits with good mechanical properties at low temperatures. HN-590 may be used in single and multiple pass applications with no limitations on weld metal thickness. HN-590 is suitable to use on both DC and AC polarities. HN-590 has good weldability, good slag removal in groove welds and good resistance to cracking and porosity. Typical applications include structural steels, high strength low-alloy (HSLA), quenched and tempered and other low alloy steels. Depending on the application, the HN-590 flux may be used with the composite electrodes such as Metalloy EM12KS or EM13KS.

**HN-511** - HN-511 is a high basic agglomerated flux producing excellent low temperature mechanical properties. The HN-511 has excellent weldability and slag removal common to most basic fluxes, good resistance to cracking and porosity and good bead appearance. HN-511 is suitable to use with both DC and AC polarities. The composite low alloy Metalloy electrodes may be used with HN-511 flux to achieve these low temperature properties used in such applications as offshore structures, structural steel, shipbuilding and heavy equipment. Composite carbon steel electrodes may also be used with HN-511 flux.

**ACTIVE FLUX**

**HA-495** - HA-495 flux is an agglomerated active type flux primarily for single and double pass fillet welds. The HA-495 may be used for other fillet and butt welds on carbon steel limited to a maximum thickness of 1" (25mm). HA-495 has superior performance in single, tandem and other multiple electrode applications with electrical currents of DC and/or AC, as well as Variable Balance AC (VBAC) square-wave polarities. The HA-495 has excellent resistance to rust and mill scale, excellent wetting of fillet weld toes and excellent slag removal. Typical applications include single pass fillets and butt welds in excess of 40 inches of travel speed over mill scaled, thin wall pressure vessels, thin structural steel and in railroad manufacturing. HA-495 is suggested to be used with Metalloy EM12KS electrode.

**FLUX CHARACTERISTICS**

Flux Type	Polarity	Maximum Current	Wall Neutrality*
HN-590	DC or AC	1200A	
HN-511	DC or AC	1200A	
HN-495	DC or AC	1200A	

\*Wall Neutrality determined by AWS, <35 is considered neutral.

The properties listed above are typical of either DC electrode positive (reverse polarity), or variable balance AC (VBAC) square-wave with 66% electrode positive / 34% electrode negative.

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with AWS A5.20 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers Company.

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