



Colours for Visual Aids to Navigation

For more than 10 years Brantho-Korrux '3 in 1' and other Branth's Special-Coatings have been applied to protect and identify navigational buoys, light-houses, beacons, ocean data collection buoys and many other marine structures.

Although Black and White are the two most frequently used colours, they do not suffer from UV degradation to the extent of other colours. Where colours are used for visual signals, they must be highly visible and at the same time have a good resistance to UV degradation in order to keep maintenance costs to an acceptable level. This is especially relevant for the colours 'Red' and 'Green'.

In the late 1990's, Branth-Chemie decided to stop the manufacture of fluorescent coatings for navigational markings. Fluorescent coating pigments that are environment friendly are extremely expensive, fade disappointingly rapidly, and have only been found to be effective when UV light is present. Through intensive contact with various Waterway Authorities it became clear that fluorescent colours did not show any better visibility during the night, twilight or in artificial light than non-fluorescent colours. Not only are fluorescent colour systems expensive to maintain, it was found that the existing RAL-traffic colours, especially RAL 6024 Traffic Green, were not suitable for naval markings.

At this time, Branth-Chemie decided to carry out extensive research into colours for navigational buoys especially for the colours 'red' and 'green'. The aim was to develop new tones which would satisfy the requirements of high visibility, good resistance to UV degradation, be environment friendly, easily applied both in workshops and at sea and provide a long-lasting coating system that kept maintenance costs to acceptable levels. Tests were carried out on colour variants, gloss levels, UV degradation of colour pigments in various environments both day and night and during the different seasons of the year. This research took some years to complete and the end result was the production of 'BK320 Buoy Red' and 'BK 632 Buoy Green'. Since 2005, these colours have been widely used by many Waterway Authorities for all types of offshore and inshore waterway markings and lighthouses. Ultimately, in August 2009, these colours received official RAL classifications as 'RAL 3028, Pure Red' and 'RAL 6037, Pure Green' and are included in the RAL Classic Colour Collection. Recently, these colours have been recommended by IALA (International Association of Lighthouse Authorities) for use as visual signals on aids to navigation, (IALA Recommendation E-108, December 2009).



environment friendly coatings ltd

98 Bandeath Road, Fallin, Stirling FK7 7EW
Tel: 01786 817 902 Fax: 0800 066 4943
E-mail: info@efcltd.co.uk Website: www.efcltd.co.uk

Brantho-Korrux '3 in 1' is very easy to apply all year around due to its direct adhesion to most substrates and previous intact coatings. Application temperatures range from -10°C to + 30°C. 'Pure Red' and 'Pure Green' are available from stock in 5 litre and 0,75 litre cans. In order to obtain exceptional colour saturation and visibility, the gloss level of these two colours has been increased to approx 60% which is higher than the standard Brantho-Korrux '3 in 1' colours. RAL 3028 Pure Red and RAL 6037 Pure Green are also available in the two-pack polyurethane epoxy Brantho-Korrux '2 Kompo'. Both the 1-pack Brantho-Korrux '3 in 1' and the 2-pack '2-Kompo' can be sealed with a high-gloss transparent finish (1-component 'Kristall-Glasure' or 2-component '2K-Anti-Graffik'), which maximises surface gloss, colour saturation and UV-resistance.

Prior to the application of colours like Rape Yellow (RAL 1021), Pure Red (RAL 3028) and Pure Green (RAL 6037) as topcoats, we recommend the application of a white or light grey colour as an intermediate coat as these lighter intermediate colours increase the colour intensity of the more pigmented topcoat colours. Brantho-Korrux '3 in 1' and '2 Kompo' are designed as Primer, Intermediate or Topcoats and can be applied with all customary application methods. They are suitable for use on ferrous metals, non-ferrous metals, timber and masonry substrates as well as most soundly adhered previous coatings. Brantho-Korrux '3 in 1' is used in many other marine environment applications e.g. railings, capstans/winches, bridges, cranes, ships equipment, link-spans, sea-containers, pipelines, lighting masts, etc.

Branth-Chemie A.V. Branth KG (Hamburg-Glinde) has developed and manufactured corrosion resistant coatings and lacquers since 1887. The high solid and lead-free Brantho-Korrux product range originates from 1957. Brantho-Korrux meets all present and the noted future environment regulations.