

ABSTRACT**SOLVENT-FREE FLAME-RESISTANT EPOXY PAINT COMPOSITION, THE
TOXICITY OF THE SMOKE OF WHICH IS REDUCED IN THE EVENT OF AN
OUTBREAK OF A FIRE**

The present invention relates to binary-liquid flame-resistant foaming epoxy paint composition, and more particularly, to a solvent-free flame-resistant epoxy paint composition, the toxicity of the smoke of which is reduced in the event of an outbreak of a fire, said
10 composition comprising: a primary composition (A) comprising 5 to 70 wt % of epoxy resin, 1 to 50 wt % of a phosphorous flame retardant, 1 to 50 wt % of expandable graphite, 0.2 to 20 wt % of fibers, 0.1 to 10 wt % of a pigment, and 1 to 20 wt % of an additive; and a hardener composition (B), comprising 10 to 80 wt % of an amine hardener, 1 to 40 wt % of a phosphorous flame retardant, 0.05 to 20 wt % of fibers, 1 to 40 wt % of filler, 0.1 to 10 wt % of a
15 pigment, and 1 to 20 wt % of an additive, wherein the expandable graphite is coated with a silane compound. The composition of the present invention prevents the emission of noxious gas during the expansion of a paint film in the event of an outbreak of a fire, thus reducing the risk of asphyxiation in the event of a fire. Therefore, the composition of the present invention may be effectively used as a flame-resistant paint not only for facilities for treating oil or gas, such as a
20 maritime structure or a plant, but also for an enclosed space, such as a tunnel or an underground area.