

## 1. Producer / supplier

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## 2. Product description

**Commercial product name:** Borotron® UH050

These products are 'articles' according to the Regulation (EC) No 1907/2006 (REACH).

**Material characterization:** Ultra high molecular weight polyethylene + boric oxide [PE-UHMW-BD]

## 3. Product characteristics

**Form:** semi-finished products (plates) / finished parts machined from semi-finished products

**Colour:** natural (off-white)

**Odour:** odourless

**Density:** 1.005 g/cm<sup>3</sup>

**Melting temperature:** 135 °C

**Glass transition temperature:** -

Values for this property are only given here for amorphous materials and not for semi-crystalline ones.

**Thermal decomposition:** > 300 °C

**Self ignition temperature:** > 330 °C

**Solubility in water:** insoluble

### Test methods

ISO 1183-1

ISO 11357-1/-3

ISO 11357-1/-2

ASTM D 1929

## 4. Handling and storage

**Machining:** During machining of the semi-finished products, evacuate swarf to prevent slipping or tripping hazard and observe the maximum allowable concentration of dust levels on the workplace which apply in your country. Wear safety goggles during machining. The wearing of nitrile RNF 15 gloves and a dust mask class P2 are also advised.

**Storage:** The products shall be stored indoors in a normal environment (air at 10 - 30°C / 30 - 70% RH) and kept away from any source of degradation such as sunlight, UV-lamps, chemicals (direct or indirect contact), ionising radiation, flames, etc. Dimensional changes (camber, warpage, shrinkage ...) of the products as well as slight colour shifts of the external surfaces can occur with time. The latter does generally not pose a problem in case of semi-finished products since the surface-layer is mostly removed anyway upon machining them into finished parts.

**Safety measures:** Standard industrial safety recommendations shall be observed. Temperatures above the melting temperature shall be avoided.

Please also note the disclaimer on page 3 of this document.

## 5. Fire-fighting measures

**Suitable extinguishing media:** Water, foam, dry chemical, CO<sub>2</sub>. Adapted to the nature and extend of fire.

**Hazardous decomposition products:**

The main products formed in case of overheating and combustion are carbon monoxide, carbon dioxide and boron containing substances. Formation of further hazardous decomposition products depends upon the fire conditions and can not be excluded.

**Special protective equipment:** Firemen should wear self-contained breathing apparatus and protective clothing to prevent contact with skin and/or eyes. If exposed to combustion fumes in a high concentration, bring the victim into fresh air. If molten material contacts skin, cool rapidly with cold water and obtain medical attention for removal of adhering material and treatment of the burn.

## 6. Disposal considerations

According to the 'European Waste Catalogue and Hazardous Waste List', uncontaminated waste from the products is not classified as hazardous. The following six-digit codes can be used:

- 07 02 13 waste plastic from the manufacture, formulation, supply and use of plastics
- 12 01 05 plastic shavings and turnings
- 16 01 19 plastic, from end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance
- 17 02 03 plastic construction and demolition wastes
- 20 01 39 plastics from municipal wastes (household waste and similar commercial, industrial and institutional wastes)

**Waste disposal:**

When recycling is not feasible, waste disposal by incineration or landfill can be applied. Disposal methods shall conform to local or other government regulations. The products do not contain cadmium pigments or cadmium stabilisers. They are not biologically degradable, but based on the present state of knowledge no negative effects on the environment may be anticipated.

## 7. Marking and transport information

**Classification and labelling:** Hazard warning labelling in accordance with relevant EC-Directives is not required.

**International transport regulations:**  
Not applicable

## 8. Other information

Consult the Quadrant website for the latest information on the Quadrant products (product data sheets, delivery programme, machining instructions, chemical resistance, regulatory information ...) as well as for our statements concerning the European Regulation (EC) No 1907/2006 (REACH).

**Borotron®** is a registered trademark of the **Quadrant Group**.

Please also note the disclaimer on page 3 of this document.



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