## DURATRON® T4301 & T4501 PAI



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**Test methods** 

### Producer / supplier

PRODUCER: SUPPLIED BY:

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**Product description** 

**DURATRON® T4301 PAI** (extruded) Commercial product name:

**DURATRON**® **T4501 PAI** (compression moulded)

CV7 9EJ

UK

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

Material characterization: Polyamide-imide + PTFE + graphite [PAI-(CD+PTFE)]

3. Product characteristics

semi-finished products (round rods, plates, tubes) / finished parts machined Form:

from semi-finished products

Colour: black

Odour: odourless

1.45 g/cm<sup>3</sup> ISO 1183-1 Density:

Melting temperature: ISO 11357-1/-3

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

Glass transition temperature: 280 °C ISO 11357-1/-2

no information available Thermal decomposition:

> 500 °C Self ignition temperature: **ASTM D 1929** 

Solubility in water: insoluble

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 products shall be stored indoors in a normal environment (air at 10 - 30°C / Storage:

> 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.

The properties of materials which are prone to water absorption, e.g. polyamide-imides, may change significantly with storage time as a result of water absorbed from the environment (this effect depends very much on shape

and size of the products, the relative humidity and temperature of the

environment and the time). However, this water absorption phenomenon being a reversible one, the original material properties can if necessary be restored by

drying them.

Safety measures: Standard industrial safety recommendations shall be observed.

Temperatures above the glass transition temperature shall be avoided.

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### 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, fluorinated hydrocarbons and hydrofluoric acid. 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.

### **Disposal considerations**

PRODUCT HANDLING INFORMATION SHEET

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.

### Marking and transport information

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

required.

International transport regulations:

Not applicable

#### 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).

**DURATRON**<sup>®</sup> is a registered trademark of the **Quadrant Group**.

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

PRODUCT HANDLING INFORMATION SHEET

This brochure and any data and specifications presented on our website shall provide promotional and general information about the Engineering Plastic Products (the "Products") manufactured and offered by Quadrant Engineering Plastic Products ("Quadrant") and shall serve as a preliminary guide. All data and descriptions relating to the Products are of an indicative nature only. Neither this brochure nor any data and specifications presented on our website shall create or be implied to create any legal or contractual

Any illustration of the possible fields of application of the Products shall merely demonstrate the potential of these Products, but any such description does not constitute any kind of covenant whatsoever. Irrespective of any tests that Quadrant may have carried out with respect to any Product, Quadrant does not possess expertise in evaluating the suitability of its materials or Products for use in specific applications or products manufactured or offered by the customer respectively. The choice of the most suitable plastics material depends on available chemical resistance data and practical experience, but often preliminary testing of the finished plastics part under actual service conditions (right chemical, concentration, temperature and contact time, as well as other conditions) is required to assess its final suitability for the given application. It thus re-mains the customer's sole responsibility to test and assess the suitability and compatibility of Quadrant's Products for its intended applications, processes and uses, and to choose those Products which according to its assessment meet the requirements applicable to the specific use of the finished product. The customer undertakes all liability in respect of the application, processing or use of the aforementioned information or product, or any consequence thereof, and shall verify its quality and other properties.