TIVAR® Xtended Wear UHMW-PE



Test methods

ISO 1183-1

1. Producer / supplier

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2. Product description

Commercial product name: TIVAR® Xtended Wear PE-UHMW

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

Material characterization: Ultra high molecular weight polyethylene [PE-UHMW]

3. Product characteristics

Density:

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

products

1.02 g/cm3

Colour: pastel turquoise

Odour: odourless

Melting temperature: 135 °C ISO 11357-1/-3

Glass transition temperature: -

- ISO 11357-1/-2 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 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.

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 2 of this document.

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5. Fire-fighting measures

Suitable extinguishing media: Water, foam, dry chemical, CO2. Adapted to the nature and extend of fire.

Hazardous decomposition products:

The main products formed in case of overheating and combustion are carbon monoxide and carbon dioxide. Formation of further hazardous decomposition products depends upon the fire conditions and cannot 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

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

8. Other information

Consult the Mitsubishi website for the latest information on the Mitsubishi Chemical Advanced Material 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).

TIVAR® is a registered trademark of Mitsubishi Chemical Advanced Materials.

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