PEEK Filament

1. **Chemical product and company information**
   - a. **Chemical product name** — **PolyEtherEtherKetone (PEEK)**
   - b. **Usage** — **Medical, aerospace, automotive, chemical process industries etc.**
   - c. **Chemical type** — **High performance thermoplastic**
   - d. **Company's Adress** — **3D4Makers BV, Waarderweg 56, 2031 BP Haarlem, The Netherlands**
   - e. **Phone number** — **+31 (0) 238200584**

2. **Hazards identification**

Effect of overexposure	
Eye contact	Flush eyes with water for at least 15 minutes while holding eyelids open.
Skin contact	After contact with the skin, wash immediately with plenty of soap and water. In the event of contact with molten products: cool affected aera quickly with water.
Ingestion	Call a physician (or poison control centre immediately). Do not induce vomiting, was out mouth with water.

3. **Composition/Information on ingredients**

Monomers/additives	CAS	REF	LIMIT
4,4' difluorobenzophenone	345-92-6	15820	0,05 mg/kg
1,4-dihydroxybenzene	123-31-9	15940	0,6 mg/kg

Migration tests on a number of V ICTREX PEEK polymer grades have been performed according to Commission Regulation No 10/2011 on specially fabricated test specimens by an independent laboratory showed that under the following conditions the overall migration limits and specific migration limits were not exceeded.

Simulant	Time(s)/Temperature(s)
20% v/v aqueous ethanol	4 hours reflux repeat use
3% w/v aqueous acetic acid	4 hours reflux repeat use
Fat simulant	2 hours at 175 °C repeat use

The polymer also contains substances other than monomers listed which are regulated with a specific migration limit (SML) in Commission Regulation (EU) No 10/2011 and amendments and also substances listed in Commission Directive 95/2/EC defined as dual additive, but which are not expected to change the properties of food as specified in Commission Regulation (EU) No 1935/2004.

Traceability of the product is ensured according to Commission Regulation (EC) No. 1935/2004.

4. Hazards identification

a.	Classification of the substance or mixture	Preparation is not classified as hazardous in the sence of directive 1999/45/EC and 2016/121 /EC
b.	Regulation (EC} No. 1272/2008 (CLP}.	Not classified as dangerous for supply/use
c.	Directive 67/548/EEC & directive 1999/45/EC	Not classified as dangerous for supply/use
d.	Label elements	None
e.	Other Hazards	None
f.	Additional information	None

5. Fire fighting measures

a.	Extinguishing Media	
	• Suitable Extinguishing media	Extinguish with waterspray, foam or dry chemical
	• Unsuitable Extinguishing	None
b.	Special hazards arising from the substance or mixture	In case of fire the following can develop: Oxides of carbon

6. Accidental release measures

a.	Personal precautions	Avoid inhalation and contact with eyes or skin when material is hot
b.	Environmental precautions	Avoid release to the environment
c.	Cleanup	Sweep up

7. Handling and storage

a.	Handling	Avoid formation of dust Avoid product from getting wet Avoid contact with hot material during handling
b.	Storage	Keep in bags/container in a well-ventilated place Store at room temperature and avoid product from getting wet Storage life > 10 year

8. Exposure controls/personal protection

a.	Engineering controls	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations
b.	Personal protective equipment	
	• Eye/face protection	Use safety glasses or chemical goggles
	• Skin protection	No precautions other than clean body-covering clothing should be needed
	• Respiratory protection	For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator

9. Physical and chemical properties

a.	Appearance	Filament, 175 mm & 2,85 mm
b.	Odor	Odorless
c.	Color	Grey/brown
d.	pH (value)	Not applicable
e.	Melting point	343
f.	Boiling point	Not known
g.	Evaporation rate	Not known
h.	Flammability (solid, gas)	Solid, non-flammable
i.	Vapor pressure	39.6 (@107)
j.	Vapor density	Not known
k.	Solubility in water	Insoluble
l.	Solubility in other solvent	Insoluble
m.	Bulk density (g/ml)	~ 1.3
n.	Auto ignition point	595
o.	Decomposition temp.	>450
p.	Explosive properties	Not explosive
q.	Explosive limit ranges	not explosive
r.	Oxidising properties	Not oxidisingStability and reactivity

10. Reactivity and stability

a.	Chemical Stability	Stable under normal conditions
b.	Possibility of hazardous reactions	Stable under normal conditions
c.	Conditions to avoid	Stable under normal conditions
d.	Incompatible materials	Concentrated Sulphuric acid
e.	Hazardous decomposition products	Oxides of carbon

11. Toxicological information

a.	Ingestion	Predicted to be low toxicity under normal conditions of handling and use
b.	Inhalation	Mechanical irritation of the respiratory tract
c.	Skin contact	In the event of contact with molten product: thermal bums
d.	Eye contact	No data

12. Ecological Information

a.	Toxicity	Low toxicity to aquatic organisms
b.	Persistence & degradability	Not readily biodegradable
c.	Bioaccumulative potential	Not classified as PBT or vPvB
d.	Mobility in soil	The product has low mobility in soil and sediment
e.	Results of PBT and vPvB assessment	Not classified as PBT vPvB

13. Disposal Considerations

a.	Waste treatment methods	Disposal should be in accordance with local, state or national legislation
b.	Additional information	None

14. Transport information

Not classified as hazardous under transport regulations.

15. Regulatory information

a.	Safety, health and environmental regulatiosn/legislation specific for the substance or mixture	Not classified as dangerous for supply/ use
b.	EU regulations	None
c.	National regulations TSCA	Listed
d.	Chemical safety assessment	Not relevant for this material

16. Other information

- The information provided herein is based on the knowledge possessed at this present time from the view point of safety requirements. It should, therefore, not be construed as guaranteeing specific properties.
- The information provided herein is based on the MSDS from the raw material supplier
- The information relates only to the specific material designated and may not be valid for such material used in combination with any other material.
- Although certain hazards are described herein, we cannot guarantee that there are the only hazards.