

MATERIAL SAFETY DATA SHEET

In accordance with regulation (EC) 1907/2006 (REACH)

Para-aramid fibre fabrics, para-aramid yarns, para-aramid chopped fibres, para-aramid combimats & multiaxial fabrics, para-aramid fabric tapes

Version 01, 12-4-2014

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Commercial name: products from para-aramid fibres: f.i. Kevlar, Twaron
Products: para-aramid fibre fabrics, para-aramid yarns, para-aramid chopped fibres, para-aramid combimats and multiaxial fabrics, para-aramid fabric tapes

1.2 Use of the substance or preparation:

- as reinforcement for plastics
- for laminates and multi-layer composites production

1.3 Identification of the company:

Company: Compositesplaza B.V.

Address: Horstlandenpark 2A
5709 MB Helmond
The Netherlands

0031-492-769099

Mail/Internet:

info@compositesplaza.com; www.compositesplaza.com

2. HAZARDS IDENTIFICATION

2.1 Most important hazards: None

2.2 Specific hazards (processing): Vigorous abrasion of para-aramid products can yield microscopic fibrous dust particles. Prolonged inhalation of fine fibrous dust at high concentrations may cause lung damage.

3. COMPOSITION/INFORMATION ON COMPONENTS

3.1 Presentation: Para-aramid (AR) fibre and derived products

3.2 Chemical Nature of Product: Poly-(paraphenylene-terephthalamide)

CAS nr: 26125-61-1
(with finishes and traces of water)

4. FIRST AID MEASURES

- 4.1 General advise:** Treat eye damage, cuts, burns, skin irritation and other skin lesions symptomatically – like other injuries of the same kind
- 4.2 Inhalation (fine fibrous dust):** Move subject into fresh air
- 4.3 Ingestion:** No medical treatment required

5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing media:** All usual fire extinguishing media are suitable.
- 5.2 Specific hazards:** None: material is flame-resistant (L.O.I. = 29%)
- 5.3 Special protective equipment:** Autonomous respiratory protection to avoid inhalation of fumes in poorly ventilated areas.
- 5.4 Special methods:** None

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions:** None
- 6.2 Environmental precautions:** None

7. HANDLING AND STORAGE

- 7.1 Handling:** No particular measures are required
- 7.2 Technical measures/precautions:** Fibre dust and fly should be removed with approved industrial vacuum cleaning equipment. Compressed air cleaning increases airborne dust levels and must be avoided
- 7.3 Storage:** Para-aramid products require no particular storage precautions

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

- 8.1 Engineering measures:** Use proper workplace ventilation. Avoid accumulation and discharges of static electricity in the presence of flammable/explosive materials.
- 8.2 Control parameters:** See local regulations. In their absence, it is recommended that the average concentration of respirable fibre-shaped particles (RFP's) derived from para-aramid products be maintained below 2 fibrils per ml of work place air.
- 8.3 Personal Protection Equipment:**
- 8.3.1 Respiratory Protection:** Respirators – only if control limits are exceeded and processing conditions require it (poor ventilation, copious abrasion induced fine dust)
 - 8.3.2 Hand Protection:** Gloves – if processing conditions require
 - 8.3.3 Eye Protection:** Goggles with side-shields, if process conditions require
 - 8.3.4 Hygiene Measures:** None

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Appearance:** Textile surface made of multi filament yarn
- 9.2 Colour:** Golden yellow
- 9.3 Odour:** Odourless
- 9.4 Melting point/range:** does not melt
- 9.5 Decomposition Temp.:** Carbonisation/pyrolysis starts above 300-350 °C
- 9.6 Solubility in water:** Insoluble in water
- 9.7 Solubility in organic solvents:** Insoluble in organic solvents
- 9.8 Solvent content:** None
- 9.9 Relative density:** 1.44 – 1.45 g/cm³ (@ 20 °C)

10. STABILITY AND REACTIVITY

- 10.1 Stability:** para-aramid products are highly resistant to chemicals and heat
- 10.2 Conditions to avoid:** Strong acids/bases
- 10.3 Hazardous decomposition products:** Small quantities of carbon monoxide ev. also traces of nitrogen compounds

11. TOXICOLOGICAL INFORMATION

- 11.1 Acute toxicity:** LD50 > 7500 mg/KG orally in the rat
- 11.2 Sensitization:** None
- 11.3 Chronic Toxicity:** A two year inhalation study with rats using specially prepared respirable fibrous dust did not result in any lung damage at 2.5 respirable fibre-shaped particles (RFP)/ml. The onset of fibrotic changes in the lung was barely detectable at concentrations of 25 RFP/ml. At extremely high concentrations (100 and 400 RFP/ml) the rats developed unequivocal signs of lung overloading and fibrosis. At these concentrations some of the female rats (but none of the males) also developed benign proliferative keratin (horn) cysts, in addition to fibrosis, in the lung.
- 11.4 Human Experience:** Airborne coarse para-aramid fibre dust can cause a transitory, mild irritation of the skin, the mucosa and or the eyes. There are no other known negative effects to the human body.

12. ECOLOGICAL ASPECT

- 12.1 Mobility:** Not applicable
- 12.2 Persistence and Degradability:** Para-aramid products are stable, persistent and resist bacterial degradation
- 12.3 Bio-accumulation:** Not applicable
- 12.4 Ecotoxicity effects:** None

13. CONSIDERATION ON DISPOSAL

- 13.1 Uncontaminated product:** Can be disposed of as solid waste or incinerated in a suitable installation – subject to local regulations

14. TRANSPORT REGULATIONS

- 14.1 General:** Para-aramid products (articles) are not dangerous in terms of national and international transportation regulations

15. INFORMATION ON REGULATIONS

These products are not regulated by EU directive 67/548, as amended, or by 1999/45/EG, nor by any derived national statutes and they do not need to be labelled.

In some countries the workplace exposure to respirable fibre-shaped particles (RFP's) – that can be formed during abrasive processing of para-aramid products – is regulated. In France, Spain and the Netherlands the concentration of the RFP's should not exceed an average of 1 fibril/ml during an eight hour day; in the UK and OES of 0.5 fibril/ml is applicable.

16. OTHER INFORMATION

Not applicable.



All information, recommendations and advice on the part of *Compositesplaza B.V.* are published to the best of our knowledge and belief. Any data given in this SAFETY DATA SHEET are typical values as indicated by our supplier. Due to constant technical improvement of our products there may be changes to the characteristic values. Please check on a regular basis on our webshop if you still have the latest information.