T oho T enax	Product Information on Safe Handling Pyromex [®] thermally stable, oxidized PAN-Fiber (OPF)

Revision 01 (en), print data 1 Apr. 2016, updated 1 Apr. 2016

According to Regulation (EC) No 1907/2006 [REACH] Art. 3 Part 3 this product is classified as article, hence no obligation exists to create a safety data sheet as required by REACH Art. 31/32. This Product Information was created in the style of REACH Annex II/Regulation (EU) 2015/830 to inform about a safe and careful handling with this product.

Chapte	er 1: Identification of th	ne article and of the company
1.1	Product Identifier	Tenax [®] Pyromex
1.1.1	Product types	Tenax [®] CPX
1.2	Recommended use	As material using for fire and heat protection as well as high-temperature carbon/carbon (C/C) component.
1.2.1	Uses advised against	None
1.3	Details of the supplier/s	ite
1.3.1	Europa	Toho Tenax Europe GmbH Kasinostr. 19-21 42103 Wuppertal GERMANY Tel: +49 202 32-3225 Homepage: <u>www.tohotenax-eu.com</u>
	America	Toho Tenax America, Inc. 121 Cardiff Valley Road Rockwood, TN 37854 USA Tel: +1 865 354 4120 Homepage: <u>www.tohotenaxamerica.com</u>
1.3.2	Responsible departmen	t/qualified person
	Europa	Dr Axel Leuchter General Manager Quality & Compliance E-Mail: <u>safety@tohotenax-eu.com</u>
	America	Jason Carling Global Director of Product Development E-Mail: <u>jcarling@tohotenax-us.com</u>
		Mark Klemmer ES&H Manager E-Mail: <u>mklemmer@tohotenax-us.com</u>
Chapte	er 2: Hazards identifica	ations
2.1	Classification	This product is an article, and hence does not require a classification and labelling according to EU regulations.
2.1.1	Classification according	g to Regulation (EC) No 1272/2008 [CLP] Not classified as hazardous. See chapter 3
2.2	Labelling elements	Not subject to classification.
Verfass	er/Editor: Doris Ohms	Freigabe/Release: Dr. Axel Leuchter Page 1 of 7

TohoTenax	Product Information on Safe Handling Pyromex [®] thermally stable, oxidized PAN-Fiber (OPF)
-----------	--

Revision 01 (en), print data 1 Apr. 2016, updated 1 Apr. 2016

2.2.1 Precautionary instruction P280: Wear protective gloves.

T

2.3 Other hazards With respect to health and environment risks, as long as safety instructions are followed, no other hazards are to be feared. See chapter 11

Chapter 3: Composition/information of ingredients

3.1 Product type This product is an article acc. to regulation (EC) No 1907/2006 [REACH].

3.2 Composition/information of ingredients

wt [%]	Substance	CAS EINECS/ELINCS EU-INDEX	GHS/CLP:
≤ 99	Poly(acrylonitrile), oxidized	68908-35-0 614-761-7 -	-

3.2.1 Comment on component parts

None

3.2.2	Inventory Status	In general, articles are exempted from compulsory registration acc. to REACH regulation. Anyhow all ingredients comply with the registration
		requirements acc. to REACH (registration or pre-registration), and additionally are listed in EINECS or ELINCS as well as EPA's TSCA.

3.2.3 SVHC (candidate list) The product does not contain any or less than 0.1 wt % of substances of very high concern as listed.

Chapter 4: First aid measures

4.1	Description of first aid I	neasures
4.1.1	General information	No special measures are necessary.
4.1.2	Inhalation	Not applicable
4.1.3	Skin contact	In the case of contact with skin, rinse affected area immediately with plenty of warm water. Consult a doctor if skin irritation persists.
4.1.4	Eye contact	In the case of eye contact, rinse the affected eye thoroughly for a few minutes. Remove contact lenses, if present and easy to do, continue rinsing. If eye irritation persist, seek medical attention.
4.1.5	Ingestion	Seek medical care. Rinse mouth out with water then give plenty of water to drink.
4.2	Most important sympto	ms and effects, both acute and delayed No information available.
4.3	Indication of any immed	diate medical attention and special treatment needed Symptomatic treatment.
Chapte	er 5: Firefighting meas	ures

Product Information on Safe Handling Pyromex[®]

thermally stable, oxidized PAN-Fiber (OPF)

Revision 01 (en), print data 1 Apr. 2016, updated 1 Apr. 2016

5.1	Extinguishing media	
5.1.1	Suitable extinguishing me	
		Foam, dry powder, water spray jet, carbon dioxide
5.1.2	Not suitable extinguishing	g media for safety reasons Full water jet
5.2	Special hazards arising fr	om the article At temperatures above ≥ 500 °C, hazardous decomposition and degradation products as well as hazardous pyrolysis residues might occur.
5.3	Advice for firefighters	Do not inhale explosion and/or combustion gases. Use self-contained breathing apparatus. Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations.
Chapter	6: Accidental release	neasures
6.1	Personal precautions, pro	otective equipment and emergency procedure Use personal protective clothing.
6.2	Environmental precaution	ns No special measures are required.
6.3	Methods and material for	containment and cleaning up Take up mechanically. Dispose of contaminated material in accordance with regulations.
6.4	Reference to other section	ns See Chapter 7, 8 and 13
Chapter	7: Handling and storage	je
7.1	Precautions for safe hand	Iling Avoid skin contact by wearing appropriate protective clothing (suitable gloves). General hygiene rules must be observed: Wash hands before breaks and at the end of work. Protect skin by using skincare ointment.
7.2	Conditions for safe storage	ge, including any incompatibilities Store the article in the original packaging in dry rooms. Recommended storage temperature: ≤ 50 °C, relative humidity: ≤ 85 %.
7.3	Specific end uses	See product use, Chapter 1.2
Chapter	8: Exposure controls/	personal protection
8.1	Control parameters	

8.1.1 Ingredients with occupational exposure limits to be monitored

Substance	es	CAS	Occupational exposure limits (OEL)	Country	Sources
Poly(acry oxidized	lonitrile),	68908-35-0	-	-	-

8.2 Exposure controls None

Verfasser/Editor: Doris Ohms	Freigabe/Release: Dr. Axel Leuchter	Page 3 of 7

TohoTenax	Product Information on Safe Handling Pyromex [®] thermally stable, oxidized PAN-Fiber (OPF)
------------------	--

Revision 01 (en), print data 1 Apr. 2016, updated 1 Apr. 2016

8.2.1	Additional advice on syst	t em design Ensure adequate ventilation on workplace.
8.2.2	Eye protection	Protection goggles
8.2.3	Hand protection	In the event of skin contact with the product, wear protective gloves for sufficient protection according to ie EN 374. In any case, the protective gloves should be tested for its workplace-specific suitability (eg mechanical resistance, product compatibility and antistatic properties).
8.2.4	Additional protective mea	Asures Personal protective equipment should be selected specifically for the work place.
8.2.5	Respiratory protection	In the case of fiber dust, use mouth protection.
8.2.6	Delimitation and monitor	ing of the environmental exposition Not specified
Chapte	r 9: Physical and chem	ical properties
9.1	Information on basic phy	sical and chemical properties
9.1.1	Appearance	
	Form	Solid, non-crimped tow or crimped staple fiber
	Color	Black
	Odor	Odorless
9.1.2	Basic physical and chem	ical properties
	Inflammability and explos Upper Lower	sion limits Not applicable Not applicable
	Oxidizing properties Density 23 °C [g/cm³] Melting point [°C] Decomposition temp.	None 1.35 - 1,45 Not applicable ≥ 500 (ambient air), Sizing ≥ 290
9.2	Other information Spec. electr. resistance	$10^{10} - 10^{12}$ Ohm cm
Chapte	r 10: Stability and reactive	vity
10.1	Reactivity/stability	Product is not reactive and stable under normal conditions for transfer, storage and applications.
10.2	Conditions to avoid	Do not heat up above decomposition temperature mentioned. See Chapter 5.2, 9.1.2
10.3	Incompatible materials	None
10.4	Hazardous decompositio	n products None if used for intended purpose.
Chapte	r 11: Toxicological infor	nation

`		
Verfasser/Editor: Doris Ohms	Freigabe/Release: Dr. Axel Leuchter	Page 4 of 7

TohoT enax		Product Information on Safe Handling Pyromex [®]						
		thermally stable, oxidized PAN-Fiber (OPF)						
		Revision 01 (en), print data 1 Apr. 2016, updated 1 Apr. 2016						
11.1	Information on toxicological information							
11.1.2	Acute toxicity	Toxicological effects of the article are not studied. Not specified						
11.1.2	General information	None						
_								
Chapter	12: Ecological inform	nation						
12.1	Toxicity	Toxicity of the article is not studied.						
12.1.1	Results of the PBT and vPvB assessment Not specified							
12.1.2	Other adverse effects	The article is inert to naturally occurring substances in soil. Due to the residents to rotting, do not release into the environment or sewers. It is not known that the article has got an ozone depletion effect or a global warming potential						
Chapter	13: Disposal conside	erations						
13.1	Waste treatment metho	Article residues should be disposed of in compliance with Directive on Waste 2008/98/EC as well as national and regional regulations. For the article, it is not possible to determine a waste code number according to the European Waste Catalogue (EWC) as only the intended use by the costumer enables an allocation. The waste code number has to be determined within the EU in accordance with the local waste disposer.						
13.1.1	Article	If necessary, coordinate disposal with the authorities.						
	AVV-No. (recommende	 d) 070299 Wastes from MFSU of plastics, synthetic rubber and man-made fibres, if otherwise not specified. 160306 Organic wastes. 						
13.2	Contaminated packagin	C						
	AVV-No. (recommende	 d) 150101 Packaging made of paper and cardboard. 150102 Packaging made of plastic. 						
Chapter	14: Transport inform	ation						
14.1	.1 With reference to the transport regulations the article is classified as:							
		NO DANGEROUS GOODS						
Chapter	15: Regulatory inform	nation						
15.1	Safety, health and envi	ronmental regulations/specific legislations						
		The national health and occupational safety regulations have to be considered						

- 15.1.1 National regulations when handling or processing the product.
 15.1.2 Employment restriction 15.1.3 Water pollution class Not hazardous to water.
- 15.2 Chemical safety assessment Chemical safety assessments for substances in this product were not carried out.

Verfasser/Editor: Doris Ohms	Freigabe/Release: Dr. Axel Leuchter	Page 5 of 7

Product Information on Safe Handling Pyromex[®]

thermally stable, oxidized PAN-Fiber (OPF)

Revision 01 (en), print data 1 Apr. 2016, updated 1 Apr. 2016

Chapter	16: Other information						
16.1	Changes compared to the last version						
	Revision 01		First edition. In view of the data content, this information sheet has been completely				
		revised. l	revised. Unlike previous definition, the Toho Tenax has concluded that thermally stable, oxidized PAN-Fiber (OPF) is regarded as an article in				
		accordant the firm c	ce with REACH Regulation (EC) No 1907/2006. T conviction that during production oxidized PAN-Fib	TE has come to er (OPF) is given a			
			hape, surface or design, which determines its func nan does its chemical composition. Therefore it has				
16.2	Hazard information (Cha	rd information (Chapter 2 and 3) No hazard statements.					
16.2.1	Supplemental hazard information (EU) None						
16.3	Literature references and sources for data						
16.3.1 Regulations In their respective current versions:							
	C C		REACH Regulation (EC) No. 1907/2006, Regulation (EU) 2015/830				
			ulation (EC) No 1272/2008, VOC 2004/42/CE, Ozone Regulation (EC) No 203	7/2000.			
		RoHS Di	rective 2011/65/EU, National Maternity Protection				
		Employm National	ient Acts Workplace Exposure Limits of corresponding coun	tries			
16.3.2	Internet	http://www.baua.de					
		http://ww	/ww.echa.europa.eu//candidate-list-table				
		•	w.esdscom.eu w.echemportal.org				
		http://eur	-lex.europa.eu				
		http://ww	w.epe.gov/tsca-inventory				
16.4	Abbreviations	acc. to	according to				
		AVV	Abfallverzeichnis-Verordnung European List of Waste (Wastregulation)				
		CAS	Chemical Abstracts Service				
		CLP	Classification, Labelling and Packaging				
		EC	European Council				
		EINECS	European Inventory of Existing Commercial Cher Substances	mical			
		ELNICS					
		EPA	United States Environmental Protection Agency				
		EU	European Union				
		EUH	EU-Hazard Statements				
		GHS	Globally Harmonised System for Classification ar				
		MFSU PBT	Wastes from manufacture, formulation, supply ar Persistent, Bioaccumulative and Toxic substance				
		REACH	Registration, Evaluation, Authorization and Restr				
			Chemicals				
		RoHS	Restriction of Hazardous Substances Directive				
		SVHC	Substances of Very High Concern for Authorizati	on			
		TSCA	Toxic Substances Control Act	· · · · · · · · · · · · · · · · · · ·			
Verfasser/Editor: Doris Ohms		Freig	abe/Release: Dr. Axel Leuchter	Page 6 of 7			

Image: TohoTenax Product Information on Safe Handling Pyromex [®] thermally stable, oxidized PAN-Fiber (OPF)

Revision 01 (en), print data 1 Apr. 2016, updated 1 Apr. 2016

		VOC vPvB VwVwS wt %	Technical Rules for Hazardous Substances Volatile Organic Compounds Directive very Persistent and very Bioaccumulative Verwaltungsvorschrift wassergefährdende Stoffe Administrative Regulation of Water-Polluting Substances Weight Percent	
			5	
16.5	Other information			
16.5.1	Self-declaration	None		
16.5.2	Customs tariff number	55013000, 55063000		
16.5.3	VOC (2004/42/EC)	Not applicable		
16.5.4	RoHS (EU) 2015/863	This product does not contain any substances listed in RoHS (or contains in concentrations below the limits as specified therein).		
16.5.5	Disclaimer	This information is given to the best of our current knowledge and describes an article with regard to safety requirements. We would like to point out that it does not represent a guarantee of properties.		