PRODUCT INFORMATION DATA SHEET

INCLUDING SAFETY INSTRUCTIONS

MATERIALDATASHEET IN ACORDANCE OF INTER-TRADE ORGANISATION

Material	**Elastic Polyurethane-foam or PUR**
Distributor	SenseTek B.V. Abberdaan 162 1046 AB – Amsterdam Phone number +31 (0)20 613 1611 Fax number +31 (0)20 613 2212 info@sensetek.nl

Polyurethane-foams should be considered as “Materials” or “Products”.
Polyurethane foams are not considered to be hazardous products nor as mixtures of dangerous substances.
In accordance to EU legislative 1907/2006 (Reach) PU-foam is a product and not a chemical compound.
So it is not provided a Safety Data Sheet.

A. Product Identification

Product name	Polyether Polyurethane-foam Polyester Polyurethane-foam
Trade names	Various, brand and product names
Composition	Polyurethane polymer
Chemical description	Polyaddition product of isocyanates, polyether-/ polyester-polyols and water, controlled by catalysts, stabilizers and other substances, resulting in a cellular polyurethane-foam. The isocyante and polyol are completely reacted during manufacture and the foam, as supplied, contains no free isocyanate.
Appearance	Cellular flexible foam
Regulatory information	No labeling is required by existing EU directives on Classification, Packaging and Labeling of Dangerous Substances.

B. Physical properties

Physical form / appearance	Cellular material with elastic properties
Colour	Varies
Specific gravity	10 - 300 kg/m³
Solubility in water	Insoluble
Odour	None or mild odour
Flash ignition point	between 315°C to 370°C
Decomposition temperature	> 180°C
Melting point	The product has no melting point but will decompose into gaseous components.
Thermal energy	28.000 KJ/kg
Stability and reactivity	The product is stable at temperatures between -40°C and +100°C

C. Fire Hazards

Auto-ignition point (ASTM D 1929)	Between 370°C and 427°C
Fire hazard	The product is a combustible material and causes, when burning, intense heat and dense smoke. In a fire, decomposition products such as carbon black, carbon monoxide, carbon dioxide, gaseous hydrocarbons and nitrogen containing products can be generated in various concentrations depending on the combustion conditions.
Suitable fire extinguihers	Water, carbon dioxide, dry powder, liquid foam
Human protection at fire	Fire fighters should use self-contained breathing apparatus. Should the burning foam come in contact with skin, cool the burned area with water without removing the foam. In case of serious burns call a doctor immediately. In the event of persons inhaling combustion gases, they must be removed from the area and given swift medical attention.

Further fire information	Terms like „is flame retarded“ or „contains flame retardants“ are sometimes used to describe improved ignition resistance in small-scale tests and do not reflect hazards in large scale fire conditions.
Storage and Processing	In processing flexible PU foams all prescriptions, directives and technical rules regarding the layout of workstations, machinery safety and workplace human protection must be observed. Because of the fire risks associated with certain processing operations on block foam (e.g. hot-wire cutting, crumbing, flame lamination etc.) it is advisable to seek expert guidance on fire precautions that need to be in place. Attention should be paid to the possibility to produce electrostatic charges during foam processing operations that may be dangerous.

D. Toxicological data

Oral	There is no evidence that OU foam is toxic in case of ingestion. LD_{50} (oral rats) > 5.000 mg/kg
Inhalation	No adverse effect known by inhalation following contact with PU foam. In case of a conversion step in which foam material is grinded and foam dust particles can be generated a proper exhaustion of dust must be in place and/or PSP (personal safety protection) must be worn. Concentration in air equal to or greater than 10 mg/m^3 8-h TWA of inhalable dust not allowed.
Skin contact	No adverse effects known following contact with PU foam.
Eye contact	Dust particles can cause mechanical irritation. Rinse with water to remove dust.

E. Protective measures in handling, storage and processing

Handling foam	Special protective equipment and clothing is not necessary when handling foam, since it does not irritate the skin, eyes or respiratory systems, except in those processes where dust is produced.
Ventilation	Provided there is adequate general ventilation, no special precautions are necessary for most handling and cutting operations.

Ventilation during some operations	Local exhaust ventilation is necessary for some operations i.e. where dust is produced from sawing, buffing or crumbing operations or where fumes are produced in flame laminating, thermoforming or hot wire cutting.
Storage	Store away from heat sources (match, cigarette, open fire, electrical heater, …). UV-rays may cause surface discoloration. This does not affect the physical properties of the foam. Store in compliance with safety standards established by local authorities and by specific requirements of the insurance companies.
Eye protection	Protective goggles should be worn for processes which generate dust.
Protective clothing	Not required. In case of dust generating operations skin protective clothes and appropriate respiratory masks are recommended.

F. Ecological information

Biodegradability	Depending on the type of PU foam, the product is not degradable or degrades slowly.
Additional ecological data	PU flexible foams do not contain Ozone depleting.

G. Transport iInformation

Labeling	Polyurethan-foam is not classified for conveyance or supply under the International Agreements on Carriage of Dangerous Goods. The product is not classified as hazardous for any mode of transportation under current EU or UN regulations. In accordance with the existing directives for classification, packaging and labeling of substances and mixtures (1272/2008/EG), there is no labeling requirement.
Measures	No special steps need to be taken for the transportation of PU-foam.

H. Disposal considerations

Production trim	Trim polyurethan foam and off-cuts can be usually be recycled by several methods unless the residues are clean and sorted.
Post-Consumer waste	A major recycling option exists via re-bonding if a series of technical and economic conditions are met. If recycling is not possible, scrap or post-consumer PU foam waste can be used for energy recovery or be disposed of at licensed landfill sites or by incineration under controlled conditions in agreement with EU and National regulatory provisions and following advice from the Local Waste Regulation Authority.
Legislation	Under EU environmental legislation, there are no special requirements for the disposal of conventional PU foam.

I. Disclaimer of liability

The relevant national and local laws must be observed.
This information is given without explicit or implicit warranty and is based on our knowledge at the time of publication. They do not represent warranted properties.

SenseTek accepts no legal responsibility for the use of this information.

Regarding warranty the relevant product data sheets and the terms and conditions apply exclusively.
Prior to use and processing refer to the product data sheet.

Input for external Material Data Systems or for PU foam convertors

Flexible polyurethanes are polymers and defined in Data Systems, i.e. IMDS, as a product, not as a chemical compound. In terms of REACH polyurethane foam is defined as “article”.

For the manufacturing of PU foam, a series of raw materials are used. These include isocyanates, polyols (Major portion) and water (small portion). These ingredients react fully during foam manufacturing and are chemically converted into the PU polymer matrix.
In addition, other essential additives of different characteristics are used in small concentrations, some of which could also be chemically bonded into the matrix.

Depending on the final application, legal requirements or customer`s requests PU foam may contain any of the following substances:

- Aliphatic and/or cycloaliphatic amine catalysts
- Flame-retardants
- Polysiloxane compounds
- Inorganic metal catalysts
- Organic and/or inorganic pigments

Additives, which prohibit the rebonding recycling route, are not present.
Substances like Hg, Cd, Pb und Cr6+ are not intentionally added to the formulation.
When reporting to customers in the automotive sector the use of IMDS is required. Besides the material PU foam, additives are to be reported according to the requirements of GADSL.
DADSL = Global Automotive Declarable Substance List / List of declarable substances used in automotive parts

Note concerning Regulation (EC) No. 1907/2006 (REACH)

FoamPartner is neither a producer nor supplier of chemical substances or mixtures.

As defined by EC 1907/2006 (REACH) FoamPartner is a so-called downstream user and producer of products. For these the creation of (material) safety data sheets (MSDS) is not provided.
For products there is only an obligation to provide information if substances from SVHC-list should be included.
However, since this is not the case with all FP-products, consequently and in full accordance with REACH-regulation no MSDS exists.
Thus the misleading impression should be avoided, that FoamPartner products fall within the scope of Reach.
In case of changes FoamPartner will meet its obligations and will inform unsolicited, in accordance with the Reach-regulation.