NEVEON

Safety Data Sheet - PU Foam

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PRODUCT :

Flexible polyurethane foam (PU)

Scope of application: entire range of products of NEVEON Austria GmbH: Polyether and Polyesther-Foam grades and resultant recycling products.

last edit:
page 4= (US) TSCA 6(h);
page 3= (BPA)

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*) changed since last edition

1. Characteristics :

flexible polyurethane foam

polyaddition product from diisocyanate, polyether/polyestherpolyol, additives and water.

2. Handling / potential dangers :

Dust, smoke or vapour developed during processing (hot deformation, hot wire cutting, thermolamination) should not be inhalated and schouldn´t get into the eyes.

3. Ingredients :

The product does not contain hazardous substances

4. First-aid measures :

No special measures are required for the processing of flexible polyurethane foam.

5. Measures to be taken in case of fire :

Flexible polyurethan foam is inflammable. All common methods of fire fighting like water (also with foam added), CO2 extinguishing powder or powder fire extinguishers may be used for fire fighting.
In case of a fire the development of heavy smoke is to be expected. Therefore the use of "heavy respiratory protection" (protective equipment independent of air circulation) is advisable. Depending on the conditions during the fire the gases developing contain different amounts of soot, carbon monoxide, nitric oxides, hydrocyanic and organic products of pyrolysis, just like with the burning of wood or wool.

Moreover, the development of corrosive gases like e.g. chloric hydrogen has to be expected with flame-retardant types of foam.

Introducing extinguishing water into surface waters or municipal water treatment systems is not dangerous. Analyses of extinguish waters have proved that the concentration of potentially dangerous substances is within the legal margins. All substances occuring in the extinguishing water are filtered out and decomposed in muncipal water treatment plants.
Organisms living in the water are not treathened.

6. Measures in case of accidental release :

Is not relevant for flexible PU-foam.

7. Handling and storage :

Do not store close to sources of ignition. UV-radiation makes the surface color change and turn yellow.

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Do not store close to sources of ignition. UV-radiation makes the surface color change and turn yellow.

8. Personal safety equipment :

Basically, there is no need for a safety equipment. Should dust, smoke or vapour develop durin processing provide for adequate filtering and use protective glasses and respiratory protection.

9. Phisycal and chemical properties :

form	open-cell flexible foam
colour	depends on the colour used by the produce
smell	weak natural smell
density	appr. 7 - 110 Kg/m³
solubility	insoluble
flash point	315 - 370 °C
self-ignition temperature	370 - 427 °C
decomposition temperature	> 180 °C
thermal conductivity coefficient λ	appr. 0,038 W/°C m
pH-value	6,4 - 8,5

10. Stability and reactivity :

PU-foam remains stable within a temperature range of -40 °C to 120 °C
The use of solvents makes the material swell.

11. Toxicology :

According to numerous examination results and findings PU-foam is nowadays generally considered safe.

LD50 (oral rat) 5000 mg/Kg

12. Ecology :

The produkt rots slowly
Water-endangering class **WGK = 0** - does not endanger water (self assessment).

13. Disposal :

PU-foam can be recycled and should therefore be taken to recycling centres.
According to the waste-disposal law and its regulations there are no special requirements for the disposal of PU-foam. It may be disposed of both in waste dumps and modern incineration plants.
European waste code : **20 01 39 "Plastics"**
Waste code according to ÖNORM S 2100 (edition 9/1997) = **57110 - flexible polyurethane foam**

14. Transport :

No specific measures are required for transport. No hazardous good.
GGVE / GGVS : Kl. --- RID / ADR : GGVSee : --- UN-No. : ---

15. Regulations :

There are no specific regulations.

16. Other information :

None.

Appendix 1

Further information on flexible polyurethane foam :

- When exposed to the sun the foam´s surface turns yellow, the extent varies depending on the duration and intensity of exposion.
- Cleaning in a steam autoclave can lead to permanent deformation (for example round edges)
- Cleaning in a steam autoclave is possible approximetly 10 to 15 times at 135 °C
- PUR-foam can be cleaned with common detergents.
- The cleaning temperature should not exeed 80 °C

- NEVEON foams are saliva- and perspiration-proof
  Expertise Austrian Textile Research Institute ÖTI

- The specific surface resistance of our PU-foams is : $> 10^{11}$ Ohm = insulating material

legend acc. ***IEC 61340-5-1*** *testvoltage = 100 V :*

10^2 to 10^5 Ohm =	electrostatic conductive
10^5 to 10^{11} Ohm =	electrostatic dissipative (antistatic)
$> 10^{11}$ Ohm =	insulating

Appendix 2

Hazardous substances not contained in PU-foam :

volatile chlorinated, fluorinated hydrocarbons like e.g.:

CFC, H-CFC, tetrachlorocarbone, dichloromethane, 1.1.1.-trichloroethane, trichloroethylene, tetrachloroethylene, methylenechloride

chlorous hydrocarbons like e.g.:

vinyl chloride, pentachlorophenole (PCP), polychlorinated biphenyl (PCB), polychlorinated terphenyls, polychlorinated dioxins, polychlorinated difuranes

** hydrocarbones containing bromine like e.g.:*

tetrabromobiphenol A, polybromic diphenylether, tris(2,3-dibromopropyl)-phosphate, hexabromocyclo-dodecane
Deca Brom Diphenyl Ether

aromatic hydrocarbones :

benzene, styrene, xylene

amines :

nitrosamines, naphtylamine and it salts, 4-N2-naphtylamine and it salts, 4-aminodiphenyl and it salts, 4,4´diaminodiphenylmethane

metals and metal compounds :

arsenic, lead, cadmium, chromium, cobalt, nickel, mercury, zinc and their compounds,

oxidic compounds :

Antimontrioxid, Biphenyloxide, Peroxide, Tris(aziridinyl-)phosphinoxid,

microplastic:

Polyurethane foam does not contain any microplastics.
The mentioned plastic parts are not part of the foam formulation nor content of the used raw materials.
But in some special circumstances microplastics can be generated out of foam as of any other plastic parts by friction (for example in water)

other substances

asbestus, benzidines and their salts, difurans, dioxins, formaldehyde, monomeric isocyanates, nonylphenol, octylphenol, 4-nitrodiphenyl, tributyltin (TBT), organic tin, trichlorphenol (TCP), ***** Bisphenol A (BPA), thiuram and it compounds, AZO colors, phthaltes, silicones, sulfonic acid, dimethylfumarate, halogens, latex, dimethylformamide (DMF), Alkylphenolethoxylate.

Appendix 3 Confirmation

Our PU-foams fulfill the following juridical requirements :

- 1907/2006 EU (REACH)
- Austrian environmental legislation
- no prohibited or declared substances as listed in ***GADSL*** (formerly VDA-list 232-101)
- no prohibited substances listed in EU-directive ***2011/65/EU (RoHS)*** , ***2005/618/EC, 2006/122 EEC,*** **(EU) 2015/863, (EU) 2016/585, (EU) 2017/2102** and ***China RoHS*** (lead, cadmium, mercury, chrom VI, chlore, PBB, PBDE, tin, asbest, ...).
- no pentabromdiphenylether and octabromdiphenylether as shown in EU-directive ***2003/11/EG***
- no polychlorated biphenyles (PCB) and terphenyles (PCT) as shown in EU-directive ***76/769/EWG***
- no heavy metals (lead, cadmium, mercury, chrom VI) as shown in EU-directive ***2000/53/EG*** , article 1 and update ***2002/525/EG*** and update **(EU) 2016/774**
- recyclable in accordance to EU-directive ***2000/53/EG***
- no hazardous substances in our packaging materials as shown in EU-directive ***94/62/EG*** , article 11 (lead, cadmium, mercury, chrom VI) also valid if PU-foam is used for packaging material.
- declaration, wrapping and labelling of hazardous substances in acc. to EU ***67/548/EWG, EU 1999/45***
- all our packaging materials are recyclable according to EU-directive ***94/62/EG*** and can be used several times. Waste from packaging will be collected and recycled by ARA Austria
- all PU-foams are recyclable according to EU-directive ***2002/96/EG (WEEE), 2012/19/EG (WEEE)***
- no AZO colors as listed in EU-directive ***2002/61/EG***
- no ozone-depleting substances listed in ***EU 1005/2009***
- no use of Perflurooctanoic acid (PFOA), its salts and esters **FOR-2013-05-27-550; Attachment I of Regulation (EU) 2019/1021**

***)** - no use of restricted hazardous substances acc. to US-guideline "**Toxic Substances Control Act (TSCA) Section 6 (h)**"

Signature :