# SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier	
Trade name or designation of the mixture	HIPS
Registration number	-
Synonyms	None.
Issue date	13-May-2019
Version number	01
1.2. Relevant identified uses of t	he substance or mixture and uses advised against
Identified uses	3D printer filament
Uses advised against	None known.
1.3. Details of the supplier of the	safety data sheet
Supplier	
Company name	eMotion Tech
Address	185 avenue des États-Unis, 31200 Toulouse, France
Telephone	+33 (0)5 82 95 26 62 (Office hours Mo Fr. 9:00 - 12:00, 14:00 - 17:30)
Contact person	Product Compliance
e-mail	contact@emotion-tech.com.com
1.4. Emergency telephone	+33 (0)1 40 05 48 48
number	National Poison Information Center Paris, France

### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

### Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary Not available.

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms	None.
Signal word	None.
Hazard statements	The mixture does not meet the criteria for classification.
Precautionary statements	
Prevention	Not available.
Response	Not available.
Storage	Not available.
Disposal	Not available.
Supplemental label information	None.
2.3. Other hazards	Not a PBT or vPvB substance or mixture.

## **SECTION 3: Composition/information on ingredients**

3.2. Mixtures

Chemical name	% CAS-No. / EC No. REACH Registration No. Index No. Notes		
High impact polystyrene	90 - 100 9003-55-8		
Classification: -			
Other components below report levels	rtable 1 - < 3		
Composition comments	The full text for all H-statements is displayed in section 16.		
SECTION 4: First aid meas	ures		
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.		
4.1. Description of first aid meas			
Inhalation	Not likely, due to the form of the product. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.		
Skin contact	If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn. Do not peel polymer from the skin.		
Eye contact	Not likely, due to the form of the product. If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately.		
Ingestion	Not likely, due to the form of the product.		
4.2. Most important symptoms and effects, both acute and delayed	Exposure may cause temporary irritation, redness, or discomfort.		
4.3. Indication of any mmediate medical attention and special treatment needed	Treat symptomatically.		
SECTION 5: Firefighting m	easures		
General fire hazards	No unusual fire or explosion hazards noted.		
5.1. Extinguishing media Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).		
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.		
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.		
5.3. Advice for firefighters			
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.		
Special fire fighting procedures	Move containers from fire area if you can do so without risk.		
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.		
SECTION 6: Accidental rele	ease measures		
6.1. Personal precautions, protec	ctive equipment and emergency procedures		
For non-emergency personnel	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.		
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.		
5.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.		
δ.3. Methods and material for containment and cleaning up	Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.		
6.4. Reference to other	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS		
sections			
sections SECTION 7: Handling and	storage		

7.2. Conditions for safe storage, including any	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
incompatibilities	
7.3. Specific end use(s)	Not available.

Material name: HIPS

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

#### **Occupational exposure limits**

### Austria. MAK List, OEL Ordinance (GwV), BGBI. II, no. 184/2001

Components	Туре	Value	
Styrene (CAS 100-42-5)	MAK	85 mg/m3	
		20 ppm	
	STEL	340 mg/m3	
		80 ppm	
Belgium. Exposure Limit Values.			
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	TWA	4,5 mg/m3	
		2 ppm	
Styrene (CAS 100-42-5)	STEL	216 mg/m3	
		100 ppm	
	TWA	108 mg/m3	
		25 ppm	

## Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	lype	Value	
1,3-Butadiene (CAS 106-99-0)	STEL	100 mg/m3	
	TWA	50 mg/m3	
Styrene (CAS 100-42-5)	STEL	215 mg/m3	
	TWA	85 mg/m3	

# Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	MAC	22 mg/m3	
		10 ppm	
Styrene (CAS 100-42-5)	MAC	430 mg/m3	
		100 ppm	
	STEL	1080 mg/m3	
		250 ppm	

# Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Туре	Value	
Styrene (CAS 100-42-5)	TWA	210 mg/m3	
		50 ppm	
Czech Republic. OELs. Governm	ient Decree 361		
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	Ceiling	20 mg/m3	
	TWA	10 mg/m3	
Styrene (CAS 100-42-5)	Ceiling	400 mg/m3	
	TWA	100 mg/m3	
Denmark. Exposure Limit Values	3		
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	TLV	22 mg/m3	
		10 ppm	
Styrene (CAS 100-42-5)	Ceiling	105 mg/m3	
		25 ppm	

# Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	STEL	10 mg/m3	
		5 ppm	
	TWA	1 mg/m3	
		0,5 ppm	
Styrene (CAS 100-42-5)	STEL	200 mg/m3	
		50 ppm	
	TWA	90 mg/m3	
		20 ppm	
Finland. Workplace Exposure Li	nits		
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	TWA	2,2 mg/m3	
		1 ppm	
Styrene (CAS 100-42-5)	STEL	430 mg/m3	
		100 ppm	
	TWA	86 mg/m3	
		20 ppm	

## France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Туре	Value	
Styrene (CAS 100-42-5)	VLE	200 mg/m3	
Regulatory status:	Indicative limit (VL)		
		46,6 ppm	
Regulatory status:	Indicative limit (VL)		
	VME	100 mg/m3	
Regulatory status:	Indicative limit (VL)		
		23,3 ppm	
Regulatory status:	Indicative limit (VL)		

# Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Туре	Value	
Styrene (CAS 100-42-5)	TWA	86 mg/m3	
		20 ppm	
Germany. TRGS 900, Limit Value	s in the Ambient Air at the Wor	kplace	
Components	Туре	Value	
Styrene (CAS 100-42-5)	AGW	86 mg/m3	
		20 ppm	
Greece. OELs (Decree No. 90/199	99, as amended)		
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	TWA	22 mg/m3	
		10 ppm	
Styrene (CAS 100-42-5)	STEL	1050 mg/m3	
		250 ppm	
	TWA	425 mg/m3	
		100 ppm	
Hungary. OELs. Joint Decree on	Chemical Safety of Workplaces	i	
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	Ceiling	1 mg/m3	

Hungary. OELs. Joint Decree on Chemic Components	al Safety of Workplaces Type	Value			
Styrene (CAS 100-42-5)	STEL	50 mg/m3			
	TWA	50 mg/m3			
Iceland. OELs. Regulation 154/1999 on o Components	ccupational exposure limits Type	Value			
1,3-Butadiene (CAS	TWA	20 mg/m3			
106-99-0)		10 ppm			
Styrene (CAS 100-42-5)	STEL	105 mg/m3			
Stylene (CAS 100-42-5)	STEL	25 ppm			
Ireland. Occupational Exposure Limits Components	Туре	Value			
1,3-Butadiene (CAS	TWA				
1,3-Buladiene (CAS 106-99-0)	TWA	2,2 mg/m3			
		1 ppm			
Styrene (CAS 100-42-5)	STEL	170 mg/m3			
		40 ppm			
	TWA	85 mg/m3			
		20 ppm			
Italy. Occupational Exposure Limits					
Components	Туре	Value			
1,3-Butadiene (CAS 106-99-0)	TWA	2 ppm			
Styrene (CAS 100-42-5)	STEL	40 ppm			
	TWA	20 ppm			
Latvia. OELs. Occupational exposure lin Components	it values of chemical substances ir Type	i work environment Value			
1,3-Butadiene (CAS 106-99-0)	TWA	100 mg/m3			
Styrene (CAS 100-42-5)	STEL	30 mg/m3			
	TWA	10 mg/m3			
Lithuania. OELs. Limit Values for Chemi	cal Substances, General Requirem	ents			
Components	Туре	Value			
1,3-Butadiene (CAS	STEL	10 mg/m3			
106-99-0)		5 ppm			
	TWA	1 mg/m3			
		-			
		() 5 ppm			
Styrene (CAS 100-42-5)	STEL	0,5 ppm 200 ma/m3			
Styrene (CAS 100-42-5)	STEL	200 mg/m3			
Styrene (CAS 100-42-5)		200 mg/m3 50 ppm			
Styrene (CAS 100-42-5)	STEL TWA	200 mg/m3 50 ppm 90 mg/m3			
		200 mg/m3 50 ppm			
Styrene (CAS 100-42-5) Netherlands. OELs (binding) Components		200 mg/m3 50 ppm 90 mg/m3			
Netherlands. OELs (binding)	TWA	200 mg/m3 50 ppm 90 mg/m3 20 ppm			
Netherlands. OELs (binding) Components 1,3-Butadiene (CAS	TWA <b>Type</b> TWA	200 mg/m3 50 ppm 90 mg/m3 20 ppm <b>Value</b>			
Netherlands. OELs (binding) Components 1,3-Butadiene (CAS 106-99-0) Norway. Administrative Norms for Conta Components	TWA Type TWA TWA minants in the Workplace Type	200 mg/m3 50 ppm 90 mg/m3 20 ppm <b>Value</b> 2 mg/m3 <b>Value</b>			
Netherlands. OELs (binding) Components 1,3-Butadiene (CAS 106-99-0) Norway. Administrative Norms for Conta	TWA Type TWA minants in the Workplace	200 mg/m3 50 ppm 90 mg/m3 20 ppm <b>Value</b> 2 mg/m3 <b>Value</b> 2,2 mg/m3			
Netherlands. OELs (binding) Components 1,3-Butadiene (CAS 106-99-0) Norway. Administrative Norms for Conta Components 1,3-Butadiene (CAS	TWA Type TWA TWA minants in the Workplace Type	200 mg/m3 50 ppm 90 mg/m3 20 ppm <b>Value</b> 2 mg/m3 <b>Value</b>			

Components	Туре	Value
		25 ppm
Ordinance of the Minister of Lab	our and Social Policy on 6 June 2	2014 on the maximum permissible concentrations and
intensities of harmful health fact	ors in the work environment, Jou	rnal of Laws 2014, item 817
Components	Туре	Value
1,3-Butadiene (CAS 106-99-0)	TWA	4,4 mg/m3
Styrene (CAS 100-42-5)	STEL	100 mg/m3
	TWA	50 mg/m3
Portugal. VLEs. Norm on occupa	tional exposure to chemical ager	ıts (NP 1796)
Components	Туре	Value
1,3-Butadiene (CAS 106-99-0)	TWA	2 ppm
Styrene (CAS 100-42-5)	STEL	40 ppm
	TWA	20 ppm
Romania. OELs. Protection of wo Components	orkers from exposure to chemical Type	l agents at the workplace Value
1,3-Butadiene (CAS 106-99-0)	TWA	22 mg/m3
		10 ppm
Styrene (CAS 100-42-5)	STEL	150 mg/m3
<b>, , , ,</b>		35 ppm
	TWA	50 mg/m3
		6
		12 ppm /2002 on carcinogenic and mutagenic substances
Components 1,3-Butadiene (CAS	and mutagens. Regulation No. 46 Type TWA	
Components 1,3-Butadiene (CAS	Туре	/2002 on carcinogenic and mutagenic substances Value
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3	Type TWA 300/2007 concerning protection of	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components	Type TWA 300/2007 concerning protection of Type	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components	Type TWA 300/2007 concerning protection of	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components	Type TWA 300/2007 concerning protection of Type STEL	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components	Type TWA 300/2007 concerning protection of Type	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5)	Type TWA 300/2007 concerning protection of Type STEL TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of work	Type TWA 300/2007 concerning protection of Type STEL TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5)	Type TWA 300/2007 concerning protection of Type STEL TWA rkers from exposure to carcinoge	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended)
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS	Type TWA 300/2007 concerning protection of Type STEL TWA rkers from exposure to carcinoge Type	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0)	Type         TWA         300/2007 concerning protection of Type         STEL         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA         TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations com (Official Gazette of the Republic	Type         TWA         300/2007 concerning protection of Type         STEL         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA         TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm 90 mg/m3 20 ppm 91 mand mutagen agents (ULRS 101/2005, as amended) Value
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations com (Official Gazette of the Republic for Components 1,3-Butadiene (CAS 1,3-Butadiene (CAS)	Type         TWA         300/2007 concerning protection of Type         STEL         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3 15 ppm painst risks due to exposure to chemicals while working
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations com (Official Gazette of the Republic for Components 1,3-Butadiene (CAS 1,3-Butadiene (CAS)	Type TWA 300/2007 concerning protection of Type STEL TWA rkers from exposure to carcinoge Type TWA TWA accerning protection of workers ag of Slovenia) Type	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3 15 ppm painst risks due to exposure to chemicals while working Value
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations con (Official Gazette of the Republic Components 1,3-Butadiene (CAS 1,3	Type TWA 300/2007 concerning protection of Type STEL TWA rkers from exposure to carcinoge Type TWA TWA accerning protection of workers ag of Slovenia) Type	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3 15 ppm painst risks due to exposure to chemicals while working Value 11 mg/m3
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations con (Official Gazette of the Republic Components 1,3-Butadiene (CAS 1,3	Type         TWA         300/2007 concerning protection of Type         STEL         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3 15 ppm painst risks due to exposure to chemicals while working Value 11 mg/m3 15 ppm
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations com (Official Gazette of the Republic of Components 1,3-Butadiene (CAS 106-99-0) Styrene (CAS 100-42-5)	Type         TWA         300/2007 concerning protection of Type         STEL         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3 15 ppm painst risks due to exposure to chemicals while working Value 11 mg/m3 15 ppm 86 mg/m3
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations com	Type         TWA         300/2007 concerning protection of Type         STEL         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3 15 ppm painst risks due to exposure to chemicals while working Value 11 mg/m3 15 ppm 86 mg/m3
Components 1,3-Butadiene (CAS 106-99-0) Slovakia. OELs. Regulation No. 3 Components Styrene (CAS 100-42-5) Slovenia. CMR. Protection of wor Components 1,3-Butadiene (CAS 106-99-0) Slovenia. OELs. Regulations con (Official Gazette of the Republic Components 1,3-Butadiene (CAS 106-99-0) Styrene (CAS 100-42-5) Styrene (CAS 100-42-5) Spain. Carcinogens and Mutager	Type         TWA         300/2007 concerning protection of Type         STEL         TWA         rkers from exposure to carcinoge Type         TWA         rkers from exposure to carcinoge Type         TWA         TWA	/2002 on carcinogenic and mutagenic substances Value 11 mg/m3 5 ppm f health in work with chemical agents Value 200 mg/m3 50 ppm 90 mg/m3 20 ppm en and mutagen agents (ULRS 101/2005, as amended) Value 11 mg/m3 15 ppm painst risks due to exposure to chemicals while working Value 11 mg/m3 15 ppm 86 mg/m3 20 ppm

#### Spain. Occupational Exposure Limits Components Value Туре 1,3-Butadiene (CAS TWA 4,5 mg/m3 106-99-0) 2 ppm Styrene (CAS 100-42-5) STEL 172 mg/m3 40 ppm TWA 86 mg/m3 20 ppm

#### Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7) Components Type Value

Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	Ceiling	10 mg/m3	
		5 ppm	
	TWA	1 mg/m3	
		0,5 ppm	
Styrene (CAS 100-42-5)	STEL	86 mg/m3	
		20 ppm	
	TWA	43 mg/m3	
		10 ppm	
Switzerland. SUVA Grenzwerte a	m Arbeitsplatz		
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	TWA	11 mg/m3	
		5 ppm	
Styrene (CAS 100-42-5)	STEL	170 mg/m3	
		40 ppm	
	TWA	85 mg/m3	
		20 ppm	
UK. EH40 Workplace Exposure L	imits (WELs)		
Components	Туре	Value	
1,3-Butadiene (CAS 106-99-0)	TWA	22 mg/m3	
		10 ppm	
Styrene (CAS 100-42-5)			
	STEL	1080 mg/m3	
	STEL	1080 mg/m3 250 ppm	
- ,	STEL	-	
		250 ppm	
EU. OELs, Directive 2004/37/EC o	TWA on carcinogen and mutagens fro	250 ppm 430 mg/m3 100 ppm om Annex III, Part A	
	TWA	250 ppm 430 mg/m3 100 ppm	
EU. OELs, Directive 2004/37/EC o	TWA on carcinogen and mutagens fro	250 ppm 430 mg/m3 100 ppm om Annex III, Part A	

#### Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended) Components Value Determinant Specimen Sampling Time

Value	Determinant	opecimen	
20 µg/l	Styrene	Blood	*
1 g/g	Mandelic acid	Creatinine in urine	*
240 mg/g	Phenylglyoxylic acid	Creatinine in urine	*
0,18 mol/mol	Phenylglyoxylic acid	Creatinine in urine	*
	20 μg/l 1 g/g 240 mg/g	20 μg/lStyrene1 g/gMandelic acid240 mg/gPhenylglyoxylic acid0,18 mol/molPhenylglyoxylic	20 μg/lStyreneBlood1 g/gMandelic acidCreatinine in urine240 mg/gPhenylglyoxylic acidCreatinine in urine0,18 mol/molPhenylglyoxylicCreatinine in urine

#### Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended) Components Value Determinant Specimen Sampling Time

components	value	Determinant	Specimen	Sampling Time
	1,66 nmol/l	Styrene	Mixed exhaled air	*
	40 ppm	Styrene	Mixed exhaled air	*
	18 ppm	Styrene	Mixed exhaled air	*
	0,75 umol/l	Styrene	Mixed exhaled air	*
	0,19 umol/l	Styrene	Blood	*

\* - For sampling details, please see the source document.

Czech Republic. Limit Values for Indictators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.

Components	Value	Determinant	Specimen	Sampling Time
Styrene (CAS 100-42-5)	300 µmol/mmol	Mandelic acid	Creatinine in urine	*
	400 mg/g	Mandelic acid	Creatinine in urine	*

\* - For sampling details, please see the source document.

Finland. HTP-arvot,	App 2., Biological L	_imit Values, (BRA/BGV) ,	Social Affairs a	and Ministry of Health
Components	Value	Determinant	Specimen	Sampling Time

Styrene (CAS 100-42-5) 1,2	,2 mmol/l MAPGA (mandelic a plus phenylglyox acid)		*
----------------------------	--	--	---

\* - For sampling details, please see the source document.

## France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)

Components	Value	Determinant	Specimen	Sampling Time	
Styrene (CAS 100-42-5)	240 mg/g	Acide phénylglyoxyliq ue	Creatinine in urine	*	
	100 mg/g	Acide phénylglyoxyliq ue	Creatinine in urine	*	
	0,55 mg/l	Styréne	Venous blood	*	
	0,02 mg/l	Styréne	Venous blood	*	

\* - For sampling details, please see the source document.

#### Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling Time
Styrene (CAS 100-42-5)	600 mg/g	Mandelsäure plus Phenylglyoxyls äure	Creatinine in urine	*

\* - For sampling details, please see the source document.

# Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling Time	
Styrene (CAS 100-42-5)	1000 mg/g	mandelic acid	Creatinine in urine	*	
	740 µmol/mmol	mandelic acid	Creatinine in urine	*	

\* - For sampling details, please see the source document.

# Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Components	Value	Determinant	Specimen	Sampling Time
Styrene (CAS 100-42-5)	600 mg/g	Mandelic acid plus phenylglyoxylic acid	Creatinine in urine	*
	901 mg/l	Mandelic acid plus phenylglyoxylic acid	Urine	*

\* - For sampling details, please see the source document.

#### Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4 Components Value Determinant Specimen Sampling Time

Components	Value	Determinant	Specimen	Sampling Time	
1,3-Butadiene (CAS 106-99-0)	2,5 mg/l	Acido 1,2-Dihidroxibu tilmercaptúrico	Urine	*	
	2,5 pmol/g	Mezcla de 1-N y 2-N-(hidroxibut enil) valina aductos de hemoglobina (Hb)	Hemoglobin in blood	*	
Styrene (CAS 100-42-5)	400 mg/g	Ácido mandélico más ácido fenilglioxílico	Creatinine in urine	*	
	0,2 mg/l	Estireno	Venous blood	*	

\* - For sampling details, please see the source document.

#### Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA) Components Value Determinant Specimen

Components	Value	Determinant	Specimen	Sampling Time
Styrene (CAS 100-42-5)	600 mg/g	Mandelsäure plus Phenyl-glyoxyls äure	Creatinine in urine	*
* - For sampling details, pl	ease see the source doo	cument.		
Recommended monitoring procedures	Follow standard m	onitoring procedures		
Derived no effect levels (DNELs)	Not available.			
Predicted no effect concentrations (PNECs)	Not available.			
8.2. Exposure controls				
Appropriate engineering controls	should be matched or other engineerin	I to conditions. If app og controls to maintai	licable, use proo n airborne levels	our) should be used. Ventilation rates cess enclosures, local exhaust ventilation, s below recommended exposure limits. If borne levels to an acceptable level.
Individual protection measur	es, such as personal p	rotective equipmer	nt	
General information		n equipment should b supplier of the perso		ding to the CEN standards and in quipment.
Eye/face protection	Wear safety glasse	es with side shields (	or goggles).	
Skin protection				
- Hand protection	Wear appropriate of	chemical resistant glo	oves.	
- Other	Wear suitable prote	ective clothing.		
<b>Respiratory protection</b>	In case of insufficie	ent ventilation, wear	suitable respirate	bry equipment.
Thermal hazards	Wear appropriate t	hermal protective clo	othing, when nec	essary.
Hygiene measures		drinking, and/or smo		n as washing after handling the material wash work clothing and protective

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

···· ···· ···· ··· ··· ··· ··· ··· ···	
Appearance	
Physical state	Solid.
Form	filament
Colour	Color depends on product specification
Odour	Slight.
Odour threshold	Not available.
рН	Not available.
Melting point/freezing point	105 - 135 °C (221 - 275 °F)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	> 300 °C (> 572 °F)
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Density	1,00 - 1,10 g/cm³
SECTION 10: Stability and	I reactivity
10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.

temperatures exceeding the decomposition temperature. Contact with incompatible materials.10.5. Incompatible materials10.6. Hazardous<br/>decomposition productsIntritating and/or toxic fumes and gases may be emitted upon the products decomposition.

## **SECTION 11: Toxicological information**

General information	Occupational exposure to the substance or mixture may cause adverse effects.	
Information on likely routes of	exposure	
Inhalation	Based on available data, the classification criteria are not met.	
Skin contact	Based on available data, the classification criteria are not met.	
Eye contact	Based on available data, the classification criteria are not met.	
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.	

Material name: HIPS

Symptoms	Exposure may cause temporary irritation, redness, or discomfort.	
11.1. Information on toxicological effects		
Acute toxicity	Not known.	
Skin corrosion/irritation	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
Skin sensitisation	Based on available data, the classification criteria are not met.	
Germ cell mutagenicity	Based on available data, the classification criteria are not met.	
Carcinogenicity	Based on available data, the classification criteria are not met.	
Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended) Not listed.		
Reproductive toxicity	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Based on available data, the classification criteria are not met.	
Mixture versus substance information	No information available.	
Other information	This product has no known adverse effect on human health.	

## **SECTION 12: Ecological information**

12.1. Toxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
12.2. Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
12.3. Bioaccumulative potential	
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture. Not available.
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## **SECTION 13: Disposal considerations**

13.1. Waste treatment methods		
Residual waste	Dispose of in accordance with local regulations.	
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.	
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.	
Special precautions	Dispose in accordance with all applicable regulations.	

## **SECTION 14: Transport information**

## ADR

14.1. - 14.6.: Not regulated as dangerous goods.

## RID

14.1. - 14.6.: Not regulated as dangerous goods.

## ADN

14.1. - 14.6.: Not regulated as dangerous goods.

## ΙΑΤΑ

14.1. - 14.6.: Not regulated as dangerous goods.

## IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

## **SECTION 15: Regulatory information**

15.1. Safety, health and enviro	onmental regulations/legislation specific for the substance or mixture
EU regulations	
Regulation (EC) No. 1005/ Not listed.	2009 on substances that deplete the ozone layer, Annex I and II, as amended
	004 On persistent organic pollutants, Annex I as amended
	012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
	012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
	012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
	012 concerning the export and import of dangerous chemicals, Annex V as amended
Regulation (EC) No. 166/2	006 Annex II Pollutant Release and Transfer Registry, as amended
Not listed. Regulation (EC) No. 1907/ Not listed.	2006, REACH Article 59(10) Candidate List as currently published by ECHA
Authorisations	
Regulation (EC) No. 1907/ Not listed.	2006, REACH Annex XIV Substances subject to authorization, as amended
Restrictions on use	
Regulation (EC) No. 1907/	2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed. Directive 2004/37/EC: on t work, as amended.	the protection of workers from the risks related to exposure to carcinogens and mutagens at
Not listed.	
Other EU regulations	
Directive 2012/18/EU on m	najor accident hazards involving dangerous substances, as amended
Not listed.	
Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Follow national regulation on the protection of workers from the risks of exposure to carcinogens and mutagens at work, in accordance with Directive 2004/37/EC.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.
SECTION 16: Other infor	rmation
List of abbreviations	Not available.
References	Not available.
Information on evaluation	The classification for health and environmental hazards is derived by a combination of calculation

methods and test data, if available.

Follow training instructions when handling this material.

user's responsibility to take appropriate safety measures for handling.

This safety data sheet (SDS) is issued based on the latest reference, data etc currently available. The information in this SDS has been carefully assessed, but no guarantee is given for its accuracy. We cannot anticipate all conditions under which this product may be used. It is the

None.

None.

not written out in full under

method leading to the classification of mixture Full text of any H-statements

Sections 2 to 15 **Revision information** 

Disclaimer

**Training information**