

# HIPS-20

UPDATE: 1.09.2020

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier Trade name: Filament HIPS-20 1,75mm; Filament HIPS-20 2,85mm

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses Thermal processing: FDM/FFF

1.2.2. Uses advised against No data.

1.3. Company

Producent/Dostawca: Omni3d sp z o.o.  
Adres: ul. Św Michała 43 Poznań 61-119  
Telefon: 886 618 690  
Adres e-mail: sales@omni3d.com

1.4. Emergency telephone number EU-wide emergency number: 112

## 2. HAZARD IDENTIFICATION

2.1. Classification of the substance/mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified.

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable.

2.3. Other hazards

Other hazards not contributing to the classification: fine dust may cause irritation of respiratory system and mucous. Contact with hot material – prevent serious burns. If heated to more than 200°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Dust may form explosive mixture in air. Combustible dust.



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substances

Not applicable.

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hihg Impact Polystyrene	(CAS-No.) 9003-55-8	< 100	Not classified
Polybutadiene		2 – 10	Not classified
Styrene (Impurity)	(CAS-No.) 100-42-5 (EC-No.) 202-851-5 (EC Index-No.) 601-026-00-0 (REACH-No.) 01-2119457861-32	< 0,08	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 3, H412

### 4. FIRST AID MEASURES

#### 4.1. Description of first aid measures

##### First-aid measures after inhalation

Exposure to spray, fumes and vapours produced by heated or burned product: move to fresh air. Call a doctor.

##### First-aid measures after skin contact

Exposure to splashing of hot product: treat the affected part with cold water (by spraying or immersion). Do not remove clothing adhering to the skin. In case of severe burns, seek hospital treatment.

##### First-aid measures after eye contact

Immediately rinse with water for prolonged period while holding the eyelids wide open. In case of irritation caused by fine dust: wash with copious volumes of water, until the irritation disappears.

##### First-aid measures after ingestion

Ingestion during handling is not likely. Do not induce vomiting. Rinse mouth out with water.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects: refer to Section 11 for more details on effects.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### 5. FIREFIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable extinguishing media – for small fire: carbon dioxide, dry powder, water; for large fire: foam.  
Unsuitable extinguishing media – do not use a solid water stream as it may scatter and spread fire.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard – combustible.

Hazardous decomposition product in case of fire – carbon oxides (CO, CO<sub>2</sub>), aldehydes, ketones, hydrocarbons, toluene, alcohols, styrene.



### 5.3. Advice for firefighters

Protection during firefighting – do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.  
Other information – notify fire brigade and environmental authorities. Evacuate unnecessary personnel. Use water spray to cool exposed surfaces.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Protective equipment: do not attempt to take action without suitable protective equipment – gloves, safety glasses.

#### For emergency responders

Protective equipment: use personal protective equipment as required.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment: if spilled, may cause the floor to be slippery. Sweep up or vacuum up the product. Keep recovered product for subsequent disposal. Do not allow to enter drains or water courses.

Other information: dispose of contaminated material at an authorized site. Notify authorities if product enters sewers or public waters.

### 6.4. Reference to other sections

For further information refer to section 8 and section 13.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Hygiene measures: do not eat, drink or smoke when using this product. Keep away from food and drink.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Technical measures

Comply with applicable regulations. Provide local exhaust or general room ventilation. Take precautionary measures against static discharge. Explosive atmospheres may result from the presence of flammable gas or from the evaporation of flammable liquids, such as some solvents.

#### Storage conditions

Explosive vapour/air mixtures may be formed. Store at ambient temperature and at atmospheric pressure in original packaging (plastic or cardboard boxes). Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. Proper grounding procedures to avoid static electricity should be followed. Store in dry, cool, well-ventilated area.

### 7.3. Specific end use(s)

Recommended to professional users.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### 8.1. Control parameters

<i>High Impact Polystyrene (9003-55-8)</i>		
USA – ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> inhalable dust particles
<i>Styrene (100-42-5)</i>		
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	85 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	20 ppm
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	170 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	40 ppm
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	430 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	1080 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	250 ppm
USA – ACGIH	ACGIH TWA (ppm)	20 ppm
USA – ACGIH	ACGIH STEL (ppm)	40 ppm
USA – ACGIH	Biological Exposure Indices (BEI)	400 mg/m Kreatinin (Medium: urine – Time: end of shift – Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific) 0,2 mg/l (Medium: <u>vanous</u> blood – Time: end of shift – Parameter: Styrene (semi-quantitative)

### 8.2. Exposure controls

#### Appropriate engineering controls

Ensure good ventilation of the work station. If handling results in dust generation or high temperatures, local exhaust ventilation should be provided to ensure that exposure to dust or decomposition products does not exceed the exposure recommended levels. Safety shower. Eye fountain.

#### Personal protective equipment

Dustproof clothing. Gloves. Safety glasses. Dust formation: dust mask.  
Hand protection: protective gloves. Use insulated gloves when handling this material hot. Eye protection: safety glasses.  
Skin and body protection: wear suitable protective clothing. Safety foot-wear.  
Respiratory protection: dust/aerosol mask with filter type P1

#### Environmental exposure controls

Avoid release to the environment.

#### Other information

Do not eat, drink or smoke during use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical state		Solid
Appearance		Fiber, filament
Odour		Mild
Odour threshold		No data available
<i>Styrene (100-42-5)</i>		
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	85 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (ppm)	20 ppm
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	170 mg/m <sup>3</sup>
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### 9.2. Other information

Softening point 76 – 102°C

VOC content < 0,5%

## 10. Stability and reactivity

### 10.1. Reactivity

Electrostatic charges may be generated during handling. Take precautionary measures static discharge during blending and transfer operations.

### 10.2. Chemical stability

The product is stable at normal handling and storage conditions.

### 10.3. Possibility of hazardous reactions

Dust may form explosive mixture in air.

#### 10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition. Avoid temperature above 250°C

#### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Halogens.

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Acute toxicity

Not classified (based on available data, the classification criteria are not met).

Styrene (100-42-5)	
LD50 oral rat	2650 mg/kg
LD50 dermal rat	> 26,4 mg/kg
LC50 inhalation rat	11,8 mg/l/4h as a vapor
LC inhalation rat (ppm)	2770 ppmv/4h

### 11.2. Skin corrosion/irritation

Not classified (based on available data, the classification criteria are not met)

pH: not applicable

Additional information: heated product causes burns. Thermal decomposition products are produced at elevated temperatures and these may be irritating.

### 11.3. Eye corrosion/irritation

Not classified (based on available data, the classification criteria are not met)

pH: not applicable

Additional information: fine dust cause irritation to ocular mucous. Thermal decomposition products are produced at elevated temperatures and these may be irritating. Heated product causes burns.

### 11.4. Respiratory sensitization

Not classified.

### 11.5. Skin sensitization

Not classified.

### 11.6. Mutagenicity

Not classified.

### 11.7. Carcinogenicity

Not classified.

### 11.8. Reproductive toxicity

Not classified.



### 11.9. Specific target organ toxicity (single exposure)

Not classified.

Dust may cause irritation of respiratory system. If heated to more than 200°C, the product may form vapours or fumes which may cause irritation of respiratory tract and cause coughing and sensation of shortness of breath.

### 11.10. Specific target organ toxicity (repeated exposure)

Not classified.

### 11.11. Aspiration hazard

Not classified.

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

Do not allow product to spread into the environment. This product does not present any particular risk for the environment.

<i>Styrene (100-42-5)</i>	
LC50 fish 1	3,24 – 2,99 mg/l (Exposure time: 96h – Species: Pimephales promelas [flow through])
LC50 fish 2	19,03 – 33,53 mg/l (Exposure time: 48h – Species: Lepomis macrochirus [static])
EC50 <i>Daphnia</i> 1	3,3 – 7,4 mg/l (Exposure time: 48h – Species: <i>Daphnia magna</i> )
EC50 other aquatic organisms 1	1,4 mg/l (Exposure time: 72h – Species: Pseudokirchneriella subcapitata)
EC50 other aquatic organisms 2	0,72 mg/l (Exposure time: 96h - Species: Pseudokirchneriella subcapitata)
NOEC (acute)	44 mg/kg (Exposure time: 14 days – Species: Eisenia foetida [soil dry weight])

### 12.2. Persistence and degradability

<i>High Impact Polystyrene (9003-55-8)</i>	
Persistence and degradability	Product persists. Not readily biodegradable.
BOD (% of ThOD)	Below detection limit.

### 12.3. Bioaccumulative potential

<i>High Impact Polystyrene (9003-55-8)</i>	
Bioaccumulative potential	Low bioaccumulation potential
<i>Styrene (100-42-5)</i>	
BCF fish 1	13,5
Log Pow	2,95

### 12.4. Mobility in soil

<i>High Impact Polystyrene (9003-55-8)</i>	
Ecology – soil	Low mobility.



## 12.5. Results of PBT and vPvB assessment

<i>High Impact Polystyrene (9003-55-8)</i>	
Results of PBT assessment	Not required.

## 12.6. Other adverse effects

No additional information available.

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Dispose of in accordance with relevant local regulations. Recycle the material as far as possible. Do not discharge the product into the environment.

## 14. TRANSPORT INFORMATION

### 14.1. Un number

ADR Not applicable  
 IMDG Not applicable  
 IATA Not applicable  
 ADN Not applicable  
 RID Not applicable

### 14.2. UN proper shipping name

ADR Not applicable  
 IMDG Not applicable  
 IATA Not applicable  
 ADN Not applicable  
 RID Not applicable

### 14.3. Transport hazard class(es)

ADR Not applicable  
 IMDG Not applicable  
 IATA Not applicable  
 ADN Not applicable  
 RID Not applicable

### 14.4. Packing group

ADR Not applicable  
 IMDG Not applicable  
 IATA Not applicable  
 ADN Not applicable  
 RID Not applicable



#### 14.5. Environmental hazard

ADR Dangerous for the environment: No  
 IMDG Dangerous for the environment: No  
 Marine Pollutant: No  
 IATA Dangerous for the environment: No  
 ADN Dangerous for the environment: No  
 RID Dangerous for the environment: No

#### 14.6. Special precautions for user

Overland transport No data available  
 Transport by sea (IMDG) No data available  
 Air transport (IATA) No data available  
 Inland waterway transport No data available  
 Rail transport No data available

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### 15. REGULATORY INFORMATION

#### 15.1. Safety, health and environmental regulation/legislation specific for the substance or mixture

##### EU-Regulations

Contains no REACH substances with Annex XVII restrictions  
 Contains no substance on the REACH candidate list  
 Contains no REACH Annex XIV substances  
 VOC content : < 0.5 %

##### National regulations

Complies the United States TSCA (Toxic Substances Control Act) inventory  
 Not listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
 Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the AICS (Australian Inventory of Chemical Substances)  
 Listed on KECI (Korean Existing Chemicals Inventory)  
 Listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) Listed on the China Inventory of Existing Chemical Substances (IECSC)  
 Listed on the Canadian DSL (Domestic Substances List)

#### 15.2. Chemical safety assessment

The substance is not classified for human health hazards or for environment effects and it is not PBT or vPvB so that no exposure assessment or risk characterisation is required. For tasks where the intervention of workers is required, the substance must be handled in accordance with good industrial hygiene and safety procedures.

## 16. OTHER INFORMATION

### 16.1. Indication of changes

Not available.

### 16.2. Abbreviations and acronyms

Full text of H- and EUH-statements

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters Airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H361d	Suspected of damaging the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

### 16.3. Key literature references and sources for data

The product safety data sheet has been prepared based on the documentation provided by the manufacturer of the granulate from which the filament product was made.

### 16.4. Relevant R phrases and H statements

No data available.

### 16.5. Training advice

Not available.

## 16.6. Further information

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