

# SAFETY DATA SHEET

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

### 1.1. Product identifier

**Trade name or designation of the mixture** Putty Hardener

**Registration number** -

**Synonyms** None.

**SKU#** 0200C

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

**Identified uses** Not available.

**Uses advised against** None known.

### 1.3. Details of the supplier of the safety data sheet

**Company Name** ITW Performance Polymers

**Address** Bay 150  
Shannon Industrial Estate  
Co. Clare  
Ireland  
V14 DF82

**Contact Person** Customer Service

**Telephone Number** 353(61)771500  
353(61)471285

**Email** customerservice.shannon@itwpp.com

**Emergency Phone Number** 44(0) 1235 239 670 (24 hours)

### 1.4. Emergency telephone number

**General in EU** 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Austria National Poisons Information Center** +431 406 4343 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Belgium National Poisons Control Center** 070 245 245 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Bulgaria National Toxicological Information Center** +359 2 9154 233 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Croatia Poisons Information Center** +385 1 2348 342 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

**Cyprus Poison Center** 1401 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Czech Republic National Poisons Information Center** +420 224 919 293, or +420 224 915 402 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)

**Denmark National Poisons Control Center** +45 82 12 12 12 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**Estonia National Poisons Information Center** 16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays). SDS/Product information may not be available for the Emergency Service.)

**Finland National Poison Information Center** (09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

**France National Poisons Control Center** ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

#### 1.4. Emergency telephone number

<b>Greece Poison Information Centre</b>	(0030) 2107793777 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Hungary National Emergency Phone Number</b>	+36-80-201-199 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Iceland Poison Center</b>	(+354) 543 2222 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Latvia Emergency medical aid</b>	113
<b>Latvia Poison and Drug Information Center</b>	+371 67042473 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Lithuania Neatidėliotina informacija apsinuodijus</b>	+370 5 236 20 52 or +37068753378 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
<b>Malta Accident and Emergency Department</b>	2545 4030 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
<b>Netherlands National Poisons Information Center (NVIC)</b>	NVIC: +31 (0)88 755 8000 (Only for the purpose of informing medical personnel in cases of acute intoxications)
<b>Norway Norwegian Poison Information Center</b>	22 59 13 00 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Portugal Poison Center</b>	800 250 250 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Romania Biroul RSI si Informare Toxicologica</b>	021.318.36.06 (Available 8:00AM-3:00PM. SDS/Product information may not be available for the Emergency Service.)
<b>Slovakia National Toxicological Information Center</b>	+421 2 5477 4166 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Spain Toxicology Information Service</b>	+ 34 91 562 04 20 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Sweden National Poison Information Center</b>	112 - and ask for Poison Information (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
<b>Switzerland Tox Info Suisse</b>	145 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

## 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

##### Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Skin sensitization	Category 1	H317 - May cause an allergic skin reaction.

##### Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.
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#### 2.2. Label elements

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

**Contains:** 3,6-diazaoctanethylenediamin; triethylenetetramine, Aliphatic Amines

##### Hazard pictograms



##### Signal word

Danger

##### Hazard statements

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H412 Harmful to aquatic life with long lasting effects.

## Precautionary statements

### Prevention

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 Wash thoroughly after handling.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear eye protection/face protection.  
P280 Wear protective gloves.

### Response

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

### Storage

Not available.

### Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Supplemental label information** None.

## 2.3. Other hazards

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Aliphatic Amines	40 - < 50	N/A	-	-	
<b>Classification:</b> -					
3,6-diazaoctanethylenediamin; triethylenetetramine	20 - < 30	112-24-3 203-950-6	-	612-059-00-5	
<b>Classification:</b> Acute Tox. 4;H302;(ATE: 1716 mg/kg bw), Acute Tox. 4;H312;(ATE: 1100 mg/kg bw), Skin Corr. 1B;H314, Eye Dam. 1;H318, Skin Sens. 1;H317, Aquatic Chronic 3;H412					
benzyl alcohol	20 - < 30	100-51-6 202-859-9	-	603-057-00-5	
<b>Classification:</b> Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H312;(ATE: 2000 mg/kg bw), Acute Tox. 4;H332;(ATE: 11 mg/l), Aquatic Chronic 2;H411					
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	< 1	13463-67-7 236-675-5	01-2119489379-17-0000	022-006-002	
<b>Classification:</b> Carc. 2;H351					
Other components below reportable levels	0,1 - 1				

#### List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.  
M: M-factor  
vPvB: very persistent and very bioaccumulative substance.  
PBT: persistent, bioaccumulative and toxic substance.  
#: This substance has been assigned Union workplace exposure limit(s).  
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**Composition comments** The full text for all H-statements is displayed in section 16.

## SECTION 4: First aid measures

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 4.1. Description of first aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
4.2. Most important symptoms and effects, both acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
4.3. Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### SECTION 5: Firefighting measures

General fire hazards	No unusual fire or explosion hazards noted.
5.1. Extinguishing media	
Suitable extinguishing media	Water spray. Alcohol resistant foam. Powder. Carbon dioxide (CO <sub>2</sub> ).
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	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

### SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
6.2. Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Prevent product from entering drains.  Large Spills: Stop the flow of material, if this is without risk. Following product recovery, flush area with water.  Small Spills: Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

### SECTION 7: Handling and storage

7.1. Precautions for safe handling	Do not get this material in contact with eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Observe industrial sector guidance on best practices.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

**Occupational exposure limits****Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001, as amended**

Components	Type	Value	Form
Silicon Dioxide (CAS 112945-52-5)	MAK	4 mg/m3	Inhalable fraction.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	MAK	5 mg/m3	Respirable dust.
	STEL	10 mg/m3	Respirable dust.

**Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended**

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	10 mg/m3

**Bulgaria. OELs. Ordinance No 13 on protection of workers against risks of exposure to chemical agents at work, as amended**

Components	Type	Value	Form
benzyl alcohol (CAS 100-51-6)	TWA	5 mg/m3	
Silicon Dioxide (CAS 112945-52-5)	TWA	10 mg/m3	Inhalable fraction.
		0,07 mg/m3	Respirable fraction.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	10 mg/m3	Respirable dust.

**Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended**

Components	Type	Value	Form
Silicon Dioxide (CAS 112945-52-5)	MAC	6 mg/m3	Total dust.
		0,1 mg/m3	Respirable dust.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	MAC	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.

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

Components	Type	Value
Silicon Dioxide (CAS 112945-52-5)	TWA	2 mg/m3
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	10 mg/m3

**Czech Republic. Occupational exposure limit values of chemicals at work (Decree on protection of health at work, 361/2007, Annex 2, Part A & Annex 3, Part A, as amended)**

Components	Type	Value	Form
benzyl alcohol (CAS 100-51-6)	Ceiling	80 mg/m3	
	TWA	40 mg/m3	
Silicon Dioxide (CAS 112945-52-5)	TWA	4 mg/m3	Dust.

**Denmark. Work Environment Authority. Exposure Limits for Substances & Materials, Annex 2**

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TLV	6 mg/m3

**Estonia**

Components	Type	Value	Form
Silicon Dioxide (CAS 112945-52-5)	TWA	2 mg/m3	Fine dust, respiratory fraction

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended**

Components	Type	Value
3,6-diazaoctanethylenedia min; triethylenetetramine (CAS 112-24-3)	STEL	12 mg/m3
	TWA	6 mg/m3 1 ppm
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3

**Finland. HTP-arvot, App 3., Binding Limit Values, Social Affairs and Ministry of Health**

Components	Type	Value	Form
benzyl alcohol (CAS 100-51-6)	TWA	45 mg/m3 10 ppm	
Silicon Dioxide (CAS 112945-52-5)	TWA	5 mg/m3	
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3	Dust.

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

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	VME	10 mg/m3

**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), as updated**

Components	Type	Value	Form
benzyl alcohol (CAS 100-51-6)	TWA	22 mg/m3 5 ppm	Vapor and aerosol.
Silicon Dioxide (CAS 112945-52-5)	TWA	4 mg/m3	Vapor and aerosol. Inhalable fraction.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	0,3 mg/m3	Respirable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Components	Type	Value	Form
benzyl alcohol (CAS 100-51-6)	AGW	22 mg/m3 5 ppm	Vapor and aerosol. Vapor and aerosol.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Components	Type	Value	Form
Silicon Dioxide (CAS 112945-52-5)	AGW	4 mg/m3	Inhalable fraction.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	AGW	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

**Greece. OELs, Presidential Decree No. 307/1986, as amended**

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable

**Iceland. OELs. Regulation 390/2009 on Pollution Limits and Measures to Reduce Pollution at the Workplace, as amended**

Components	Type	Value	Form
3,6-diazaoctanethylenedia min; triethylenetetramine (CAS 112-24-3)	TWA	6 mg/m3	
		1 ppm	
Silicon Dioxide (CAS 112945-52-5)	TWA	5 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
		0,5 mg/m3	Dust.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	6 mg/m3	

**Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations**

Components	Type	Value	Form
Silicon Dioxide (CAS 112945-52-5)	TWA	6 mg/m3	Total inhalable dust.
		2,4 mg/m3	Respirable dust.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total inhalable dust.

**Italy. OELs (Legislative Decree n.81, 9 April 2008), as amended**

Components	Type	Value	Form
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	2,5 mg/m3	Respirable finescale particles
		0,2 mg/m3	Respirable nanoscale particles

**Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended**

Components	Type	Value
benzyl alcohol (CAS 100-51-6)	TWA	5 mg/m3
Silicon Dioxide (CAS 112945-52-5)	TWA	1 mg/m3

**Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended**

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	10 mg/m <sup>3</sup>

**Lithuania. OELs. Occupational Exposure Limit Values for Chemical Substances (Hygiene Norm HN 23:2011; Order No. V-824/A1-389), as amended**

Components	Type	Value
3,6-diazaoctanethylenedia min; triethylenetetramine (CAS 112-24-3)	STEL	12 mg/m <sup>3</sup>
		2 ppm
	TWA	6 mg/m <sup>3</sup>
		1 ppm
benzyl alcohol (CAS 100-51-6)	TWA	5 mg/m <sup>3</sup>
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	5 mg/m <sup>3</sup>

**Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended**

Components	Type	Value	Form
3,6-diazaoctanethylenedia min; triethylenetetramine (CAS 112-24-3)	TLV	6 mg/m <sup>3</sup>	
		1 ppm	
Silicon Dioxide (CAS 112945-52-5)	TLV	1,5 mg/m <sup>3</sup>	Respirable dust.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TLV	5 mg/m <sup>3</sup>	

**Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)**

Components	Type	Value	Form
3,6-diazaoctanethylenedia min; triethylenetetramine (CAS 112-24-3)	STEL	3 mg/m <sup>3</sup>	
	TWA	1 mg/m <sup>3</sup>	
benzyl alcohol (CAS 100-51-6)	TWA	240 mg/m <sup>3</sup>	
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	STEL	30 mg/m <sup>3</sup>	
	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796-2014)**

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	10 mg/m <sup>3</sup>



**Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)**

Components	Type	Value
3,6-diazaoctanethylenedia min; triethylenetetramine (CAS 112-24-3)	STEL	20 mg/m3
		3,3 ppm
	TWA	10 mg/m3
		1,7 ppm
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	STEL	15 mg/m3
	TWA	10 mg/m3

**Slovakia. OELs. Maximum permissible exposure limits for chemical factors in workplace air (Regulation No 355/2006, Annex 1, Table 1, as amended)**

Components	Type	Value
Silicon Dioxide (CAS 112945-52-5)	TWA	0,3 mg/m3
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3

**Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Annex I), as amended**

Components	Type	Value	Form
benzyl alcohol (CAS 100-51-6)	TWA	22 mg/m3	
		5 ppm	
Silicon Dioxide (CAS 112945-52-5)	TWA	4 mg/m3	Inhalable fraction.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3	Inhalable fraction.
		1,25 mg/m3	Respirable fraction.

**Spain. OELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 1-Valores Límites Ambientales (VLAs)**

Components	Type	Value
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	10 mg/m3

**Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended**

Components	Type	Value	Form
3,6-diazaoctanethylenedia min; triethylenetetramine (CAS 112-24-3)	STEL	12 mg/m3	
		2 ppm	
	TWA	6 mg/m3	
		1 ppm	
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)	TWA	5 mg/m3	Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte**

Components	Type	Value	Form
benzyl alcohol (CAS 100-51-6)	TWA	22 mg/m3	Vapor and aerosol.
		5 ppm	Vapor and aerosol.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	3 mg/m3	Respirable dust.

**UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1**

Components	Type	Value	Form
Silicon Dioxide (CAS 112945-52-5)	TWA	6 mg/m3	Inhalable dust.
		2,4 mg/m3	Respirable dust.
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)	TWA	4 mg/m3	Respirable.
		10 mg/m3	Inhalable

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

**Exposure guidelines** Occupational Exposure Limits are not relevant to the current physical form of the product.

**Germany DFG MAK (advisory): Skin designation**

benzyl alcohol (CAS 100-51-6) Can be absorbed through the skin.

**Germany TRGS 900 Limit Values: Skin designation**

benzyl alcohol (CAS 100-51-6) Can be absorbed through the skin.

**Lithuania OELs: Skin designation**

benzyl alcohol (CAS 100-51-6) Can be absorbed through the skin.

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

benzyl alcohol (CAS 100-51-6) Can be absorbed through the skin.

**Switzerland SUVA Limit Values at the Workplace: Skin designation**

benzyl alcohol (CAS 100-51-6) Can be absorbed through the skin.

**8.2. Exposure controls**

**Appropriate engineering controls** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

**General information** Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection** Wear safety glasses with side shields (or goggles) and a face shield. Face shield is recommended.

**Skin protection**

**- Hand protection** Wear appropriate chemical resistant gloves.

**- Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

<b>Hygiene measures</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.
<b>Environmental exposure controls</b>	Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	Solid.
<b>Form</b>	Paste.
<b>Color</b>	White
<b>Odor</b>	Ammoniacal.
<b>Melting point/freezing point</b>	4,64 °F (-15,2 °C) estimated
<b>Boiling point or initial boiling point and boiling range</b>	420,8 °F (216 °C) estimated
<b>Flammability</b>	Not available.
<b>Flash point</b>	>199,9 °F (>93,3 °C)
<b>Auto-ignition temperature</b>	640 °F (337,78 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>pH</b>	Not available.
<b>Kinematic viscosity</b>	Not available.
<b>Solubility</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water) (log value)</b>	Not available.
<b>Vapor pressure</b>	5,73 hPa estimated
<b>Density and/or relative density</b>	
<b>Density</b>	1,00 g/cm3 estimated
<b>Vapor density</b>	Not available.
<b>Particle characteristics</b>	Not available.

### 9.2. Other information

**9.2.1. Information with regard to physical hazard classes** No relevant additional information available.

### 9.2.2. Other safety characteristics

**Specific gravity** 1 estimated

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Peroxides. Phenols.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

<b>Symptoms</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
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#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity** Not known.

Components	Species	Test Results
3,6-diazaoctanethylenediamin; triethylenetetramine (CAS 112-24-3)		
<b>Acute</b>		
<b>Dermal</b>		
<i>Liquid</i>		
LD50	Rat	1465 mg/kg
<b>Oral</b>		
<i>Liquid</i>		
LD50	Rat	1716 mg/kg
benzyl alcohol (CAS 100-51-6)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	2000 mg/kg
titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Hamster	≥ 10000 mg/kg
<b>Oral</b>		
LD50	Rat	> 10000 mg/kg

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye damage.

**Respiratory sensitization** Due to partial or complete lack of data the classification is not possible.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity** Due to partial or complete lack of data the classification is not possible.

**Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)**

titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7)

**IARC Monographs. Overall Evaluation of Carcinogenicity**

titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

**Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - single exposure** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure** Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard** Due to partial or complete lack of data the classification is not possible.

**Mixture versus substance information** No information available.

#### 11.2. Information on other hazards

**Endocrine disrupting properties** This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

**Other information** Not available.

## SECTION 12: Ecological information

**12.1. Toxicity** Harmful to aquatic life with long lasting effects. Based on available data, the classification criteria are not met for hazardous to the aquatic environment, acute hazard.

<b>12.2. Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>12.3. Bioaccumulative potential</b>	
<b>Partition coefficient n-octanol/water (log Kow)</b>	
benzyl alcohol	1,1
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
<b>12.6. Endocrine disrupting properties</b>	This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
<b>12.7. Other adverse effects</b>	The product contains volatile organic compounds which have a photochemical ozone creation potential.
<b>12.8. Additional information</b>	
<b>Estonia Dangerous substances in soil Data</b>	
benzyl alcohol (CAS 100-51-6)	Chemical pesticides (As the total sum of the active substances) 0,5 MG/KG Chemical pesticides (As the total sum of the active substances) 20 MG/KG Chemical pesticides (As the total sum of the active substances) 5 MG/KG

## SECTION 13: Disposal considerations

<b>13.1. Waste treatment methods</b>	
<b>Residual waste</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	Not regulated as dangerous goods.
<b>14.2. UN proper shipping name</b>	Not regulated as dangerous goods.
<b>14.3. Transport hazard class(es)</b>	
Class	Not assigned.
Subsidiary risk	-
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	Not assigned.
<b>14.4. Packing group</b>	-
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Not assigned.

### RID

<b>14.1. UN number</b>	Not regulated as dangerous goods.
<b>14.2. UN proper shipping name</b>	Not regulated as dangerous goods.
<b>14.3. Transport hazard class(es)</b>	
Class	Not assigned.
Subsidiary risk	-
<b>14.4. Packing group</b>	-
<b>14.5. Environmental hazards</b>	No.

**14.6. Special precautions for user** Not assigned.

#### ADN

**14.1. UN number** Not regulated as dangerous goods.

**14.2. UN proper shipping name** Not regulated as dangerous goods.

**14.3. Transport hazard class(es)**

**Class** Not assigned.

**Subsidiary risk** -

**14.4. Packing group** -

**14.5. Environmental hazards** No.

**14.6. Special precautions for user** Not assigned.

#### IATA

**14.1. UN number** Not regulated as dangerous goods.

**14.2. UN proper shipping name** Not regulated as dangerous goods.

**14.3. Transport hazard class(es)**

**Class** Not assigned.

**Subsidiary risk** -

**14.4. Packing group** -

**14.5. Environmental hazards** No.

**14.6. Special precautions for user** Not assigned.

#### IMDG

**14.1. UN number** Not regulated as dangerous goods.

**14.2. UN proper shipping name** Not regulated as dangerous goods.

**14.3. Transport hazard class(es)**

**Class** Not assigned.

**Subsidiary risk** -

**14.4. Packing group** -

**14.5. Environmental hazards**

**Marine pollutant** No.

**EmS** Not assigned.

**14.6. Special precautions for user** Not assigned.

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable.

### SECTION 15: Regulatory information

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ] (CAS 13463-67-7)

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorizations

Not listed.

#### Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended  
- Conditions of restriction given for the associated entry number should be considered

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, 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

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

**Contains a substance which is included on the TRGS 905 list of carcinogenic, germ cell mutagenic and reproductive toxic substances**

titanium dioxide [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]  
(CAS 13463-67-7)

Anorganische Faserstäube, soweit nicht erwähnt (ausgenommen Gipsfasern und Wollastonitfasern)

#### France regulations

France INRS Table of Occupational Diseases

Not regulated.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

### SECTION 16: Other information

#### List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization.

IATA: International Air Transport Association.

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

IMDG: International Maritime Dangerous Goods.

MAC: Maximum Allowed Concentration.

MARPOL: International Convention for the Prevention of Pollution from Ships.

PBT: Persistent, bioaccumulative and toxic.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit.

TLV: Threshold Limit Value.

TWA: Time Weighted Average.

VLE: Exposure Limit Value.

VME: Exposure Average Value.

vPvB: Very persistent and very bioaccumulative.

Not available.

#### References

#### Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

#### Full text of any statements, which are not written out in full under sections 2 to 15

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H351 Suspected of causing cancer.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

#### Revision information

None.

#### Training information

Follow training instructions when handling this material.

## Disclaimer

ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.