

## PP B20-04

Version 1.0

Revision Date: 12.04.2023

Former date: -

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

#### 1.1 Product identifier

Trade name : PP B20-04

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

Use of the Substance/Mixture : Raw material for plastics industry

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

Supplier : Borealis AG  
Trabrennstrasse 6-8, 1020 Vienna, Austria  
Telephone: +43 1 22400 0

E-mail address : [sds@borealisgroup.com](mailto:sds@borealisgroup.com)

#### 1.4 Emergency telephone number

+44 (0) 1235 239 670 (NCEC Carechem 24)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

##### Additional Labelling

EUH210 Safety data sheet available on request.

EUH208 Contains N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethyl piperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine, 1,3-propanediamine, N,N''-1,2-ethanediybis-, polymer with 2,4,6-trichloro-1,3,5-triazine, reaction



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trichloro-1,3,5-triazine)-co-( N-butyl-2,2,6,6-tetramethyl-4-piperidinam	01-2119917320-51	H411	
bis(2,2,6,6-tetramethyl-4-piperidinyl)decanedioate	52829-07-9 258-207-9	Eye Dam. 1; H318 Repr. 2; H361f Aquatic Acute 1; H400 Aquatic Chronic 2; H411  M-Factor (Acute aquatic toxicity): 1	>= 0,1 - < 0,25
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol	96-69-5 202-525-2 01-2119514452-49	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Skin Sens. 1; H317	>= 0,1 - < 0,25
Substances with a workplace exposure limit :			
magnesium silicate	14807-96-6 238-877-9		>= 20 - < 30

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- If inhaled : Move to fresh air.
- In case of skin contact : If molten material comes in contact with the skin, cool with plenty of water. DO NOT remove solidified product, as removal could result in severe tissue damage. Obtain medical attention.
- In case of eye contact : Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
- If swallowed : Rinse mouth with water. Consult a physician if necessary.

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

- Symptoms : Inhalation of dust may irritate the respiratory tract. Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.

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

Treatment : Treat symptomatically.  
No specific instructions needed.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water in spread jet, dry chemicals, foam or carbon dioxide.

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

Specific hazards during firefighting : Principal toxicant in the smoke is carbon monoxide.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

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## SECTION 6: Accidental release measures

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

Use personal protective equipment.  
Ensure adequate ventilation.

### 6.2 Environmental precautions

Should not be released into the environment.

It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in to the environment.

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

Vacuum or sweep up spill.  
All spill of material must be removed immediately to prevent slipping accidents.  
Recycle or dispose loose material properly.  
Do not flush into surface water or sanitary sewer system.

### 6.4 Reference to other sections

For personal protection see section 8.

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For disposal considerations see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released.  
Provide adequate ventilation.  
Local exhaust ventilation may be necessary.  
Avoid inhalation of dust and decomposition fumes.  
Avoid contact with skin and eyes.
- Advice on protection against fire and explosion : Dust from the product gives a potential risk for dust explosion.  
All equipment shall be grounded. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
- Hygiene measures : When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday.

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

- Requirements for storage areas and containers : Safety aspects do not require any special precautions in terms of storage.
- Further information on storage stability : Keep in a dry place.

### 7.3 Specific end use(s)

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

For national exposure limit (OEL) values, check country specific safety data sheets.

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

Substance name	End Use	Exposure routes	Potential health effects	Value
N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethyl piperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-	Workers	Inhalation	Long-term	0,36 mg/kg

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1,10-diamine				
	Workers	Dermal	Long-term	0,05 mg/kg
	Consumers	Dermal	Long-term	0,025 mg/kg
	Consumers	Oral	Long-term	0,025 mg/kg
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol	Workers	Skin contact	Long-term systemic effects	4,2 mg/kg bw/d

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
N,N,N,N-tetrakis(4,6-bis(butyl-(N-methyl-2,2,6,6-tetramethyl piperidin-4-yl)amino)triazin-2-yl)-4,7-diazadecane-1,10-diamine	Fresh water	0,06 mg/l
	Marine water	0,006 mg/l
	Fresh water sediment	28,3 mg/kg
	Marine sediment	2,83 mg/kg
6,6'-di-tert-butyl-4,4'-thiodi-m-cresol	Fresh water	0,00016 mg/l
	Marine water	0,000016 mg/l
	Intermittent use/release	0,0016 mg/l
	Fresh water sediment	6,52 mg/kg
	Marine sediment	0,652 mg/kg
	Soil	1,3 mg/kg

## 8.2 Exposure controls

### Engineering measures

Provide adequate ventilation.  
Local exhaust ventilation may be necessary.

### Personal protective equipment

Eye protection : Safety glasses

Use eye protection according to EN 166.

Hand protection

Material : Nitrile rubber

Remarks

: Protective gloves complying with EN 374.  
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

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- Skin and body protection : Protective clothing
- Respiratory protection : In case of insufficient ventilation: Respirator with ABEK-P3 filter or self-contained breathing apparatus.  
In case of dust development use dust mask.
- Protective measures : Appropriate personal protective equipment (PPE) shall be worn in accordance with Regulation (EU) 2016/425.

### Environmental exposure controls

- General advice : Should not be released into the environment.  
It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in to the environment.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Physical state : pellets
- Colour : black
- Odour : slight
- Melting point/range : 130 - 170 °C
- Boiling range : Decomposes on heating.
- Flammability : The product is not flammable.
- Upper explosion limit / Upper flammability limit : Not applicable
- Lower explosion limit / Lower flammability limit : Not applicable
- Flash point : Not applicable, (solid)
- Auto-ignition temperature : > 320 °C
- pH : Not applicable insoluble
- Viscosity  
Viscosity, kinematic : No data available

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Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable insoluble
Vapour pressure	:	Not applicable (solid)
Density	:	0,9 - 1,0 g/cm <sup>3</sup>
Particle size	:	3 - 10 mm Method: Image analysis (surface-based)

### 9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	Not applicable (solid)

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Stable under recommended storage conditions.

### 10.2 Chemical stability

The product is a stable thermoplastic, with no chemical reactivity.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : None known.

### 10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Materials to avoid : None known.

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## 10.6 Hazardous decomposition products

Under fire conditions:

Carbon monoxide

During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released.

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## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

Based on available data, the classification criteria are not met.

#### Components:

##### **bis(2,2,6,6-tetramethyl-4-piperidinyl)decanedioate:**

Acute oral toxicity : LD50 (Rat): 3.700 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,5 mg/l  
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rat): > 3.170 mg/kg

#### 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 or skin sensitisation

##### Skin sensitisation

Based on available data, the classification criteria are not met.

##### Respiratory 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.

#### Product:

Remarks : The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium

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dioxide which is in the form of or incorporated in particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ .

## Reproductive toxicity

Based on available data, the classification criteria are not met.

## STOT - single exposure

Based on available data, the classification criteria are not met.

## STOT - repeated exposure

Based on available data, the classification criteria are not met.

## Aspiration toxicity

Based on available data, the classification criteria are not met.

## 11.2 Information on other hazards

### Endocrine disrupting properties

#### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### Further information

#### Product:

Remarks : The product is not classified as hazardous to human health. Information given is based on data of the components.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

**Poly[(N,N'-1,2-ethanediylbis-1,3-propanediamine)-co-(2,4,6-trichloro-1,3,5-triazine)-co-(N-butyl-2,2,6,6-tetramethyl-4-piperidinam):**

Toxicity to fish : LC50 (zebrafish (Brachydanio rerio)): > 119 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7,3 mg/l  
Exposure time: 48 h

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Toxicity to algae/aquatic plants : IC50 (Selenastrum capricornutum (green algae)): 1,2 mg/l  
Exposure time: 72 h

### **bis(2,2,6,6-tetramethyl-4-piperidinyl)decanedioate:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,57 mg/l  
Exposure time: 48 h  
Test Type: Short term

M-Factor (Short-term (acute) aquatic hazard) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50: 0,96 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

### **6,6'-di-tert-butyl-4,4'-thiodi-m-cresol:**

Toxicity to fish : LC50 (fathead minnow (Pimephales promelas)): 0,36 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,16 mg/l  
Exposure time: 48 h

## 12.2 Persistence and degradability

### Product:

Biodegradability : Remarks: Not readily biodegradable.

## 12.3 Bioaccumulative potential

### Product:

Bioaccumulation : Remarks: Does not accumulate in organisms.

## 12.4 Mobility in soil

### Product:

Mobility : Remarks: Not expected to adsorb on soil.

## 12.5 Results of PBT and vPvB assessment

### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

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## 12.6 Endocrine disrupting properties

### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

### Product:

Additional ecological information : Should not be released into the environment.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of contents/ container to an approved waste disposal plant.  
Reuse or recycle if not contaminated.  
Check with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14: Transport information

### 14.1 UN number or ID number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

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## 14.4 Packing group

Not regulated as a dangerous good

## 14.5 Environmental hazards

Not regulated as a dangerous good

## 14.6 Special precautions for user

Remarks : Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

## 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.  
Not applicable

### 15.2 Chemical safety assessment

no

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## SECTION 16: Other information

### Full text of H-Statements

H317 : May cause an allergic skin reaction.  
H318 : Causes serious eye damage.  
H351 : Suspected of causing cancer if inhaled.  
H361f : Suspected of damaging fertility.  
H373 : May cause damage to organs through prolonged or repeated exposure.  
H400 : Very toxic to aquatic life.  
H410 : Very toxic to aquatic life with long lasting effects.  
H411 : Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard

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Aquatic Chronic	: Long-term (chronic) aquatic hazard
Carc.	: Carcinogenicity
Eye Dam.	: Serious eye damage
Repr.	: Reproductive toxicity
Skin Sens.	: Skin sensitisation
STOT RE	: Specific target organ toxicity - repeated exposure

### Further information

Other information : Issued according to Regulation (EC) No 1907/2006, Annex II, and its amendments.  
Changes since the last version are highlighted in the margin.  
This version replaces all previous versions.

Issuer : Borealis, Group Product Stewardship

Sources of key data used to compile the Safety Data Sheet : The classification information of components is based on raw material supplier data.

### Disclaimer

Recycled plastics are subject to material inconsistencies. mtm makes no warranties which extend beyond the description contained herein and to the best of our knowledge, the information is accurate and reliable as of the date of publication. Because of the multitude of possible influences during the use and application of our products, the information included does not release customers and users from the obligation to examine and test them carefully. Please note that nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose. It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose as mtm do not know the origin of the product. Where necessary, the customer is recommended to obtain a feedstock release from the customer. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products. No liability can be accepted in respect of the use of any mtm product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above. The product(s) mentioned herein are not intended to be used for food contact, drinking water contact, medical, pharmaceutical or healthcare applications and we do not support their use for such applications. Otherwise, our General Terms and Conditions of Sale apply.

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