according to Regulation (EC) No. 1907/2006



**PP-04** 

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

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

1.1 Product identifier

Trade name : PP-04

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

Use of the : Raw material for plastics industry

Substance/Mixture

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

1.4 Emergency telephone number

+1 760 476 3962 (3E), Access code: 336296

### **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-ethanediylbis-, polymer with 2,4,6-trichloro-1,3,5-triazine, reaction





according to Regulation (EC) No. 1907/2006

# **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

products with N-butyl-2,2,6,6-tetramethyl-4-piperidinamine, 6,6'-di-tert-butyl-4,4'-thiodi-m-cresol. May produce an allergic reaction.

#### 2.3 Other hazards

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.

Ecological information: 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.

Toxicological information: 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.

The product burns, but is not classified as flammable.

Dust from the product gives a potential risk for dust explosion.

During crosslinking reaction in combination with base resin: methanol (Flam. Liq. 2; H225, Acute Tox. 3; H301, Acute Tox. 3; H311, Acute Tox. 3; H331, STOT SE 1; H370) is released.

In contact with water or moisture methanol will be released.

in contact with water of molecule methanor will be released

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

#### 3.2 Mixtures

Chemical nature : The product is a polypropylene polymer.

It contains additives.

It contains post-industrial recycled polymer.

#### Components

Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		
	Registration number		
N,N,N,N-tetrakis(4,6-bis(butyl-(N-	106990-43-6	Skin Sens. 1; H317	>= 0,25 - < 1
methyl-2,2,6,6-tetramethyl	401-990-0	Aquatic Chronic 2;	
piperidin-4-yl)amino)triazin-2-yl)-	613-078-00-1	H411	
4,7-diazadecane-1,10-diamine	01-0000015180-83	STOT RE 2; H373	
Poly[(N,N"-1,2-ethanediylbis-1,3-	136504-96-6	Skin Sens. 1; H317	>= 0,25 - < 1
propanediamine)-co-(2,4,6-	500-311-6	Aquatic Chronic 2;	
trichloro-1,3,5-triazine)-co-( N-	01-2119917320-51	H411	
butyl-2,2,6,6-tetramethyl-4-			
piperidinam			
bis(2,2,6,6-tetramethyl-4-	52829-07-9	Eye Dam. 1; H318	>= 0,1 - < 0,25
piperidinyl)decanedioate	258-207-9	Repr. 2; H361f	





according to Regulation (EC) No. 1907/2006

### **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

		Aquatic Acute 1; H400 Aquatic Chronic 2; H411	
		M-Factor (Acute aquatic toxicity): 1	
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		>= 10 - < 20

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.

If symptoms persist, call a physician.

In case of skin contact : Wash off with soap and plenty of water.

Call a physician if irritation develops or persists.

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.

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.

Skin contact may provoke the following symptoms:

Local irritation





according to Regulation (EC) No. 1907/2006

**PP-04** 

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

Repeated or prolonged skin contact may cause allergic

reactions with susceptible persons.

Symptoms of poisoning (methanol):

Daze Dizziness Nausea

Abdominal pain Respiratory disorders

Symptoms of poisoning, prolonged exposure (methanol):

Blindness

4.3 Indication of any immediate medical attention and special treatment needed

**Treatment** : Treat symptomatically.

No specific instructions needed.

# **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

for firefighters

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

#### **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.





according to Regulation (EC) No. 1907/2006

**PP-04** 

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

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. 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.

The product contains small amounts of a substance classified as sensitising, which may produce an allergic reaction to

susceptible personnel.

Personnel sensitised to this substance should not be allowed

to handle the product.

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)





according to Regulation (EC) No. 1907/2006

# **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

Specific use(s) : Raw material for plastics industry

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

### 8.1 Control parameters

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

# Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
methanol	67-56-1	TWA	200 ppm 260 mg/m3	2006/15/EC
Further information	Indicative, Identifies the possibility of significant uptake through the skin			

### 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-1,10-diamine	Workers	Inhalation	Long-term	0,36 mg/kg
	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-	Fresh water	0,06 mg/l
methyl-2,2,6,6-tetramethyl		
piperidin-4-yl)amino)triazin-2-yl)-		
4,7-diazadecane-1,10-diamine		
	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-	Fresh water	0,00016 mg/l
cresol		
	Marine water	0,000016 mg/l
	Intermittent use/release	0,0016 mg/l
	Fresh water sediment	6,52 mg/kg





according to Regulation (EC) No. 1907/2006

### **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

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

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.

Skin and body protection : Protective clothing

Respiratory protection : In case of insufficient ventilation: Respirator with ABEK-P3

filter or self-contained breathing apparatus.

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.

# **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





according to Regulation (EC) No. 1907/2006

## **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

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

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)

### **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.





according to Regulation (EC) No. 1907/2006

### **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

### 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.

### 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.

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

During crosslinking reaction in combination with base resin: methanol

### **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.





according to Regulation (EC) No. 1907/2006

### **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

### 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.

**Product:** 

Remarks : The product contains small amounts of a substance classified

as sensitising, which may produce an allergic reaction to

susceptible personnel.

Personnel sensitised to this substance should not be allowed

to handle the product.

#### 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 dioxide which is in the form of or incorporated in particles with

aerodynamic diameter <= 10 µm.

#### 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





according to Regulation (EC) No. 1907/2006

**PP-04** 

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

(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.

Remarks Repeated or prolonged skin contact may cause allergic

reactions with susceptible persons.

### **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-(Nbutyl-2,2,6,6-tetramethyl-4-piperidinam:

Toxicity to fish : LC50 (zebrafish (Brachydanio rerio)): > 119 mg/l

Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 7,3 mg/l

Exposure time: 48 h

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:

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0,57 mg/l

Exposure time: 48 h Test Type: Short term

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

aquatic hazard)

Toxicity to daphnia and other : EC50: 0,96 mg/l

aquatic invertebrates (Chronic toxicity)

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





according to Regulation (EC) No. 1907/2006

**PP-04** 

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

aquatic invertebrates

Toxicity to daphnia and other : 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...

### 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.





according to Regulation (EC) No. 1907/2006

### **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

### **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.

# **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

### 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.





according to Regulation (EC) No. 1907/2006

### **PP-04**

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

### **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

#### **SECTION 16: Other information**

#### **Full text of H-Statements**

H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
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 Aquatic Chronic : Long-term (chronic) aquatic hazard

Eye Dam. : Serious eye damage Repr. : Reproductive toxicity Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure 2006/15/EC : Europe. Indicative occupational exposure limit values

2006/15/EC / TWA : Limit Value - eight hours

#### **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 : The classification information of components is based on raw





according to Regulation (EC) No. 1907/2006

**PP-04** 

Version 4.0 Revision Date: 04.04.2024 Former date: 17.11.2023

compile the Safety Data Sheet material supplier data.

#### **Disclaimer**

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