

## PA 4500

Version number: 1.0

### SECTION 1: Identification

#### 1.1 Product identifier

**Trade name** PA 4500  
**CAS number** not relevant (mixture)

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

**Relevant identified uses** Filament

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

Jabil Inc. Telephone: 612 225-2692  
 102 N Jonathan Blvd  
 Chaska, Minnesota, MN 55318  
 United States

**e-mail (competent person)** GHS@crc-us.com

#### 1.4 Emergency telephone number

Poison center		
Country	Name	Telephone
	CHEMTREC (International)	+1 202-483-7616
United States	CHEMTREC USA	(800) 424-9300

As above or next toxicological information centre.

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

**Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

This mixture does not meet the criteria for classification.

**The most important adverse physicochemical, human health and environmental effects**

Spillage and contaminated fire fighting water can pollute waterways.

#### 2.2 Label elements

**Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

Not required.

**2.3 Other hazards**

There is no additional information.

**Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

**3.1 Substances**

Not relevant (mixture).

**3.2 Mixtures**

<b>Description of the mixture</b>	Polyamide ≥ 90 %
	Additives < 10 %

The specific exact percentage (concentration) of composition has been withheld as a trade secret.

**SECTION 4: First-aid measures**

**4.1 Description of first- aid measures**

**General notes**

In all cases of doubt, or when symptoms persist, seek medical advice.

**Following inhalation**

Provide fresh air.

Remove person to fresh air and keep comfortable for breathing.

After inhalation of decomposition products, remove the affected person to a source of fresh air and keep calm.

Immediately call a doctor.

**Following skin contact**

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

After contact with the molten product, cool rapidly with cold water.

Get immediate medical advice/attention.

**Following eye contact**

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**Following ingestion**

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

**Notes for the doctor**

None.

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

These information are not available.

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

None.

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder

#### Unsuitable extinguishing media

water jet

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

Hazardous decomposition products: Section 10.

Deposited combustible dust has considerable explosion potential.

#### Hazardous combustion products

ammonia (NH<sub>3</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), hydrogen cyanide (HCN, prussic acid)

### 5.3 Advice for firefighters

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### Special protective equipment for firefighters

chemical protection suit, self-contained breathing apparatus (SCBA)

## SECTION 6: Accidental release measures

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

#### For non-emergency personnel

Ventilate affected area.

Control of dust.

Do not breathe dust/fume/gas/mist/vapors/spray.

Do not get in eyes, on skin, or on clothing.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

## 6.2 Environmental precautions

Keep away from drains, surface and ground water.  
Retain contaminated washing water and dispose of it.  
If substance has entered a water course or sewer, inform the responsible authority.

## 6.3 Methods and material for containment and cleaning up

### Advice on how to contain a spill

Take up mechanically.

### Advice on how to clean up a spill

Take up mechanically.  
Collect spillage.

### Other information relating to spills and releases

Place in appropriate containers for disposal.  
Ventilate affected area.

## 6.4 Reference to other sections

Hazardous combustion products: see section 5.  
Personal protective equipment: see section 8.  
Incompatible materials: see section 10.  
Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.  
Keep away from sources of ignition - No smoking.

#### Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.  
Remove contaminated clothing and protective equipment before entering eating areas.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Do not get in eyes, on skin, or on clothing.  
Wash thoroughly after handling.  
Preventive skin protection (barrier creams/ointments) is recommended.

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

#### Explosive atmospheres

Removal of dust deposits.

**Flammability hazards**

None.

**Incompatible substances or mixtures**

Incompatible materials: see section 10.

**Protect against external exposure, such as**

heat

**Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

Store in a dry place. Store in a closed container.

Store in a well-ventilated place. Keep cool.

**Ventilation requirements**

Provision of sufficient ventilation.

**Packaging compatibilities**

Keep only in original container.

**7.3 Specific end use(s)**

No information available.

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

**8.1 Control parameters**

No data available.

**8.2 Exposure controls**

**Appropriate engineering controls**

General ventilation.

**Individual protection measures (personal protective equipment)**

**Eye/face protection**

Wear eye/face protection.

**Hand protection**

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
no information available	no information available	no information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Use heat resistant gloves when handling hot / molten product.

## Other protection measures

Protective clothing for use against solid particulates.

Wear heat-resistant protective clothing when handling hot/molten product.

## Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

## Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	Solid
Form	Filament
Color	Different according to coloring
Odor	Faintly perceptible
Odor threshold	These information are not available

#### Other safety parameters

pH (value)	These information are not available
Melting point/freezing point	These information are not available
Initial boiling point and boiling range	These information are not available
Flash point	Not applicable
Evaporation rate	These information are not available
Flammability (solid, gas)	This material is combustible, but will not ignite readily
Explosion limits of dust clouds	Not determined
Vapor pressure	These information are not available
Density	These information are not available

Vapor density	These information are not available
Relative density	These information are not available
<b>Solubility(ies)</b>	
Water solubility	insoluble
<b>Partition coefficient</b>	
n-octanol/water (log KOW)	These information are not available
Auto-ignition temperature	Not relevant (Solid matter)
Decomposition temperature	These information are not available
<b>Viscosity</b>	
Kinematic viscosity	Not relevant (Solid matter)
Dynamic viscosity	Not relevant (Solid matter)
Explosive properties	Not explosive
Oxidizing properties	Shall not be classified as oxidizing

**9.2 Other information**

None

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

This material is not reactive under normal ambient conditions.

**10.2 Chemical stability**

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**10.3 Possibility of hazardous reactions**

No known hazardous reactions.

**10.4 Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

**10.5 Incompatible materials**

acids, bases, oxidizers

**10.6 Hazardous decomposition products**

Ammonia (NH<sub>3</sub>).  
Hydrogen cyanide (HCN, prussic acid).  
Hazardous combustion products: see section 5.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Classification procedure**

If not otherwise specified the classification is based on:  
Ingredients of the mixture (additivity formula).

**Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

This mixture does not meet the criteria for classification.

**Acute toxicity**

Test data are not available for the complete mixture.

**Skin corrosion/irritation**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Serious eye damage/eye irritation**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Respiratory or skin sensitization**

**Skin sensitization**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Respiratory sensitization**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Germ cell mutagenicity**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Carcinogenicity**

**IARC Monographs**

None of the ingredients are listed.

**National Toxicology Program (United States)**

None of the ingredients are listed.

**OSHA Carcinogens**

None of the ingredients are listed.



## **Reproductive toxicity**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## **Specific target organ toxicity - single exposure**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## **Specific target organ toxicity - repeated exposure**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

#### **Aquatic toxicity (acute)**

Test data are not available for the complete mixture.

#### **Aquatic toxicity (chronic)**

Test data are not available for the complete mixture.

### **12.2 Persistence and degradability**

#### **Biodegradation**

No data available.

#### **Persistence**

No data available.

### **12.3 Bioaccumulative potential**

Test data are not available for the complete mixture.

### **12.4 Mobility in soil**

No data available.

### **12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### **12.6 Other adverse effects**

Data are not available.

#### **Remarks**

Wassergefährdungsklasse, WGK (water hazard class): 2

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

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

**Sewage disposal-relevant information**

Do not empty into drains.

**Waste treatment of containers/packages**

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

**Remarks**

Please consider the relevant national or regional provisions.

**SECTION 14: Transport information**

<b>14.1</b>	<b>UN number</b>	not subject to transport regulations
<b>14.2</b>	<b>UN proper shipping name</b>	-
<b>14.3</b>	<b>Transport hazard class(es)</b>	-
<b>14.4</b>	<b>Packing group</b>	-
<b>14.5</b>	<b>Environmental hazards</b>	-
<b>14.6</b>	<b>Special precautions for user</b>	-
<b>14.7</b>	<b>Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	-

**14.8 Information for each of the UN Model Regulations****Transport of dangerous goods by road or rail (49 CFR US DOT)**

Not subject to transport regulations.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations specific for the product in question****National regulations (United States)****Superfund Amendment and Reauthorization Act (SARA TITLE III )****The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)**

none of the ingredients are listed

**Specific Toxic Chemical Listings (EPCRA Section 313)**

none of the ingredients are listed

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### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

#### List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

### Clean Air Act

none of the ingredients are listed

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

### Industry or sector specific available guidance(s)

#### NPCA-HMIS® III

Hazardous Materials Identification System.  
American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	0	no significant risk to health
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

#### NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

**SECTION 16: Other information, including date of preparation or last revision**

Date of preparation: 2020-06-29

**Abbreviations and acronyms**

<b>Abbreviations and acronyms</b>	
<b>Abbr.</b>	<b>Descriptions of used abbreviations</b>
49 CFR US DOT	49 CFR U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
IARC Mono-graphs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

**Key literature references and sources for data**

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

**Classification procedure**

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Responsible for the safety data sheet**

Chemical Regulatory Compliance Company Telephone: +1 (630) 410-1660  
 Chicago, IL e-Mail: GHS@crc-us.com  
 USA Website: www.crc-us.com

### **Disclaimer**

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