PEBAX® 5533 SN 70 BLK

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Specialty Polyamides

Customer Service Telephone Number:	(800) 932-0420 (Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation:	CHEMTREC: (800) 424-9300 (24 hrs., 7 days a week)
Medical:	Rocky Mountain Poison Center: (866) 767-5089 (24 hrs., 7 days a week)

Product Information

Product name:	PEBAX® 5533 SN 70 BLK
Synonyms:	Not available
Molecular formula:	Not applicable
Chemical family:	polyamide
Product use:	Mouldings and Extrusion

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview

Color:	black
Physical state:	solid
Form:	pellets
Odor:	odourless

***Classification of the substance or mixture:**

Skin sensitisation, Category 1, H317

*For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labelling

Hazard pictograms:

Signal word: **Warning**

Hazard statements:

H317 : May cause an allergic skin reaction.

Supplemental Hazard Statements:

Processing may release vapors and/or fumes which cause eye, skin and respiratory tract irritation.

Precautionary statements:

Prevention:

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 : Contaminated work clothing should not be allowed out of the workplace.
P280 : Wear protective gloves.

Response:

P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.
P363 : Wash contaminated clothing before reuse.

Disposal:

P501 : Dispose of contents or container to an approved waste disposal plant.

Supplemental information:

Potential Health Effects:

High molecular weight polymer. Effects due to processing releases: Irritating to eyes, respiratory system and skin.
Prolonged or repeated exposure may cause: drowsiness, headache, nausea, weakness, (severity of effects depends on extent of exposure).

Other:

This product may release fume and/or vapor of variable composition depending on processing time and temperature.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Hexanedioic acid, polymer with azacyclotridecan-2-one and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl)	77402-38-1	> 83 %	Not classified
Carbon black	1333-86-4	14 %	Not classified
Benzenamine, 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]-	10081-67-1	< 2 %	H317, H413

**For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

Inhalation:
If inhaled, remove victim to fresh air.

Skin:
In case of contact, immediately flush skin with soap and plenty of water. If molten polymer gets on the skin, cool rapidly with cold water. Do not peel solidified product off the skin. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
Immediately flush eye(s) with plenty of water. Obtain medical treatment for thermal burns.

Ingestion:
If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

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

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information if applicable) and Section 11 (Toxicology Information) of this SDS.

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

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media (suitable):
Water spray, Carbon dioxide (CO2), Foam

Protective equipment:
Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:
Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:
When burned, the following hazardous products of combustion can occur:
Carbon oxides
Hazardous organic compounds
Hydrogen cyanide (hydrocyanic acid)
(traces)

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:
Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Sweep up and shovel into suitable properly labeled containers for prompt disposal. Possible fall hazard – floor may become slippery from leakage/spillage of product. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Protective equipment:
Appropriate personal protective equipment is set forth in Section 8.

SECTION 7: HANDLING AND STORAGE

Handling

General information on handling:
Avoid breathing dust.
Avoid breathing fumes or vapors.
Avoid prolonged or repeated contact with skin.
Wash thoroughly after handling.
Emptied container retains product residue.
Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Storage

General information on storage conditions:
Keep in a dry, cool place. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store away from moisture and heat to maintain the technical properties of the product.

Storage stability – Remarks:
Stable under recommended storage conditions.

Storage incompatibility – General:
None known.

Temperature tolerance – Do not store above:
140 °F (60 °C)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Carbon black (1333-86-4)

US. ACGIH Threshold Limit Values

Form:	Inhalable fraction.
Time weighted average	3 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL:	3.5 mg/m3

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:
Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce

exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection:
Avoid breathing dust. Avoid breathing fumes or vapors. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:
Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:
Where eye contact may be likely, wear chemical goggles and have eye flushing equipment available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	black
Physical state:	solid
Form:	pellets
Odor:	odourless
Odor threshold:	No data available
Flash point	Not applicable
Auto-ignition temperature:	698 - 842 °F (370 - 450 °C) (Method: Standard ASTM D 1929-77 (B))
Lower flammable limit (LFL):	No data available
Upper flammable limit (UFL):	No data available
pH:	Not applicable

Density:	No data available
Specific Gravity (Relative density):	No data available
Bulk density:	550 - 650 kg/m3
Boiling point/boiling range:	Not applicable
Melting point/range:	266 - 347 °F (130 - 175 °C)
Freezing point:	No data available
Evaporation rate:	No data available
Solubility in water:	68 °F (20 °C) insoluble
Solubility in other solvents: [qualitative and quantative]	Soluble in:
	Phenols
	Metacresol
	Benzyl alcohol (when hot)
	Formic acid (concentrate), Sulphuric acid (concentrate)
	Methylene chloride (dichloromethane) partly soluble
Viscosity, dynamic:	No data available
Oil/water partition coefficient:	(No data available)
Thermal decomposition:	572 - 662 °F (300 - 350 °C)
Flammability:	See GHS Classification in Section 2 if applicable

SECTION 10: STABILITY AND REACTIVITY

Stability:
The product is stable under normal handling and storage conditions.

Hazardous reactions:
Hazardous polymerization does not occur.

Materials to avoid:

None known.

Conditions / hazards to avoid:
Avoid storing in moist and warm conditions. (to maintain the technical properties of the product). See Hazardous Decomposition Products below.

Hazardous decomposition products:

Thermal decomposition giving toxic, flammable, and / or corrosive products:
Carbon oxides
Ammonia
Amino derivatives
Hydrogen cyanide (hydrocyanic acid)
(traces)
Hazardous organic compounds

SECTION 11: TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for Carbon black (1333-86-4)

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 > 8,000 mg/kg.

Skin Irritation:
Not irritating. (rabbit)

Eye Irritation:
Not irritating. (rabbit)

Skin Sensitization:
Not a sensitizer. Buehler method. (guinea pig) No skin allergy was observed.

Repeated dose toxicity
Subchronic inhalation administration to rat, mouse / affected organ(s): lung / signs: inflammation

Chronic dietary administration to rat, mouse / No adverse systemic effects reported.

Chronic dermal administration to mouse / No adverse systemic effects reported.

Carcinogenicity
Chronic inhalation administration to rat / Increase in tumor incidence was reported. (Effect occurred only at levels exceeding normal clearance capacity.)

Chronic inhalation administration to mouse, hamster / No increase in tumor incidence was reported.

Chronic dietary, dermal administration to rat, mouse / No increase in tumor incidence was reported.

Classified by the International Agency for Research on Cancer as: Group 2B: Possibly carcinogenic to humans. Cancer classification is determined by the concentration of carcinogenic impurities in this substance.

Genotoxicity

Assessment in Vitro:
Both positive and negative responses for genetic changes were observed in laboratory tests using:
animal cells, bacteria

Genotoxicity

Assessment in Vivo:
Both positive and negative responses for genetic changes were observed in laboratory tests using:
animals

Human experience
General:
Decreased pulmonary function reported in workers with long term exposure. Epidemiology studies have not shown an increase in cancer .

Human experience
Inhalation:
Respiratory system: decreased lung function. (based on reports of occupational exposure to workers)

Human experience
Skin contact:
Skin: irritating. (repeated or prolonged exposure)

Human experience
Eye contact:
Eye: irritating. (repeated or prolonged exposure)

Data for Hexanedioic acid, polymer with azacyclotridecan-2-one and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl) (77402-38-1)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 > 4,000 mg/kg.

Skin Irritation:
Not irritating. (rabbit) (4 h)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Skin Sensitization:
Not a sensitizer. Guinea pig maximization test. No skin allergy was observed.

Genotoxicity

Assessment in Vitro:

No genetic changes were observed in a laboratory test using: bacteria

Genotoxicity

Assessment in Vivo:
No genetic changes were observed in a laboratory test using: mice

Other information
The information presented is from representative materials with this Chemical Abstract Service (CAS) Registry number. The results vary depending on the size and composition of the test substance.

Data for Benzenamine, 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]- (10081-67-1)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 > 2,000 mg/kg.

Dermal:
No deaths occurred. (rat) LD0 > 2,000 mg/kg.

Skin Irritation:
Practically non-irritating. (rabbit) (4 h)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Skin Sensitization:
May cause an allergic skin reaction. LLNA: Local Lymph Node Assay. (mouse) Skin allergy was observed.

Repeated dose toxicity
Subchronic oral administration to rat / No adverse systemic effects reported.

Repeated oral administration to rat / affected organ(s): kidney, liver / signs: changes in organ weights, changes in organ structure or function

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells

Reproductive effects
Reproductive/Developmental Effects Screening Assay. Oral (rat) / No toxicity to reproduction.

SECTION 12: ECOLOGICAL INFORMATION

Chemical Fate and Pathway
Data on this material and/or its components are summarized below.

Data for Benzenamine, 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]- (10081-67-1)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 29 %

Octanol Water Partition Coefficient:
log Pow: = 7.9, at 77 °F (25 °C) pH = 6.9

Ecotoxicology
Data on this material and/or its components are summarized below.

Data for Carbon black (1333-86-4)

Aquatic toxicity data:
No effect up to the limit of solubility. Danio rerio (zebra fish) 96 h LC0 > 1,000 mg/l (Nominal concentration)

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 24 h EC50 > 5,600 mg/l (Nominal concentration)

Algae:
No effect up to the limit of solubility. Desmodesmus subspicatus (green algae) 72 h EC50 > 10,000 mg/l (Nominal concentration)

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 > 800 mg/l

Data for Benzenamine, 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]- (10081-67-1)

Aquatic toxicity data:
No effect up to the limit of solubility. Poecilia reticulata (guppy) 96 h LC50 > 100 mg/l (Nominal concentration)

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 48 h EC50 > 100 mg/l (Nominal concentration)

Algae:
No effect up to the limit of solubility. Selenastrum capricornutum (green algae) 72 h ErC50 = 116 mg/l (Nominal concentration)

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 > 1,000 mg/l

Chronic toxicity to aquatic invertebrates:
No effect up to the limit of solubility. Reproduction Test / Daphnia magna (Water flea) 21 d NOEC = 0.038 mg/l (Nominal concentration)

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal:
Where possible recycling is preferred to disposal or incineration. If recycling is not an option, incinerate or dispose of in accordance with federal, state, and local regulations. Pigmented, filled and/or solvent laden product may require

special disposal practices in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

SECTION 14: TRANSPORT INFORMATION

US Department of Transportation (DOT): not regulated

International Maritime Dangerous Goods Code (IMDG): not regulated

SECTION 15: REGULATORY INFORMATION

Chemical Inventory Status

US. Toxic Substances Control Act	TSCA	The components of this product are all on the Active TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	All components of this product are listed or exempted
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	All components of this product are listed or exempted
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	All components of this product are listed or exempted
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	All components of this product are listed or exempted
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	The mixture contains a polymer. All the monomers for this polymer & other substances are listed on the inventory.
Australian Inventory of Industrial Chemicals	AU AIICL	All components of this product are listed or exempted
Taiwan Chemical Substance Inventory (TCSI)	TCSI	Not all components of this product are listed or exempted

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:
The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:
Acute Health Hazard

SARA Title III – Section 313 Toxic Chemicals:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations

New Jersey Right to Know

Chemical name	CAS-No.
Carbon black	1333-86-4

New Jersey Right to Know – Special Health Hazard Substance(s)

Chemical name	CAS-No.
Carbon black	1333-86-4

Pennsylvania Right to Know

Chemical name	CAS-No.
Hexanedioic acid, polymer with azacyclotridecan-2-one and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl)	77402-38-1
Carbon black	1333-86-4

California Prop. 65
WARNING! This product contains a chemical known to the State of California to cause cancer.

Chemical name	CAS-No.
Carbon black	1333-86-4

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.
H317 May cause an allergic skin reaction.
H413 May cause long lasting harmful effects to aquatic life.

Latest Revision(s):

Reference number:	200006830
Date of Revision:	06/03/2022
Date Printed:	06/03/2022

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It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.