SAFETY DATA SHEET

Issuing Date 22-Jan-2019 **Revision date** 22-Jan-2019 **Revision Number** 1

1. Identification

Product identifier

Product Name NYCAST® 6PA CP 6/12; NYCAST® 6PA FG; NYCAST® 6PA MoS2; NYCAST® 6PA NYLOIL®; NYCAST® 6PA MP; NYCAST® 6PA; NYCAST® 6PA XHA

Other means of identification

Product Code(s) CPBK; CPBL; CPYW; FGBK; FGBL; FGGY; GXGY; MDGY; NYBL; OMBL; P2BK; P2BL; P2OR; P2RD; P2YW; P4BL; P4YW; PVPU; SDBK; SDBL; SDGF; SDOR; SDRD; SDYW; XHBK; XHBL; XHNA; XHNG; XHRD

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Industrial

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address
Cast Nylons Limited
4300 Hamann Parkway
Willoughby, OH 44094
T: 440-269-2300

Emergency telephone number

Emergency Telephone 440-269-2300

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Danger

Hazard statements
Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause cancer
May damage fertility or the unborn child
May cause respiratory irritation

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)
Specific treatment (see supplemental first aid instructions on this label)
IF IN EYES: 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
IF ON SKIN: Wash with plenty of water and soap
Call a POISON CENTER or doctor if you feel unwell
Take off contaminated clothing and wash it before reuse
If skin irritation occurs: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information
Not applicable

Unknown acute toxicity 23.8257 % of the mixture consists of ingredient(s) of unknown toxicity
8.8607 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
14.8357 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
23.8257 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Trade secret
.epsilon.-Caprolactam	105-60-2	92-98	*
Methyl pyrrolidone	872-50-4	0-4	*
Petroleum distillates, hydrotreated heavy naphthenic	64742-52-5	<3	*
Molybdenum (IV) sulfide	1317-33-5	0-<3	*
Carbon black	1333-86-4	0-<3	*
Titanium dioxide	13463-67-7	0-<3	*

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

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Eye contact IF IN EYES: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact IF ON SKIN: Wash off immediately with soap and plenty of water for at least 15 minutes. If symptoms persist, call a physician.

Ingestion IF SWALLOWED: Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. Avoid breathing dust/fume/gas/mist/vapors/spray.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx). Hydrogen cyanide.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep in a dry place. Keep away from Incompatible materials. Keep out of the reach of children. Store locked up.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
.epsilon.-Caprolactam 105-60-2	TWA: 5 mg/m³ inhalable fraction and vapor	(vacated) TWA: 1 mg/m³ dust (vacated) TWA: 5 ppm vapor (vacated) TWA: 20 mg/m³ vapor (vacated) STEL: 3 mg/m³ dust (vacated) STEL: 10 ppm vapor (vacated) STEL: 40 mg/m³ vapor	TWA: 1 mg/m³ dust TWA: 0.22 ppm vapor TWA: 1 mg/m³ vapor STEL: 3 mg/m³ dust STEL: 0.66 ppm vapor STEL: 3 mg/m³ vapor
Molybdenum (IV) sulfide 1317-33-5	TWA: 10 mg/m³ Mo inhalable particulate matter TWA: 3 mg/m³ Mo respirable particulate matter	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ Mo	IDLH: 5000 mg/m³ Mo
Carbon black 1333-86-4	TWA: 3 mg/m³ inhalable particulate matter	TWA: 3.5 mg/m³ (vacated) TWA: 3.5 mg/m³	IDLH: 1750 mg/m³ TWA: 3.5 mg/m³ TWA: 0.1 mg/m³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³ TWA: 2.4 mg/m³ CIB 63 fine TWA: 0.3 mg/m³ CIB 63 ultrafine, including engineered nanoscale

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand protection

Wear suitable gloves. Impervious gloves.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection

If respirable dusts are generated, respiratory protection may be needed.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance Solid (compressed)

Physical state Solid

Color	Natural color
Odor	None
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No data available	None known
Melting point / freezing point	210 - 238 °C / 410 - 460 °F	
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.15 - 1.17	
Water solubility	Insoluble	
Solubility(ies)	Soluble in: solvent	
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available.
Oxidizing properties	No information available.
Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Temperatures above 210 °C / 410 °F.

Incompatible materials Strong acids. Strong oxidizing agents.

Hazardous decomposition products Carbon oxides. Nitrogen oxides (NOx). Hydrogen cyanide.

11. Toxicological information

Information on likely routes of exposure

Product Information .

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).

Eye contact Specific test data for the substance or mixture is not available. Irritating to eyes. Causes serious eye irritation. (based on components).

Skin contact Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. May cause redness and tearing of the eyes. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1,197.40 mg/kg
ATEmix (dermal) 1,222.60 mg/kg
ATEmix (inhalation-dust/mist) 1.16 mg/l

Unknown acute toxicity 23.8257 % of the mixture consists of ingredient(s) of unknown toxicity
8.8607 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
14.8357 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
23.8257 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
.epsilon.-Caprolactam 105-60-2	= 1210 mg/kg (Rat)	= 1438 mg/kg (Rabbit) = 1410 µL/kg (Rabbit)	= 8.16 mg/L (Rat) 4 h
Methyl pyrrolidone 872-50-4	= 3914 mg/kg (Rat)	= 8 g/kg (Rabbit)	> 5.1 mg/L (Rat) 4 h
Petroleum distillates, hydrotreated heavy naphthenic 64742-52-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-
Molybdenum (IV) sulfide 1317-33-5	-	-	> 2820 mg/m³ (Rat) 4 h
Carbon black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Petroleum distillates, hydrotreated heavy naphthenic 64742-52-5	A2	Group 1	Known	X
Carbon black 1333-86-4	A3	Group 2B	-	X
Titanium dioxide 13463-67-7	-	Group 2B	-	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Classification based on data available for ingredients. May damage fertility or the unborn child.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure No information available.

Target organ effects liver, kidney, Respiratory system, Eyes, Skin, Central nervous system, Central Vascular System (CVS), Lungs, Lymphatic System.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
.epsilon.-Caprolactam 105-60-2	EC50: 4320 - 4800mg/L (72h, Pseudokirchneriella subcapitata) EC50: =160mg/L (96h, Desmodesmus subspicatus) EC50: =130mg/L (72h, Desmodesmus subspicatus)	LC50: =1400mg/L (96h, Pimephales promelas) LC50: =930mg/L (96h, Lepomis macrochirus)	-	EC50: >500mg/L (48h, Daphnia magna Straus) EC50: 828 - 2920mg/L (48h, Daphnia magna)
Methyl pyrrolidone 872-50-4	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: =4000mg/L (96h, Leuciscus idus) LC50: =1400mg/L (96h, Poecilia reticulata) LC50: =832mg/L (96h,	-	EC50: =4897mg/L (48h, Daphnia magna)

		Lepomis macrochirus) LC50: =1072mg/L (96h, Pimephales promelas)		
Petroleum distillates, hydrotreated heavy naphthenic 64742-52-5	-	LC50: >5000mg/L (96h, Oncorhynchus mykiss)	-	EC50: >1000mg/L (48h, Daphnia magna)
Carbon black 1333-86-4	-	-	-	EC50: >5600mg/L (24h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
.epsilon.-Caprolactam 105-60-2	-0.02
Methyl pyrrolidone 872-50-4	-0.46

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number U108

14. Transport information

DOT Not regulated

TDG Not regulated

MEX Not regulated

IATA Not regulated

IMDG Not regulated

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Methyl pyrrolidone - 872-50-4	1.0

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Methyl pyrrolidone - 872-50-4	Developmental
Carbon black - 1333-86-4	Carcinogen
Titanium dioxide - 13463-67-7	Carcinogen
1,4-Dioxane - 123-91-1	Carcinogen

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
.epsilon.-Caprolactam 105-60-2	X	X	X
Methyl pyrrolidone 872-50-4	X	X	X
Molybdenum (IV) sulfide 1317-33-5	-	X	-
Carbon black 1333-86-4	X	X	X
Titanium dioxide 13463-67-7	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards**	2	**Flammability**	0	**Instability**	0	**Physical and chemical properties** -
HMIS	**Health hazards**	2*	**Flammability**	0	**Physical hazards**	0	**Personal protection** X

Chronic Hazard Star Legend ** = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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Revision Note Initial Release.

Disclaimer

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. 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.

End of Safety Data Sheet