



Material Safety Data Sheet

Section 1

MSDS: Nylon 6
Unfilled

Dynamic Polymer Solutions
Telephone Numbers: (810) 324-1451
Chemtrec - Transportation Emergency:
(800) 424-9300

MATERIAL IDENTIFICATION

PRODUCT NAME:	DYN-N6, DYB-N6MI		
CHEMICAL NAME:	Polyhexamethylene Adipamide		
CAS NO.:	Polyhexamethylene Adipamide	25038-54-4	< 91.0%
	Carbon Black (if Black)	1333-86-4	< 4.0 – 2.0%
	Heat Stabilizer & Lube	n/a	< 5.0%
	Impact Modifier (if IM)	n/a	< 20.0%
PRODUCT USE:	Engineered Thermoplastics		

Section 2

HAZARDOUS INGREDIENTS (Additives not hazardous by 29 CFR 1910.1200)

Identity	CAS Number	Concentration



Material Safety Data Sheet

Section 3

HEALTH HAZARD DATA

Acute or immediate effects:

Routes of entry and systems:

Ingestion:	Ingestion is not a likely route of exposure. Ingestion of product may cause gastrointestinal discomfort.
Skin:	Pellets or dusts in contact with skin may cause irritation. Hot or molten polymer can burn the skin.
Eye:	Contact with powders or dusts may cause mechanical irritation. Thermal processing fumes/vapors may irritate the eyes.
Inhalation:	Thermal processing fumes/vapors or dusts may irritate the mucous membranes of the nose and throat.
Delayed Effects:	There are no known chronic effects associated with this material.

Section 4

EMERGENCY FIRST AID

Eyes:	Flush eyes with running water. If irritation develops or persists, obtain medical attention.
Skin:	For irritation, flush the skin with cool running water. Wash the affected area with mild soap and water. Obtain medical attention if irritation persists. If hot or molten polymer burns the skin, immerse the burned area in cold running water and obtain medical attention immediately.
Inhalation:	Remove person to fresh air. If irritation develops or persists, obtain medical attention.
Ingestion:	Ingestion is not a likely route of exposure. If product is ingested, seek medical attention.
Chronic Effects:	There are no known chronic effects associated with this material.
Advice to Physician	There are no specific recommendations for treatment of effects associated with exposure to these products. Base treatments on clinical findings.

Section 5



Material Safety Data Sheet

FIRE AND EXPLOSION HAZARD DATA

Flash Ignition Temperature:	Not Determined
Unusual Fire/Explosion Hazards:	None known
Hazardous Combustion Products:	None listed
Special Fire Fighting Instructions:	Wear self-contained, positive-pressure breathing apparatus (full face-piece type) and full protective clothing.
Extinguishing Media:	Water, foam, dry chemical, carbon dioxide

Section 6

ACCIDENTAL RELEASES

Spill or Release: Sweep or vacuum material and place in container for re-use or disposal. Spills and releases may have to be reported to federal and/or local authorities. See Section 15 regarding reporting requirements.

Section 7

STORAGE CONDITIONS

NORMAL HANDLING: Avoid processing material above recommended thermal processing temperatures. Read product Technical Data Sheet before use or contact a technical service representative for specific advice. Avoid breathing thermal processing fumes and vapors. Avoid inhalation and/or skin contact with product dusts or pellets. Avoid dust or pellets in contact with the eyes. Consider the use of local exhaust ventilation at all processing emission points. Wash thoroughly after handling.

STORAGE RECOMMENDATIONS: To maintain product quality, store product in a cool dry area. Keep in a tightly sealed container.

Section 8

PROTECTION INFORMATION

Eye:	Wear safety glasses with side shields as a minimum. Use a face shield when processing molten material.
Skin:	Wear gloves when handling drums and when handling hot polymer. Use arm protection to protect against thermal burns.
Ventilation:	Good manufacturing practice and good industrial



Material Safety Data Sheet

	hygiene practice recommends the use of local exhaust ventilation at thermal processing emission points. Processors should evaluate the need for local exhaust ventilation at each processing emission point. These considerations should include secondary operations (cutting, regrinding, chopping, etc.) that follow thermal processing.
Respirator:	If dusty conditions exist, use a mechanical filter respirator approved by NIOSH. For exposures to fumes and vapors in excess of permissible exposure limits, use an organic vapor cartridge respirator approved by NIOSH.
Additional Protective Measures:	Use additional personal protective equipment consistent with the users plant conditions and requirements. An eye wash fountain or other source of running water is recommended for the work area.

Exposure Guidelines

Ingredient Name	ACGIH TLV	OSHA PEL	Other Limit
PEL	None	Particulates Not Otherwise Regulated – 15 mg/m ³ , 8 hr. TWA, Total Dust 5 mg/m ³ , 8hr. TWA, Respirable Dust	None
Nylon 66	None	None	10mg/m ³ , 8hr. TWA, Total Dust 5mg/m ³ , 8 hr. TWA, Respirable Dust
Carbon Black	3.5 mg/m ³ , 8HR. TWA, A4	3.5 mg/m ³ , 8Hr. TWA	0.5 mg/m ³ , 8 & 12Hr. TWA, (Polynuclear Aromatic Hydrocarbon Content < 0.1%) Includes Channel, Lamp, and Thermal Black

Section 9

PHYSICAL/CHEMICAL DATA

Appearance:	Granules
Odor:	None
Melting Point:	NE



Material Safety Data Sheet

Solubility in Water:	Insoluble
Volatile Content %:	NA
Specific Gravity:	1.18

Section 10

HAZARDOUS REACTIVITY

Stability at Room Temperature:	Stable
Materials to Avoid:	Strong Acids, Oxidizing Agents
Conditions to Avoid:	Open flame, temperatures in excess of processing recommendations, prolonged contact with processing temperatures
Decomposition Temperature:	644F (340C)
Decomposition Products:	Carbon Monoxide, aldehydes

Section 11

TOXICOLOGICAL INFORMATION

Toxicity Data for: Nylon 6

Nylon 6 is not a skin irritant in tests with animals. Single exposure by ingestion to high doses caused decreased body weight. Long-term exposure caused no significant toxicological effects. Repeated inhalation exposure caused histopathological changes of the lungs and kidneys. In animal testing Nylon 66 has not caused carcinogenicity. No animal data are available to define developmental, reproductive, or mutagenic hazards.

Toxicity Data for: Carbon Black

Repeated inhalation exposure of animals to Carbon Black caused inflammation of the respiratory tract, lungs, and emphysema. Repeated exposure to high doses of Carbon Black by ingestion or skin contact caused no significant toxicological effects. No adequate studies have been conducted in animals to define the carcinogenicity of Carbon Black by ingestion. In several skin painting studies using various Carbon Blacks, no carcinogenicity was observed. Tests by inhalation for carcinogenicity in rats show significant increases in lung tumors in female rats, but not male rats. In another study using female mice exposed by inhalation to Carbon Black, there was no increase in the incidence of respiratory tract tumors. Researchers conducting the rat inhalation studies believe that these effects probably result from the massive accumulation of small dust particles in the lung that overwhelm the normal lung clearance mechanisms. This represents lunch overload phenomenon, rather than a specific chemical effect of the dust particle in the lung.



Material Safety Data Sheet

Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures. Tests in animals for genetic toxicity have produced mostly negative results. No animal data are available to define developmental or reproductive toxicity.

Carcinogenicity: IARC, NTP, OSHA, or SCGIH lists the following components as carcinogens:

Natural – IARC 2B

Section 12

ECOLOGICAL INFORMATION

No information is available. Toxicity is expected to be low based on insolubility in water.

Section 13

DISPOSAL

Waste Disposal: Preferred options for disposal are:

1. Recycling
2. Incineration with energy recovery
3. Landfill

The high fuel value of this product makes option 2 very desirable for material that cannot be recycled, but incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

Section 14

TRANSPORT INFORMATION

DOT Hazard Class:	Not Regulated
Technical Shipping Name:	
Freight Class Bulk:	
Freight Class Package:	
Product Label:	

Section 15



Material Safety Data Sheet

REGULATORY INFORMATION

OSHA Status:

SARA TITLE III:

Section 302 – Extremely Hazardous Substances:

Section 311/312 Hazard Categories:

Section 313 Toxic Chemicals:

RCRA Status:

United States TSCA Status:

STATE RIGHT TO KNOW LAWS – The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state

Component Name	
CAS Number	Concentration

PENNSYLVANIA:

CAS Number	Concentration

CALIFORNIA:

CAS Number	Concentration

SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER:

CAS Number	Concentration

SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM:

CAS Number	Concentration

HMIS Rating



Material Safety Data Sheet

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Health	
Flammability	
Reactivity	
PPE	
# Acute *Chronic	

Section 16

MISCELLANEOUS INFORMATION

The information set forth herein has been gathered from standard reference materials and/or supplier test data and is, to the best knowledge and belief of Dynamic Polymer Solutions, accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and it is not suggested or guaranteed that the hazard precautions or procedures mentioned are the only ones that exist. Dynamic Polymer Solutions makes no warranties, expressed or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process, and assumes no responsibility therefore.

END OF MSDS