



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** SPANDEX / ELASTANE FIBER  
**Version #** 1.0  
**MSDS Number** 1878  
**Revision date** 23-Nov-2011  
**Company Information** INVISTA S.à r.l.  
INVISTA Building  
4123 East 37th Street North  
Wichita, KS 67220  
**Emergency** CHEMTREC: 1-800-424-9300  
Outside U.S. +1-703-527-3887  
**General Information** Product Information: 1-877-446-8478  
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## 2. Hazards Identification

### OSHA regulatory status

This document is provided for informational purposes, and is not meant to imply that this product is hazardous. While this material is not considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

### Potential health effects

#### Eyes

Fiber particles and dusts may be mechanically irritating when in contact with eyes. Symptoms include itching, burning, redness and tearing.

#### Skin

Human patch testing indicates that spandex fibers are not a skin irritant or skin sensitizer. Fiber particles and dusts may be mechanically irritating to skin. While irritation is not expected under normal use, prolonged exposure and continuous rubbing of fiber particles on skin may produce skin irritation. Symptoms of mechanical irritation may include redness and/or itching.

#### Inhalation

Health injuries are not known or expected under normal use.

#### Ingestion

Not a likely route of entry. Ingestion of large amounts of fibers may cause gastrointestinal blockage which can cause stomach distress.

### Potential environmental effects

This material is not expected to be harmful to aquatic life.

## 3. Composition / Information on Ingredients

Components	CAS #	Concentration
SPANDEX / ELASTANE FIBER (Contains DIMETHYLACETAMIDE CAS #: 127-19-5)	NOT APPLICABLE	100%

## Composition comments

Fibers may have been produced with Titanium Dioxide. Titanium Dioxide is not water soluble and is encapsulated. It is not extracted or released in normal processing. Therefore Titanium Dioxide in this material does not present a hazard in normal handling, processing use and disposal.

Black fibers have been produced with Carbon Black. Carbon Black is not water soluble and is encapsulated. It is not extracted or released in normal processing. Therefore Carbon Black in this material does not present a hazard in normal handling, processing use and disposal.

Colored products contain colorant/organic pigments. These pigments are not water-soluble and are encapsulated in the polymer.

A manufactured fiber in which the fiber-forming substance is a long chain synthetic polymer comprised of at least 85 percent of a segmented polyurethane. Fiber composed of at least 85% by mass of a segmented polyurethane and which, if stretched to three times its unstretched length, rapidly reverts substantially to the unstretched length when the tension is removed.

## 4. First Aid Measures

### First aid procedures

#### Eye contact

Flush eyes with water as a precaution. If irritation persists get medical attention.

#### Skin contact

Product is not expected to be hazardous by skin contact. Should irritation occur rinse with water.

Wash hands thoroughly after handling.

Wash affected area with mild soap and water. Get medical attention if irritation develops or persists.

For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat.

#### Inhalation

No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, get medical attention.

#### Ingestion

If swallowed, do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Consult a physician if necessary.

### Notes to physician

Treat symptomatically.

## 5. Fire Fighting Measures

### Flammable properties

Heating can release vapors which can be ignited. Once ignited by a flame, spandex fiber burns readily and with high fuel value.

Dusts at sufficient concentrations can form explosive mixtures with air.

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

### Extinguishing media

#### Suitable extinguishing media

Dry chemical, CO<sub>2</sub>, water spray or regular foam.

#### Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

### Protection of firefighters

#### Protective equipment and precautions for firefighters

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Wear suitable protective equipment. Evacuate area and fight fire from a safe distance.

### Fire fighting equipment/instructions

Not available.

## Hazardous combustion products

Carbon monoxide, carbon dioxide, various hydrocarbon fragments as well as thick smoke.

Irritating and toxic gases or fumes may be released during a fire. Traces of hydrogen cyanide may be found in fire conditions.

## 6. Accidental Release Measures

### Personal precautions

Avoid inhalation of fumes from molten product. Avoid excessive skin contact with the spilled material.

### Methods for cleaning up

Sweep up or gather material and place in appropriate container.

Do not flush to sewer. Vacuum or sweep up material and place in a disposal container.

## 7. Handling and Storage

### Handling

Use care in handling/storage.

Do not breathe dust from this material.

### Storage

Keep away from heat, sparks, and flame.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

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

Components	Type	Value
DIMETHYLACETAMIDE (DMAC) (127-19-5)	PEL	10.0000 ppm 35.0000 mg/m3

### Engineering controls

Use local exhaust ventilation to keep formation of airborne dusts to a minimum when the fiber products are cut, chopped, or manipulated in other similar handling methods. Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Use process enclosures, local exhaust ventilation, or other engineering controls when working with molten material.

### Personal protective equipment

#### Eye / face protection

When the fiber products are cut, chopped, or manipulated in other similar handling methods, it may be necessary to wear safety glasses with side shields.

#### Skin protection

Gloves are not normally needed.

Wear suitable protective equipment. When material is heated, wear gloves to protect against thermal burns.

#### Respiratory protection

When dusts or fumes are generated and ventilation is not sufficient to effectively remove them, appropriate respiratory protection must be provided.

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

#### General hygiene considerations

Use good industrial hygiene practices in handling this material. Wash hands before breaks and at the end of workday.

## 9. Physical & Chemical Properties

Appearance	Fibers.
Physical state	Solid.
Form	Solid-continuous (coalesced) filament yarn with a wide range of total denier.
Color	Based on specification.
Odor	Mild.
Odor threshold	Not available.

<b>pH</b>	Not Applicable
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not Determined
<b>Boiling point</b>	Not Applicable
<b>Melting point/Freezing point</b>	> 437 °F (> 225 °C) (with decomposition)
<b>Solubility (water)</b>	Negligible
<b>Specific gravity</b>	1.1 - 1.3 at 25°C
<b>Relative density</b>	Not available.
<b>Flash point</b>	not determined
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	not determined
<b>Evaporation rate</b>	Negligible
<b>Other data</b>	
<b>Density</b>	1.1 - 1.3 g/ml

## 10. Chemical Stability & Reactivity Information

### Chemical stability

Stable, however, may decompose if heated.

This is a stable material.

### Conditions to avoid

Heat, flames and sparks.

### Incompatible materials

Reacts with strong oxidizing agents and nitric acid.

### Hazardous decomposition products

Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

### Possibility of hazardous reactions

Not expected to occur.

## 11. Toxicological Information

### Toxicological data

#### Components

DIMETHYLACETAMIDE (DMAC) (127-19-5)

#### Test Results

Acute Dermal LD50 Rabbit: 2240 mg/kg

Acute Inhalation LC50 Rat: 8.1 mg/l/1H

Acute Oral LD50 Rat: 4930 mg/kg

### Toxicological information

Due to this material's high molecular weight, and results of toxicity studies of similar products, this material is considered to be of little to no toxicological concern.

Human patch testing indicates that spandex fibers are not a skin irritant or skin sensitizer.

#### *DIMETHYLACETAMIDE (DMAC)*

##### **Carcinogenicity**

Did not show carcinogenic effects in animal experiments.

##### **Mutagenicity**

Did not show mutagenic effects in animal experiments.

##### **Skin sensitization**

No sensitization responses were observed.

##### **Reproductive effects**

Animal testing did not show any effects on fertility.

## DIMETHYLACETAMIDE (DMAC)

### Symptoms and target organs

Excessive exposures may affect human health, as follows: unconsciousness, headache, nausea, blurred vision, weakness, irritation, Kidney disorders, Liver disorders, Central nervous system

### Eye contact

Animal studies indicate this substance is an eye irritant.

### Skin contact

Causes mild skin irritation. May cause toxic effects if absorbed through skin.

### Inhalation

Inhalation of high vapor concentrations can cause CNS-depression and narcosis. May cause irritation of the mucous membranes.

## 12. Ecological Information

### Ecotoxicity

This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Based on similar substances, this material is expected to be essentially non-biodegradable.

### Persistence and degradability

Not available.

## 13. Disposal Considerations

### Disposal instructions

Dispose in accordance with all applicable regulations.

### Waste from residues / unused products

Dispose in accordance with all applicable regulations.

### Contaminated packaging

Dispose in accordance with all applicable regulations.

## 14. Transport Information

### Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

## 15. Regulatory Information

### US federal regulations

Product, as supplied, is an article under TSCA.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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<b>Section 302 extremely hazardous substance</b>	No
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### State regulations

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### US - California Proposition 65 - CRT: Listed date/Developmental toxin

DIMETHYLACETAMIDE (DMAC) (CAS 127-19-5)	Listed: May 21, 2010 Developmental toxin.
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### US - Pennsylvania RTK - Hazardous Substances: Listed substance

DIMETHYLACETAMIDE (DMAC) (CAS 127-19-5)	Listed.
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## Canadian regulations

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

This material is not a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).

## 16. Other Information

### HMIS® ratings

Health: 0  
Flammability: 1  
Physical hazard: 0

### NFPA ratings

Health: 0  
Flammability: 1  
Instability: 0

### Disclaimer

This Material Safety Data Sheet ("MSDS") contains selected information about a specific INVISTA product or group of products. It relates only to the identified product and any identified uses and is based on information available as of the date hereof. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. THIS MSDS WAS PREPARED PURSUANT TO GOVERNMENT REGULATIONS THAT IDENTIFY SPECIFIC TYPES OF INFORMATION TO BE PROVIDED HEREIN. IT IS THEREFORE NOT INTENDED AS, AND DOES NOT CONTAIN, A COMPLETE STATEMENT OF, AND DOES NOT CONSTITUTE A REPRESENTATION, WARRANTY OR GUARANTY WITH REGARD TO, A PRODUCT'S CHARACTERISTICS, USES, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THE SUITABILITY, SAFETY, EFFICACY, HAZARDS OR HEALTH EFFECTS OF THE PRODUCT, WHETHER USED SINGULARLY OR IN COMBINATION WITH ANY OTHER PRODUCT, EXCEPT TO THE EXTENT REQUIRED BY THE RELEVANT LAW AND REGULATIONS. Purchasers and users of the product are responsible for determining that the product is suitable for the intended use and that their workers and the general public are advised of any risks resulting from such use. Nothing contained in this MSDS shall be construed to modify any of the commercial terms pursuant to which the product was sold by INVISTA including, but not limited to, terms and conditions addressing each party's respective rights and obligations with regard to warranties, remedies and indemnification.

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### Issue date

23-Nov-2011