# Material Safety Data Sheet

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: VYDYNE® Nylon 6,6 Plus Additives (Class 105)
20NSP Black, 21SPF Black, 21SPF1 BLK, 21SPG Black, 21SPG1 Black, 22H Black, 22HSP Black, 22 HSP BLK, 25W, 25WSP, 25WSPF, 24NSPF08, 21SP Black, 21SP01, 21X03, 22H01, 22H03, 25I Black, Q580, Q593

Reference Number: 00071 Date: 11/18/2011

Company Information:
Ascend Performance Materials LLC
3000 Old Chemstrand Road
Cantonment, FL 32533 USA
Website: www.ascendmaterials.com
Emergency telephone: Chemtrec: 1-800-424-9300
International Emergency telephone: Chemtrec: 703-527-3887
Non-Emergency telephone: 1-850-968-8411

Ascend Performance Materials LLC
Highway 246
Greenwood, SC 29648 USA

## 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

| | |
|---|---|
| Form: | pellets |
| Colour: | various |
| Odour: | odourless |

WARNING STATEMENTS

No significant hazards associated with this material

POTENTIAL HEALTH EFFECTS

| | |
|---|---|
| Likely routes of exposure: | eye and skin contact<br>inhalation |
| Eye contact: | No more than slightly irritating to eyes.<br>Dust may cause eye irritation as would any foreign material. |
| Skin contact: | Not irritating to skin.<br>No more than slightly toxic if absorbed. |

| | |
|---|---|
| Inhalation: | No more than slightly toxic if inhaled.<br>Elevated processing temperatures may cause release of vapours which are irritating if inhaled. |
| Ingestion: | No more than slightly toxic if swallowed.<br>Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed. |

Refer to Section 11 for toxicological information.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS No. | Average concentration | Concentration range | Units |
|---|---|---|---|---|
| adipic acid - hexamethylenediamine resin (nylon 6/6) | 32131-17-2 | | >=45.0 - <=90.0 | % |
| polycaprolactam (nylon 6) | 25038-54-4 | | >=0.0 - <=30.0 | % |
| poly(hexamethylene adipamide-co-caprolactam) (nylon 6,6/6) | 24993-04-2 | | >=0.0 - <=25.0 | % |
| carbon black | 1333-86-4 | | >=0.0 - <=5.0 | % |

Components listed with a lower limit of 0% may or may not be present in the final formulation.

## 4. FIRST AID MEASURES

| | |
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| If in eyes: | Immediate first aid is not likely to be required.<br>This material can be removed with water. |
| If on skin: | Immediate first aid is not likely to be required.<br>This material can be removed with water.<br>Wash heavily contaminated clothing before reuse. |
| If inhaled: | Immediate first aid is not likely to be required.<br>If symptoms occur, remove to fresh air.<br>Remove material from eyes, skin and clothing. |
| If swallowed: | Immediate first aid is not likely to be required.<br>A physician or Poison Control Center can be contacted for advice.<br>Wash heavily contaminated clothing before reuse. |

## 5. FIRE FIGHTING MEASURES

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| Hazardous products of combustion: | carbon monoxide (CO); carbon dioxide; ammonia (NH3); hydrogen cyanide (HCN); nitrogen oxides (NOx) |
| Extinguishing media: | Water spray, foam, dry chemical, or carbon dioxide |
| Unusual fire and explosion hazards: | None known |
| Fire fighting equipment: | Firefighters, and others exposed, wear self-contained breathing apparatus.<br>Equipment should be thoroughly decontaminated after use. |
| Miscellaneous advice: | If this material is milled or the process generates fines, the fines could |

form an explosive mixture if dispersed in a sufficient quantity of air.

## 6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions: | Use personal protection recommended in section 8.<br>Product may cause a slip hazard. |
| Environmental precautions: | Keep out of drains and water courses.<br>Pellets may present a physical ingestion hazard to wildlife due to resemblance to grains.<br>Clean up spills immediately. |
| Methods for cleaning up: | In case of spill, sweep, scoop or vacuum and remove. Flush spill area with water. |

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

## 7. HANDLING AND STORAGE

Handling
Handle in accordance with good industrial hygiene and safety practices.
These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing.

Emptied containers retain vapour and product residue. Observe all recommended safety precautions until container is cleaned, reconditioned or destroyed. The reuse of this material's container for non industrial purposes is prohibited and any reuse must be in consideration of the data provided in this material safety data sheet.

Storage
General: Stable under normal conditions of handling and storage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits: (ml/m3 = ppm)

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| VYDYNE® Nylon 6,6 Plus Additives (Class 105) | OSHA and/or ACGIH have not established specific exposure limits for this material. However, they have established limits for particulates not otherwise regulated (PNOR) and particulates not otherwise classified (PNOC) respectively, which are the least stringent exposure limits applicable to dusts.<br>OSHA PEL: 15mg/m3 (total dust) 8-hr TWA<br>OSHA PEL: 5mg/m3 (respirable) 8-hr TWA<br>ACGIH TLV: 10mg/m3 (total dust) 8-hr TWA<br>ACGIH TLV: 3mg/m3 (respirable) 8-hr TWA |
| carbon black | ACGIH TLV: 3.5 mg/m3 ; ; 8-hr TWA<br>OSHA PEL: 3.5 mg/m3 ; ; 8-hr TWA<br>Mexican OEL: 3.5 mg/m3 ; ; 8-hr TWA<br>Mexican OEL: 7 mg/m3 ; ; 15-min STEL |
| Eye protection: | Does not cause significant eye irritation or eye toxicity requiring special protection.<br>Use good industrial practice to avoid eye contact. |
| Hand protection: | This product does not present significant skin concern requiring special protection. |

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| Body protection: | Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. |
| Respiratory protection: | Avoid breathing dust.<br>Use approved respiratory protection equipment when airborne exposure limits are exceeded.<br>Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.<br>Observe respirator use limitations specified by the manufacturer. |
| Ventilation: | Provide natural or mechanical ventilation to minimize exposure.<br>If practical, use local mechanical exhaust ventilation at sources of air contamination such as processing equipment. |

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Flash point: | > 371 C | Estimated |
| Density: | 1.13 - 1.15 g/cm3 | |
| Melting point : | 257 - 267 C | |

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| Conditions to avoid: | None known |
| Materials to avoid: | None known |
| Hazardous reactions: | Hazardous polymerization does not occur. |
| Decomposition: | Decomposition occurs above temperature listed below : |
| Decomposition temperature: | > 300 C |
| Hazardous decomposition products: | carbon monoxide (CO); carbon dioxide; ammonia (NH3); hydrogen cyanide (HCN); nitrogen oxides (NOx) |

## 11. TOXICOLOGICAL INFORMATION

Ascend Performance Materials has not conducted toxicity studies on this material and no toxicological information was obtained in a reasonably extensive search of the available scientific literature. Results of single exposure (acute) toxicity studies conducted on similar materials indicate that these products are practically nontoxic orally (rats) and after skin application (rabbits). These products are practically non irritating to rabbit skin and are practically non irritating to slightly irritating to rabbit eyes. No adverse effects noted following repeated oral administration.

Components

Data from Ascend Performance Materials studies and/or the available scientific literature on the components of this material which have been identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Hazardous Products Act are discussed below.

| | |
|---|---|
| carbon black | May cause irritation of respiratory system.<br>Repeated inhalation exposure produced changes to the lungs in animal models.<br>Repeated or prolonged skin contact may cause irritation.<br>Practically nontoxic following oral administration.<br>Practically non irritating to eyes (rabbit).<br>Prolonged inhalation studies produced lung effects.<br>No genetic effects were observed in standard tests using bacterial and animal cells.<br>Chronic exposure to animals produced no increase in tumour incidence.<br>Listed as "possibly carcinogenic to humans" (Group 2B) by the International Agency for Research on Cancer (IARC). |

## 12. ECOLOGICAL INFORMATION

Ascend Performance Materials has not conducted environmental toxicity or biodegradation studies with this material.

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| US EPA RCRA Status: | This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. |
| Disposal considerations: | Incineration<br>Recycle<br>Landfill |
| Miscellaneous advice: | Local, state, provincial, and national disposal regulations may be more or less stringent. Consult your attorney or appropriate regulatory officials for information on such disposal.<br>This product should not be dumped, spilled, rinsed or washed into sewers or public waterways. |

## 14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

US DOT
Other: Not regulated for transport.

Canadian TDG
Other: Not regulated for transport.

## 15. REGULATORY INFORMATION

| | |
|---|---|
| Chemical Inventory Compliance | The components of this product are in compliance with the relevant requirements of the chemical control laws in the following world areas: |

Australia, Canada (DSL), China, Japan, Korea, Philippines, and United States (TSCA).

Canadian WHMIS classification: Not Controlled

| REACh Compliance Statements | |
|---|---|
| European Union or European Economic Area Customers: | For Ascend Performance Materials' direct customers in Europe, all necessary Pre-Registrations have been completed. These have been completed through Ascend Performance Material's Only Representative. Necessary Registrations will be completed prior to the deadlines in 2010, 2013 and 2018.<br><br>As a Downstream User of our substances, you are obligated to provide to Ascend information concerning uses of and exposures to our substances. This includes occupational, downstream users, consumer and waste exposures.<br><br>For further information, please contact Ascend's REACh team at REACh@AscendMaterials.com. |
| Customers Outside the European Union or European Economic Area | For customers outside the European Union or European Economic Area who may ship this product to Europe as a discrete substance, monomer, or substance in a preparation, your company must ensure that your EU Importer or Only Representative has properly Pre-Registered the substances in this product.<br><br>Furthermore, your company must ensure that all aspects of REACh are fully complied with, including preparation of a Registration Dossier with submission of such to ECHA prior to the registration deadlines.<br><br>Without appropriate legal agreements and compensation, Ascend Performance Materials, LLC is not responsible for the REACh registration compliance of its non-EU/EEA customers.<br><br>For further information, please contact Ascend's REACh team at REACh@AscendMaterials.com. |

SARA Hazard Notification:

Hazard Categories Under Title III Rules (40 CFR 370): Not applicable

Section 302 Extremely Hazardous Substances: Not applicable

Section 313 Toxic Chemical(s): Not applicable

CERCLA Reportable Quantity:

Not applicable

This product is compliant with EU Directives 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), 2002/96/EC on the restriction of certain hazardous substances in waste electrical and electronic equipment (WEEE), and 2003/11/EC restricting the use of PBB and PBDE fire retardants. Heavy metal and halogen analysis using inductively coupled plasma - mass spectrometry techniques: Cadmium: <0.001% Chromium: <0.001% Lead: <0.001% Mercury: <0.001% Bromine: <0.001%

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

Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.

Safety data sheet also created in accordance with Brazilian law NBR 14725

# 16. OTHER INFORMATION

Product use: Plastic resins

Reason for revision: New Products added.

| | Health | Fire | Reactivity | Additional Information |
|---|---|---|---|---|
| Suggested NFPA Rating | 1 | 0 | 0 | |
| Suggested HMIS Rating: | 1 | 0 | 0 | A |

Other Information: This product may contain other copolymers, colour additives, heat stabilizers, flame retardants and/or other performance additives. Under normal use conditions, these additives are contained within the polymer matrix and occupational exposures are expected to be minimal.

Prepared by the Ascend Product Stewardship Group. Please consult Ascend @ 850-968-8411 if further information is needed.

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