DAK Americas LLC
Material Safety Data Sheet

MSDS NUMBER: DK0007
REVISION: 02/03/2012

POLYESTER STAPLE FIBER 1.5 X 1.5” T-54NW Merge 113EUD

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

MATERIAL IDENTIFICATION:
Dacron® Polyester Fiber/Staple

COMPANY IDENTIFICATION:

MANUFACTURER/DISTRIBUTOR:
DAK Americas LLC
5925 Carnegie Blvd, Suite 500
CHARLOTTE, NC, US 28209

PHONE NUMBERS:

Product Information:
Non-Wovens 1-800-257-8275
Wovens 1-800-227-8275
Knits 1-800-237-8275

Transportation Emergency: 1-800-424-9300

Dacron®*** is a registered trademark of DuPont, licensed to DAK Americas LLC.
COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS:

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Fiber Lubricant</td>
<td></td>
<td>0.02–1.0</td>
</tr>
<tr>
<td>Polymer—Polyester consisting of:**</td>
<td></td>
<td>98.0–99.9</td>
</tr>
<tr>
<td>Polyethylene Terephthalate**</td>
<td>25038-59-9</td>
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</tbody>
</table>

** This specific Polyester Fiber contain less than 1% total finish by weight of fiber. Some components or degradation products may be released under processing conditions. Where there are hazards associated with these substances, they are recorded in the appropriate section of the MSDS.

HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

Staple fiber presents low hazards for usual industrial or commercial handling. If a processing step results in significant airborne fibers, DAK Americas', recommends an
airborne exposure limit of 10mg fiber as particulate/M3 as a 8 hour time weighted average (TWA).

This product may contain up to one percent titanium dioxide (TiO2) as a light scattering agent to impart white color. When incorporated into the fiber, we do not believe TiO2 presents a significant hazard.
The product is coated with lubricants which have been toxicologically evaluated and found to be generally of a low order of acute oral and inhalation toxicity in animals and of dermal toxicity in humans. They do not present a significant health hazard in their normal use. If in processing there is a potential to generate airborne concentrations of these oils as a mist, we recommend an airborne exposure limit of 5 mg as particulate/m3 as an 8-hour TWA. If heated to temperatures of 150–250 deg. C during processing, these lubricating oils can degrade and generate off gases which may contain very small amounts of such chemicals as aldehydes, alcohols, acetic acid, acetone, etc. Local exhaust ventilation is recommended.

CARCINOGENICITY INFORMATION:

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens. A “P” indicates a proposed carcinogen.

<table>
<thead>
<tr>
<th>Material</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

FIRST AID MEASURES

FIRST AID:

INHALATION:

No specific intervention is indicated. Consult a physician if necessary.

SKIN CONTACT:

The fiber is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable.

EYE CONTACT:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
INGESTION:

No specific intervention is indicated as fiber is not likely to be hazardous by ingestion. Consult a physician if necessary.
FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flash Point: Not applicable. Material will burn in a fire.

FIRE AND EXPLOSION HAZARDS:

None.

Hazardous gases/vapors produced in fire are: aldehydes, ethanol, methanol, acetic acid, acetone, etc. Combustion products are similar to those of other organic material composed of the same elements.

EXTINGUISHING MEDIA:

Water, Foam, Dry Chemical, CO2

FIRE FIGHTING INSTRUCTIONS:

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment.

ACCIDENTAL RELEASE MEASURES

SAFEGUARDS (PERSONNEL):

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

SPILL CLEAN UP:
Polyester Staple Fibers present no unusual spill or release potential. Shovel or sweep up for disposal.
HANDLING AND STORAGE

HANDLING (PERSONNEL):

Avoid breathing hot vapors, oil mists, and airborne fibers. Wash thoroughly after handling.

STORAGE:

Store cartons and bales in accord with good material handling practices.

EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:

Generally Applicable Control Measures and Precautions

While no special controls or handling procedures are required, it is recommended that exposure to any inhalable material be minimized by the use of adequate ventilation, such as local exhaust, effective containment, and personal cleanliness.

EYE/FACE:

Safety Glasses

EXPOSURE GUIDELINES:

Applicable Exposure Limits
Titanium Dioxide
PEL (OSHA): 15 mg/m³, total dust, 8 Hr. TWA
TLV (ACGIH): 10 mg/m³, total dust, 8 Hr. TWA, A4
AEL * (DuPont): 10 mg/m³, total dust, 8 Hr. TWA
5 mg/m³, respirable dust, 8 Hr. TWA
Polyethylene Terephthalate

PEL (OSHA): None Established
TLV (ACGIH): None Established
AEL * (DuPont): 10 mg/m³, 8 Hr. TWA, total dust
               5 mg/m³, 8 Hr. TWA, respirable dust

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- DAK Americas supports AEL’s defined by E.I. DuPont as Acceptable Exposure Limits. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA:

Melting Point: 250 to 300 deg. C
Water Solubility: Insoluble
Form: Fiber or pellet
Color: Clear and colorless, white if product contains TiO₂, black if product contains carbon black.
Odor: Odorless
% Volatiles: 3%. Only the finish will volatilize below the melting point.

STABILITY AND REACTIVITY

CHEMICAL STABILITY:

Stable.

INCOMPATIBILITY WITH OTHER MATERIALS:
None reasonably foreseeable.

DECOMPOSITION:

DECOMPOSES WITH HEAT:

If heated to 150–250 deg. C during processing, the fiber lubricants can degrade and generate off gases which may contain small amounts of chemicals such as aldehydes, alcohols, acetic acid, acetone, etc. We are not aware of chemicals such as these reaching concentrations that present a serious health hazards. However, information on toxic effects and recommended exposure limits of these and other chemicals can be found in the most recent edition of the ACGIH documentation of threshold limit values.

When Polyester Staple Fiber is burned, no unusual combustion gases have been observed, and its combustion products are similar to those of other organic materials composed of the same elements.
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Polyester fiber is essentially non–biodegradable, but most of the fiber finishes are biodegradable. It contains no significant percentage of materials extractable by contact with ambient waters. It is stable in all recommended use environments and requires no special spill handling procedure.

Polyester fiber may be disposed of by incineration, preferably by recovering the energy for other uses. The fiber produces offgases during incineration which are similar to those produced by the incineration of other natural and man–made fibers, with negligible Nox. Polyester Staple Fibers made from Polymers containing low levels of sulfur may produce SOx when incinerated. A non–hazardous ash which passes the Toxic Chemical Leachate Procedure should be produced. Further information on incineration is available upon request.

Polyester Staple Fiber is not a hazardous waste as defined by regulation implementing the Resource Conservation and Recovery Act (RCRA).

Polyester Staple Fibers and fabrics are not regulated on hazardous wastes under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and are not subject to the Superfund tax.

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.
REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TOXIC SUBSTANCE CONTROL ACT (TSCA):

Polyester Staple Fiber is considered an "article" under provision of TSCA. All non-exempt chemical substances incorporated into the product or applied to the surface are included in the TSCA Inventory of Chemical Substances compiled by the U.S. Environmental Protection Agency (EPA).

Occupational Safety and Health Act (OSHA):

This product is not a "hazardous chemical" as regulated under the OSHA Hazard Communication Standard (29 CFR 1910.1200). This data sheet is provided merely as an informational resource for our customers.

Emergency Planning and Community Right–To–Know Act of 1986 (EPCRA):

Polyester Staple Fiber contains no chemicals in concentrations reportable under Section 313 of EPCRA.
STATE REGULATIONS (U.S.):

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
Polyester Staple Fiber contains none of the substances known to the State of California to cause cancer or reproductive toxicity.

PENNSYLVANIA AND NEW JERSEY RIGHT-TO-KNOW LAWS:
Polyester Staple Fiber contains may contain carbon black and titanium dioxide, which are listed on both the New Jersey and Pennsylvania Right–To–Know regulatory lists.

INTERNATIONAL REGULATIONS:

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL or otherwise complies with CEPA new substance notification requirements.
EINECS (European Inventory of Existing Commercial Chemical Substances): This product is listed on EINECS or otherwise complies with EINECS requirements. Any polymer present in this product has regulatory clearance under Directives of the European Union.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

Philippines Inventory (PICCS): This product is listed on the Philippine Inventory or otherwise complies with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or are not required to be listed on the Chinese inventory.

No components of this product are on the Mexican Raw Materials Regulation.

No components of this product are on Germany’s Recommendation #36 for food contact.
OTHER INFORMATION

CLEAN AIR ACT AMENDMENTS OF 1990:

Polyester Staple Fiber contains none of the ozone depleting substances listed in either Class I (chlorofluorocarbons, halon, carbon tetrachloride and methyl chloroform) or Class II (hydrochlorofluorocarbons) of the Clean Air Act Amendments of 1990.

ADDITIONAL INFORMATION

Dacron®*** is a registered trademark of DuPont, licensed to DAK Americas LLC.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS: Cape Fear MSDS Coordinator
Address: 3500 Daniels Road
           Leland, NC 28451
Telephone: 1–910–371–4000

See DAK Caution Statement on next page.

End of MSDS
CAUTION

DAK Caution Bulletin No. 1

DO NOT USE DAK MATERIALS IN MEDICAL APPLICATIONS INVOLVING PERMANENT, BRIEF, OR TEMPORARY IMPLANTATION IN THE HUMAN BODY OR PERMANENT CONTACT WITH INTERNAL BODY FLUIDS OR TISSUES, UNLESS THE MATERIAL HAS BEEN PROVIDED DIRECTLY FROM DAK UNDER A CONTRACT WHICH EXPRESSLY ACKNOWLEDGES THE CONTEMPLATED USE.

DAK MAKES NO REPRESENTATION, PROMISE, EXPRESS WARRANTY OR IMPLIED WARRANTY CONCERNING THE SUITABILITY OF THESE MATERIALS FOR USE IN THE HUMAN BODY OR IN CONTACT WITH INTERNAL BODY FLUIDS OR TISSUES.

THE CONTENT OF DAK MATERIAL IS NOT CERTIFIED FOR IMPLANTS. DAK materials are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. DAK has not performed clinical testing of these materials for implantation. DAK will not provide to customers making implantable devices any notice concerning its materials, as specified under 21 C.F.R section 820.50, or any other information necessary for medical device use of the materials under any other statue or FDA regulation. DAK has neither sought, nor received, approval from the FDA for the use of these materials in implantation in the human body or in contact with internal body fluids or tissues.
ALL IMPLANTABLE MEDICAL DEVICES CARRY A RISK OF FAILURE AND ADVERSE CONSEQUENCES

The medical judgment of a physician, a medical device seller and the FDA should be relied upon for identification of both harmful consequences and life-saving benefits from an implantation device comprised of specific materials. These benefits and risks can be found in published medical cases performing clinical medical studies of an implantable medical device. DAK does not support the use of its products in these applications and cannot weigh the benefits against the risk defined in these articles. DAK can not offer a medical judgment on the safety or efficacy of the use of its materials in such devices.

DO NOT MAKE REFERENCE TO THE DAK NAME OR ANY DAK TRADEMARK IN ASSOCIATION WITH AN IMPLANTABLE MEDICAL DEVICE.

Do not use a DAK trademark or licensed trademark as the descriptive name of an implantable medical device (e.g. do not call it the "Dacron®" prosthesis", do not call it a "Delcron®" prosthesis, or do not call it a "Laser+® device" ).

End of Bulletin