# SAFETY DATA SHEET

## 1. Identification

**Product identifier** **TORZEN® U4630HSL BKB01 PA66 Resin**

**Other means of identification**

**SDS number** 45960

**Recommended use** Polymers

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company Information** INVISTA S.à r.l.
INVISTA Building
4123 East 37th Street North
Wichita, KS 67220

**Emergency telephone:** CHEMTREC: 855-224-6545

**General Information** Product Information: 1-877-446-8478
Outside the U.S.: +1-770-792-4221

**e-mail** msds@invista.com

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**OSHA defined hazards** Combustible dusts Classified

**Label elements**

**Hazard symbol** None.

**Signal word** Warning

**Hazard statement** May form combustible dust concentrations in air.

**Prevention** Not assigned.

**Response** Not assigned.

**Storage** Not assigned.

**Disposal** Not assigned.

**Hazard(s) not otherwise classified (HNOC)** Not classified.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| NYLON 66 FEEDSTOCK | | PROPRIETARY | > 99% |

**Composition comments** One or more of the ingredients have been claimed as trade secret under the OSHA Hazard Communication Standard. The hazards of this (these) ingredient(s), if any, are given on this SDS.

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

## 4. First-aid measures

**Inhalation** If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop. If breathing is difficult, give oxygen.

**Skin contact** Product, at ambient conditions, is not expected to be hazardous by skin contact. Should irritation occur, rinse with water. In case of contact with molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product from skin because skin will tear easily.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids. If irritation persists get medical attention.

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

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| **Most important symptoms/effects, acute and delayed** | Inhalation: Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.<br><br>Skin: Contact with molten polymer can cause significant tissue damage. Particles/dust may cause mechanical irritation when in contact with the skin and can cause skin irritation with redness.<br><br>Eyes: Particles and dusts may be mechanically irritating when in contact with eyes. Symptoms include itching, burning, redness and tearing.<br><br>Ingestion: Ingestion of this product may cause nausea, vomiting and diarrhea. |
| **Indication of immediate medical attention and special treatment needed** | Provide general supportive measures and treat symptomatically. |
| **General information** | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

## 5. Fire-fighting measures

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| **Suitable extinguishing media** | Dry chemical, CO2, water spray or regular foam.<br><br>Apply extinguishing media carefully to avoid creating airborne dust. |
| **Unsuitable extinguishing media** | Do not use a solid water stream as it may scatter and spread fire. |
| **Specific hazards arising from the chemical** | Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons. Traces of hydrogen cyanide may be found in fire conditions.<br><br>Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. |
| **Special 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. |
| **Fire-fighting equipment/instructions** | Firefighters should wear full protective clothing including self contained breathing apparatus. |

## 6. Accidental release measures

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| **Personal precautions, protective equipment and emergency procedures** | Avoid inhalation of fumes from molten product. Molten material can cause burns. Handle molten material with care. |
| **Methods and materials for containment and cleaning up** | Where possible allow molten material to solidify naturally. Clean up in accordance with all applicable regulations.<br><br>Large Spills: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Sweep up or gather material and place in appropriate container for disposal. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.<br><br>Small Spills: Sweep up and shovel into suitable containers for disposal. |
| **Environmental precautions** | Prevent further leakage or spillage if safe to do so. |

## 7. Handling and storage

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| **Precautions for safe handling** | Use care in handling/storage. Molten material can cause burns. Handle molten material with care.<br><br>Industrial handling of polymer pellets or chips has the potential to generate dust. Polymer dust can accumulate over time on buildings and equipment. After a significant amount of dust accumulation and disturbance, dust may form explosive mixture in air. Ensure that good housekeeping practices are followed. Minimize dust generation and accumulation. Do not breathe dust from this material.<br><br>Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Take measures to prevent the build up of electrostatic charge. |

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| **Conditions for safe storage, including any incompatibilities** | Keep the container tightly closed and dry. To maintain product quality, do not store in heat or direct sunlight. Keep from freezing. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep in a well-ventilated place. Guard against dust accumulation of this material.<br><br>Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. |

## 8. Exposure controls/personal protection

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| **Occupational exposure limits** | No exposure limits noted for ingredient(s). |
| **Biological limit values** | No biological exposure limits noted for the ingredient(s). |
| **Appropriate engineering controls** | Keep formation of airborne dusts to a minimum. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.<br><br>Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).<br><br>Use only appropriately classified electrical equipment and powered industrial trucks. |
| **Individual protection measures, such as personal protective equipment** | |
| **Eye/face protection** | Wear dust goggles. If handling molten material, additional protection may be needed, which may include face shield. |
| **Hand protection** | Not normally needed under ambient conditions. For molten material use heat resistant gloves. |
| **Other** | For molten product, use any type rubber thermal insulating gloves and other clothing as necessary to protect from thermal burns. |
| **Respiratory protection** | When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate respiratory protection must be provided. In the case of respirable dust and/or fumes, use self-contained breathing apparatus. |
| **Thermal hazards** | For molten product, use any type rubber thermal insulating gloves and other clothing as necessary to protect from thermal burns. |
| **General hygiene considerations** | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. |

## 9. Physical and chemical properties

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| **Appearance** | Granular Flakes Chips. Pellets. |
| **Physical state** | Solid. |
| **Form** | Solid. |
| **Color** | Black. |
| **Odor** | Slight to none. |
| **Odor threshold** | Not available. |
| **pH** | Not Applicable |
| **Melting point/freezing point** | 455 - 509 °F (235 - 265 °C) |
| **Initial boiling point and boiling range** | Not Determined |
| **Flash point** | 788 °F (420 °C) ASTM D1929 |
| **Evaporation rate** | Not Applicable |
| **Flammability (solid, gas)** | Not available. |
| **Upper/lower flammability or explosive limits** | |
| **Explosive limit - lower (%)** | Not available. |
| **Explosive limit - upper (%)** | Not available. |
| **Vapor pressure** | Not available. |
| **Vapor density** | Not available. |
| **Relative density (liquid)** | Not available. |
| **Solubility(ies)** | 0 % |
| **Partition coefficient (n-octanol/water)** | Not available. |

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| **Auto-ignition temperature** | 851 °F (455 °C) ASTM D1929 |
| **Decomposition temperature** | 50% at 420°C; 96% at 900°C |
| **Viscosity** | Not available. |
| **Other information** | None known. |
| **Chemical family** | Polyamide |
| **Specific gravity** | >1 |

## 10. Stability and reactivity

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| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Minimize dust generation and accumulation. Avoid heat, sparks, open flames and other ignition sources. |
| **Incompatible materials** | Strong oxidizing agents. |
| **Hazardous decomposition products** | Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. Hydrogen cyanide (hydrocyanic acid). Nitrogen oxides (NOx). Carbon oxides. Ammonia gas may be liberated at high temperatures. |

## 11. Toxicological information

**Information on likely routes of exposure**

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| **Ingestion** | Ingestion of this product may cause nausea, vomiting and diarrhea. |
| **Inhalation** | Inhalation of dusts may cause respiratory irritation. |
| **Skin contact** | Not expected to be a primary skin irritant. Particles/dust may cause mechanical irritation when in contact with the skin and can cause skin irritation with redness. |
| **Eye contact** | Particles and dusts may be mechanically irritating when in contact with eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | See information on likely routes of exposure. |

**Information on toxicological effects**

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| **Acute toxicity** | Due to this material's high molecular weight, this material is considered to be of little to no toxicological concern. |
| **Skin corrosion/irritation** | Based on available data, the classification criteria are not met. |
| **Serious eye damage/eye irritation** | Based on available data, the classification criteria are not met. |
| **Respiratory sensitization** | Based on available data, the classification criteria are not met. |
| **Skin sensitization** | Based on available data, the classification criteria are not met. |
| **Germ cell mutagenicity** | Based on available data, the classification criteria are not met. |
| **Carcinogenicity** | Based on available data, the classification criteria are not met.<br><br>Carbon Black (airborne particles of respirable size) is a listed carcinogen by IARC (2B). Carbon Black used in production of this material is encapsulated and not believed to have the potential to become of respirable size. |
| **Reproductive toxicity** | Based on available data, the classification criteria are not met. |
| **Specific target organ toxicity - single exposure** | Based on available data, the classification criteria are not met. |
| **Specific target organ toxicity - repeated exposure** | Based on available data, the classification criteria are not met. |
| **Aspiration hazard** | Based on available data, the classification criteria are not met. |
| **Chronic effects** | Occupational interstitial lung disease (ILD) has been observed at very high dust levels. |
| **Further information** | Dust causes irritation to the eyes, skin and mucous membranes and may lead to toxic lung edemas. |

## 12. Ecological information

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| **Ecotoxicity** | This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. |
| **Persistence and degradability** | No data is available on the degradability of this product. |
| **Bioaccumulative potential** | Bioaccumulation is unlikely. |

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| **Mobility in soil** | No data available. |
| **Other adverse effects** | None known. |

## 13. Disposal considerations

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| **Disposal instructions** | Dispose in accordance with all applicable regulations. Allow molten resin to solidify before disposal. |
| **Waste from residues / unused products** | Dispose in accordance with all applicable regulations. |
| **Contaminated packaging** | Empty containers should be taken to an approved waste handling site for recycling or disposal. |

## 14. Transport information

**DOT**

Not regulated as a hazardous material by DOT.

**IATA**

Not regulated as a dangerous good.

**IMDG**

Not regulated as a dangerous good.

## 15. Regulatory information

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| **US federal regulations** | All components are on the U.S. EPA TSCA Inventory List or are not required to be listed on the inventory.<br><br>This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |

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

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| **Hazard categories** | Immediate Hazard - No<br>Delayed Hazard - No<br>Fire Hazard - Yes<br>Pressure Hazard - No<br>Reactivity Hazard - No |
| **SARA 302 Extremely hazardous substance** | No |
| **SARA 311/312 Hazardous chemical** | Yes |

## 16. Other information, including date of preparation or last revision

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| **Issue date** | May-29-2015 |
| **Revision date** | 29-May-2015 |
| **Version #** | 1.0 |
| **Further information** | Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling. |
| **HMIS® ratings** | Health: 0<br>Flammability: 1<br>Physical hazard: 0 |
| **NFPA ratings** | Health: 0<br>Flammability: 1<br>Instability: 0 |
| **List of abbreviations** | Defined as necessary above. |
| **References** | Internal assessments, testing and research. |

**Disclaimer**

This Safety Data Sheet ("SDS") 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 SDS 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 SDS 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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This disclaimer shall be effective to the extent allowed by law. Should any provision be deemed to be ineffective or unenforceable, that provision shall be deemed severed from the disclaimer and the remaining provisions shall continue to have full force and effect.

**Revision Information**

This document has undergone significant changes and should be reviewed in its entirety.

# TORZEN™ U4630HSL BKB01 PA66 RESIN

Before using, read the INVISTA Safety Data Sheet (SDS) for this product.

## WARNING

**Hazard Statement:** If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air.

**INVISTA S.à r.l.**
**INVISTA Building**
**4123 East 37th Street North**
**Wichita, KS 67220**

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