

SAFETY DATA SHEET		
<b>TECHNYL 1021ST BRIGHT</b>		
Revision: 2.00 KR ( EN )	Issuing date: 16.04.2014	

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name : TECHNYL 1021ST BRIGHT

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses of the Substance/Mixture : Specific use(s): Manufacture of articles by injection and extrusion

Uses advised against : Not permitted in toys or part of toys, Medical devices, Do not use where contact with food or drinking water is possible.

### 1.3 Details of the supplier of the safety data sheet

Company : Solvay Chemicals Korea Co., Ltd.  
4F Poonglim Bldg., 124, Teheran-ro, Gangnam-gu, Seoul,  
135-784, Korea  
Tel. : +82 2 2186 2500(MAIN), +82 2 2186 2633 (NOVECARE),  
+82 2 801 0697(EP), +82 52 231 0887(PI)

E-mail address : information.fds@solvay.com

### 1.4 Emergency telephone number

MULTI LINGUAL EMERGENCY NUMBER (24/7)  
Europe/America/Africa : +44 1235 239 670 (UK)  
Middle East/Africa speaking Arabic : +44 1235 239 671 (UK)  
Asia Pacific : +65 3158 1074 (Singapore)  
China : +86 10 5100 3039 (Beijing)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Standards for classification and labeling of chemical substances and material safety data sheet (Ministry of Employment and Labor Public Notice No. 2013-37)

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting effects.

### 2.2 Label elements

Standards for classification and labeling of chemical substances and material safety data sheet (Ministry of Employment and Labor Public Notice No. 2013-37)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **General:**  
None  
**Prevention:**  
P273 Avoid release to the environment.  
**Response:**  
None  
**Storage:**  
None  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste

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disposal plant.

Additional Labeling: : The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 24.75 %  
The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 24.75 %

**2.3 Other hazards which do not result in classification**

On thermal decomposition (pyrolysis) releases:  
toxic gases

This GHS classification is referred from MoL Public Notice No 2013-37

**SECTION 3: Composition/information on ingredients**

**3.1 Substance**

Not applicable, this product is a mixture.

**3.2 Mixture**

Chemical nature : Product based on polyamide 6 (CAS: 25038-54-4)

**Information on Components and Impurities**

Chemical Name	CAS-No.	Identification number	GHS Classification	Concentration [%]
zinc	7440-66-6	<u>KECI Number:</u> KE-35518	Pyrophoric solids , Category 1 ; H250 Substances and mixtures, which in contact with water, emit flammable gases , Category 1 ; H260 Acute aquatic toxicity , Category 1 ; H400 Chronic aquatic toxicity , Category 1 ; H410	>= 1 - < 5

**For the full text of the H-Statements mentioned in this Section, see Section 16.**

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#### SECTION 4: First aid measures

##### 4.1 Description of first aid measures

- General advice : Show this safety data sheet to the doctor in attendance.  
First aider needs to protect himself.
- If inhaled : If breathed in, move person into fresh air.  
Move to fresh air.  
If symptoms persist, call a physician.
- Skin contact : Cool skin rapidly with cold water after contact with molten polymer.  
Do not peel solidified product off the skin.  
Consult a physician if necessary.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Seek medical advice.
- Ingestion : Do NOT induce vomiting.  
Rinse mouth with water.  
Consult a physician if necessary.

##### 4.2 Most important symptoms and effects, both acute and delayed

no data available

##### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

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#### SECTION 5: Firefighting measures

- Flash point : >400 °C closed cup
- Auto-ignition temperature : > 450 °C
- Flammability/Explosive limit : no data available

##### 5.1 Extinguishing media

- Suitable extinguishing media : All extinguishing agents can be used.
- Unsuitable extinguishing media : None known.

##### 5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Combustible product, melts on heating.  
Risk of fire spreading due to the flow of liquid which is already alight.  
Harmful or toxic vapours are released.

##### 5.3 Advice for firefighters

- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
- Specific fire fighting methods : Cool the molten product.

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**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

no data available

**6.2 Environmental precautions**

Environmental precautions : Do not allow uncontrolled discharge of product into the environment.  
The product should not be allowed to enter drains, water courses or the soil.

**6.3 Methods and materials for containment and cleaning up**

Recovery : Sweep up and shovel.  
Additional advice : Use mechanical handling equipment.

**6.4 Reference to other sections**

no data available

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Technical measures : Ground/bond container and receiving equipment.  
Advice on safe handling and usage : Ensure all equipment is electrically grounded before beginning transfer operations.  
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
When using do not eat, drink or smoke.

**7.2 Conditions for safe storage, including any incompatibilities**

Technical Measures for storage : No special storage conditions required.

**Storage conditions**

Recommended : Protect from moisture.  
Store away from heat.  
Incompatible products : Oxidizing materials.

**Packaging Measures**

Packaging materials - Recommended : Fibreboard, Paper bags  
Packaging conditions : Paper bag lined with a plastic film., Cardboard container lined with a plastic film., Big-bag

**Storage stability**

Storage temperature : no data available

**7.3 Specific end use(s)**

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

We are not aware of any national exposure limit.

### 8.2 Exposure controls

#### Control measures

Engineering measures : Vapour extraction at source

#### Personal protective equipment

Hand protection : Wear suitable gloves.  
When handling hot material, use heat resistant gloves.

Eye protection : Safety glasses

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
When using do not eat, drink or smoke.

Protective measures : The protective equipment must be selected in accordance with current CEN standards and in cooperation with the supplier of the protective equipment.

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use.

#### Environmental exposure controls

General advice : Do not allow uncontrolled discharge of product into the environment.  
The product should not be allowed to enter drains, water courses or the soil.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : Form : pellets  
Physical state: solid  
Colour: white

Odour : none to very slight

Odour Threshold : no data available

pH : no data available

Melting point/range : 210 - 230 °C

Flash point : > 400 °C closed cup

Evaporation rate (Butylacetate = 1) : no data available

Flammability (solid, gas) : no data available

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Flammability (liquids)	:	no data available
Flammability/Explosive limit	:	no data available
Auto-ignition temperature	:	> 450 °C
Vapour pressure	:	no data available
Vapour density	:	no data available
Density	:	no data available
Solubility	:	Water solubility : practically insoluble  Solubility in other solvents: common organic solvents : insoluble
Partition coefficient: n-octanol/water	:	no data available
Thermal decomposition	:	> 300 °C
Viscosity	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

**9.2 Other information**

no data available

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

no data available

**10.2 Chemical stability**

Chemical stability : Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

no data available

**10.4 Conditions to avoid**

Conditions to avoid : No dangerous reaction known under conditions of normal use.

**10.5 Incompatible materials**

no data available

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### **10.6 Hazardous decomposition products**

Decomposition products : On combustion or on thermal decomposition (pyrolysis) releases:  
highly toxic gases.  
(Carbon oxides (CO + CO<sub>2</sub>)).  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (hydrocyanic acid)

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## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

Acute oral toxicity : According to the data on the components  
Not classified as harmful if swallowed  
According to the classification criteria for mixtures.

Acute inhalation toxicity : According to the data on the components  
Not classified as harmful by inhalation  
According to the classification criteria for mixtures.

Acute dermal toxicity : According to the data on the components  
Not classified as harmful by contact with skin  
According to the classification criteria for mixtures.

Acute toxicity (other routes of administration) : no data available

#### **Skin corrosion/irritation**

Skin irritation : no data available

#### **Serious eye damage/eye irritation**

Eye irritation : no data available

#### **Respiratory or skin sensitisation**

Sensitisation : According to the data on the components  
Not classified as sensitising by skin contact  
According to the classification criteria for mixtures.

#### **Mutagenicity**

Genotoxicity in vitro : No information available.

Genotoxicity in vivo : No information available.

#### **Carcinogenicity**

Carcinogenicity : no data available

#### **Toxicity for reproduction and development**

Toxicity to reproduction/Fertility : no data available

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Developmental Toxicity/Teratogenicity : no data available

**STOT**

STOT - single exposure : no data available

STOT - repeated exposure : no data available

**Aspiration toxicity**

Aspiration toxicity : no data available

**SECTION 12: Ecological information**

**12.1 Toxicity**

no data available

**12.2 Persistence and degradability**

**Biodegradability**

Biodegradability : Primary biodegradation  
Not biodegradable.  
According to the data on the components  
internal evaluation

**12.3 Bioaccumulative potential**

Bioconcentration factor (BCF) : Not bioaccumulable.  
internal evaluation

**12.4 Mobility in soil**

Known distribution to environmental compartments : Ultimate destination of the product : Soil  
Ultimate destination of the product : Sediment

**12.5 Results of PBT and vPvB assessment**

no data available

**12.6 Other adverse effects**

Environment assessment : According to the data on the components  
Not classified as Dangerous for the Environment, according to EC criteria

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**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product Disposal**

Advice on Disposal : Dispose of as hazardous waste in compliance with local and national regulations.  
 Recycle the material as far as possible.  
 If recycling is not practicable, dispose of in compliance with local regulations.

**Advice on cleaning and disposal of packaging**

Other data : Dispose of in accordance with local regulations.

**SECTION 14: Transport information**

**KR\_DG**

Not Regulated

**ADR**

Not Regulated

**RID**

Not Regulated

**IMDG**

Not Regulated

**IATA**

Not Regulated

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Industrial Safety and Health Act**

**Harmful Substances Prohibited from Manufacturing**

Not relevant

**Harmful Substances Required Permission for Manufacture**

Not relevant

**Carcinogenic Substances**

Not relevant

**Controlled Hazardous Substances**

Chemical Name	CAS-No.	Threshold limits
Zinc	7440-66-6	>= 1

**Controlled Substances Subject to Environment Monitoring**

Not relevant

**Controlled Substances Subject to Health Examination**

Not relevant

Please refer to Chapter 8 and 13 for the OEL and disposal

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**Information according to TCCA and other chemical management regulations**

**Toxic Chemicals**

Not relevant

**Observational chemicals**

Not relevant

**Restricted Chemicals**

Not relevant

**Prohibited Chemicals**

Not relevant

**Toxic Release Inventory**

Chemical Name	CAS-No.	Group	Threshold limits
zinc	7440-66-6	Group 2	>= 1

**Korea. Accident precaution chemicals**

Not relevant

**Safety Control of Dangerous Substances Act**

Safety Control of Dangerous Substances Act : Not Applicable to Dangerous Materials

**Waste Management Law**

Industrial waste

Follow article 13 of the act to dispose the product waste

**SECTION 16: Other information**

**Full text of H-Statements**

H250	Catches fire spontaneously if exposed to air.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Full text of P-Statements referred to under section 2.**

P273	Avoid release to the environment.
P501	Dispose of contents/ container to an approved waste disposal plant.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in an other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.