

SAFETY DATA SHEET		
TECHNYL 1021GF6 BLACK 0179		
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 1021GF6 BLACK 0179

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)

Not a hazardous product according to Globally harmonized System (GHS)

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)

Not a hazardous product according to Globally harmonized System (GHS)

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

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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 [%]
glass, oxide, chemicals	65997-17-3	<u>KECI Number:</u> KE-17630	not classified	>= 30 - < 40
potassium iodide	7681-11-0	<u>KECI Number:</u> KE-29149	Skin irritation , Category 2 ; H315 Eye irritation , Category 2 ; H319 Chronic aquatic toxicity , Category 2 ; H411	>= 0.1 - < 0.3

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

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

SECTION 5: Firefighting measures

Flash point : >400 °C closed cup

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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.

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.

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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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace foreign Control Parameters

Components	Value type	Value	Basis
glass, oxide, chemicals	TWA	5 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
Form of exposure : Inhalable fraction Upper Respiratory Tract irritation, Not classifiable as a human carcinogen			
glass, oxide, chemicals	TWA	1fibre/cm ³	USA. ACGIH Threshold Limit Values (TLV)
Form of exposure : fibres Upper Respiratory Tract irritation, Respirable fibers:length > 5 µm; aspect ratio >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination., Not classifiable as a human carcinogen			
glass, oxide, chemicals	TWA	1fibre/cm ³	USA. ACGIH Threshold Limit Values (TLV)

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		Form of exposure : fibres Respirable fibers:length > 5 µm; aspect ratio >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination., Confirmed animal carcinogen with unknown relevance to humans	
potassium iodide	TWA	0.01 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Form of exposure : Inhalable fraction and vapor Upper Respiratory Tract irritation, Hypothyroidism, Not classifiable as a human carcinogen, varies	

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

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

Odour : none to very slight

Odour Threshold : no data available

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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
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

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

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10.4 Conditions to avoid

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

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

Decomposition products : On combustion or on thermal decomposition (pyrolysis) releases:
highly toxic gases.
(Carbon oxides (CO + CO₂)).
Nitrogen oxides (NO_x)
Hydrogen cyanide (hydrocyanic acid)

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

glass, oxide, chemicals : 4 h - rabbit
No skin irritation
Method: OECD Test Guideline 404
By analogy
Information given is based on data obtained from similar substances.
Unpublished reports

potassium iodide : Humans
Skin irritation
Published data
Unpublished reports

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Serious eye damage/eye irritation

Eye irritation
 glass, oxide, chemicals : Humans
 No eye irritation
 By analogy
 Information given is based on data obtained from similar substances.
 Published data

potassium iodide : Humans
 Eye irritation
 Published data
 Unpublished reports

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
 glass, oxide, chemicals : No respirable material
 No systemic effect expected

Toxicity for reproduction and development

Toxicity to reproduction/Fertility : no data available
 Developmental Toxicity/Teratogenicity : no data available

STOT

STOT - single exposure
 glass, oxide, chemicals : Toxicology Assessment:
 The substance or mixture is not classified as specific target organ toxicant,
 single exposure.

STOT - repeated exposure
 glass, oxide, chemicals : No respirable material
 No systemic effect expected

Aspiration toxicity

Aspiration toxicity : no data available

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish

- | | | |
|-------------------------|---|---|
| glass, oxide, chemicals | : | LC50 - 96 h : > 1,000 mg/l - Danio rerio (zebra fish)
Method: OECD Test Guideline 203
Unpublished reports |
| potassium iodide | : | LC50 - 96 h : 896 mg/l - Oncorhynchus mykiss (rainbow trout)
Published data
Unpublished reports |

Acute toxicity to daphnia and other aquatic invertebrates.

- | | | |
|-------------------------|---|---|
| glass, oxide, chemicals | : | EC50 - 72 h : > 1,000 mg/l - Daphnia magna (Water flea)
Method: OECD Test Guideline 202
Unpublished reports |
| potassium iodide | : | EC50 - 48 h : 7.5 mg/l - Daphnia magna (Water flea)
Published data
Unpublished reports |

Toxicity to aquatic plants

- | | | |
|-------------------------|---|---|
| glass, oxide, chemicals | : | EC50 - 72 h : > 1,000 mg/l - Pseudokirchneriella subcapitata
Method: OECD Test Guideline 201
Growth rate
Unpublished reports |
| | : | NOEC - 72 h : > 1,000 mg/l - Pseudokirchneriella subcapitata
Method: OECD Test Guideline 201
Growth rate
Unpublished reports |

Chronic toxicity to fish

- | | | |
|------------------|---|--|
| potassium iodide | : | NOEC: 12.5 mg/l - 90 Days - Oncorhynchus mykiss (rainbow trout)
Published data
Unpublished reports |
|------------------|---|--|

Ecotoxicity assessment

Acute aquatic toxicity

- | | | |
|-------------------------|---|---|
| glass, oxide, chemicals | : | The product does not have any known adverse effects on the aquatic organisms tested |
| potassium iodide | : | Toxic to aquatic organisms. |

12.2 Persistence and degradability

Biodegradability

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

Stability

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Stability in water
glass, oxide, chemicals : Not applicable insoluble product

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

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

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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

Not relevant

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

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

Not relevant

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

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H411

Toxic to aquatic life with long lasting effects.

