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

1.1 Product identifier

- Trade name TECHNYL 2210HS BLACK

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

Uses of the Substance/Mixture

- 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 (Shanghai) Engineering Plastic Co., Ltd
No. 3966 Jindu Road, Xinzhuang Industrial Zone Shanghai 201108 China
Tel : +86 21 54 83 17 62
Fax : +86 21 54 42 71 07

E-mail address

manager.sds@solvay.com

1.4 Emergency telephone number

+86 512 8090 3042 [CareChem 24]
China (Domestic Only): +86 532 8388 9090 (Qingdao)
MULTI LINGUAL EMERGENCY NUMBER (24/7)
Europe/Latin America/Africa : +44 1235 239 670 (UK)
Middle East/Africa speaking Arabic : +44 1235 239 671 (UK)
Asia Pacific : +65 3158 1074 (Singapore)
China : +86 512 8090 3042
North America : 800 424 9300

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification and Labeling: Follow GB 13690, GB 15258 and GB 30000.2 to GB 30000.29 (GHS 2011)

- Not classified as hazardous product under the regulation above.

2.2 Label elements

GHS Classification and Labeling: Follow GB 13690, GB 15258 and GB 30000.2 to GB 30000.29 (GHS 2011)

- Not required to be labelled under the local regulation including regulation above.

2.3 Other hazards which do not result in classification

- On thermal decomposition (pyrolysis) releases:
- toxic gases

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 6.6 (CAS: 32131-17-2)

Information on Components and Impurities

Chemical Name	CAS-No.	Identification number	GHS Classification	Concentration [%]
Poly(ethene)	9002-88-4	Not applicable	Not classified	>= 1 - < 5
Carbon black	1333-86-4	Not applicable	Not classified	>= 0.3 - < 0.5
potassium iodide	7681-11-0	Not applicable	Acute toxicity, Category 5 ; H303 Skin irritation, Category 2 ; H315 Eye irritation, Category 2A ; H319 Specific target organ toxicity - repeated exposure, Category 1 ; H372 (Thyroid) Acute aquatic toxicity, Category 2 ; H401 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.

In case of inhalation

- If breathed in, move person into fresh air.
- If symptoms persist, call a physician.

In case of 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.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Seek medical advice.

In case of 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

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

- 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

- 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

- Ground/bond container and receiving equipment.

- 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/Storage conditions

- No special storage conditions required.

- Protect from moisture.
- Store away from heat.

- Keep away from: Oxidizing materials.

Packaging material

Suitable material
- Fibreboard
- Paper bags

Remarks
- Paper bag lined with a plastic film.
- Cardboard container lined with a plastic film.
- Big-bag

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with national occupational exposure limits

Components	Value type	Value	Basis
Poly(ethene)	PC-TWA	5 mg/m3	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
	Form of exposure : Total dust		
Carbon black	PC-TWA	4 mg/m3	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
	Form of exposure : Total dust		

Components with other occupational exposure limits

Components	Value type	Value	Basis
Carbon black	TWA	3 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Form of exposure : Inhalable fraction		
potassium iodide	TWA	0.01 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Form of exposure : Inhalable fraction and vapor Expressed as :Iodine		

8.2 Exposure controls

Control measures

Engineering measures
- Vapour extraction at source

Individual protection measures

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

Environmental exposure controls
- 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	no data available
Odour Threshold	no data available
pH	no data available
Melting point/freezing point	Melting point/range: 255 - 265 °C
Initial boiling point and boiling range	no data available
Flash point	350 °C
Evaporation rate (Butylacetate = 1)	no data available
Flammability (solid, gas)	The product itself does not burn, but it is slightly oxidizing (active oxygen content ca. 2%).
Flammability/Explosive limit	no data available
Auto-ignition temperature	> 450 °C
Vapour pressure	no data available
Vapour density	no data available

Density	
Relative density	1.37
Solubility	Water solubility: insoluble Solubility in other solvents: common organic solvents : insoluble
Partition coefficient: n-octanol/water	no data available
Decomposition temperature	> 350 °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

- Stable under normal conditions.

10.3 Possibility of hazardous reactions

- no data available

10.4 Conditions to avoid

- No dangerous reaction known under conditions of normal use.

10.5 Incompatible materials

- no data available

10.6 Hazardous decomposition products

- On combustion or on thermal decomposition (pyrolysis) releases:
- highly toxic gases.
- (Carbon oxides (CO + CO2)).
- Nitrogen oxides (NOx)
- 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

Poly(ethene)	No skin irritation Unpublished reports Published data

Skin corrosion/irritation

Carbon black	Rabbit No skin irritation Unpublished reports

Skin corrosion/irritation

potassium iodide	By analogy
	Rabbit Irritating to skin. Method: Draize Test Published data

Serious eye damage/eye irritation

Carbon black	No eye irritation Unpublished reports
potassium iodide	Rabbit irritating Published data

Respiratory or skin 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

Carbon black	Not classifiable as a human carcinogen. Dust causes lung tumours in rats. Lung tumours observed in rat following long-term inhalation exposure to poorly soluble particles of low toxicity are the result of a species-specific mechanism known as “lung overload”. The formation of tumours is not observed in other species under similar exposure conditions and is considered not predictive of the effects in humans. Note: IARC Classification: Group 2B
potassium iodide	Rat drinking water Rat drinking water Animal tests with high doses have shown a tumour promoting effect The product is not considered to be carcinogenic. Published data

Toxicity for reproduction and development

Toxicity to reproduction/Fertility

potassium iodide	The product is not considered to affect fertility.

Developmental Toxicity/Teratogenicity

Carbon black	Rat , female Application Route: Inhalation Method: OECD Test Guideline 414 Did not show teratogenic effects in animal experiments. Rabbit , female Application Route: Inhalation Method: OECD Test Guideline 414 Did not show teratogenic effects in animal experiments.
potassium iodide	Rat , male and female NOAEL teratogenicity: 1 ppm(m) NOAEL maternal: 1 ppm(m) The product is not considered to be toxic for development. Unpublished reports

STOT

STOT - single exposure

Carbon black	The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria.
potassium iodide	The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria.

STOT - repeated exposure

Carbon black	The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria.
potassium iodide	Exposure routes: Ingestion Target Organs: Thyroid The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1 according to GHS criteria.
Carbon black	Oral 2 y - Mouse , female NOAEL: 137 mg/kg bw/day in food Published data Inhalation 90 d - Rat , males NOAEC: 0.0011 mg/l Aerosol Inhalation 90 d - Rat , females NOAEC: 0.001 mg/l Aerosol Dermal 1 y - Rat , male NOAEL: 20 % Published data
potassium iodide	By analogy Oral - Rat NOAEL: 10 mg/kg Method: OECD Test Guideline 422 Unpublished reports By analogy Oral - Rat NOAEL: 3 mg/l Target Organs: Thyroid Method: OECD Test Guideline 408 Published data

CMR effects

Carcinogenicity

Carbon black	Not classified as a carcinogen according to GHS criteria: the mechanism or mode of action of tumour formation is considered not relevant for humans.

Aspiration toxicity no data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	The mixture is considered not hazardous to fish as analytical monitoring data show that components hazardous for the environment are not released in quantities sufficient to exert adverse acute effects on fish. By analogy No toxicity at the limit of solubility Unpublished internal reports Expert judgement
Acute toxicity to daphnia and other aquatic invertebrates.	By analogy The mixture is considered not hazardous to aquatic invertebrates as analytical monitoring data show that components hazardous for the environment are not released in quantities sufficient to exert adverse acute effects on aquatic invertebrates. No toxicity at the limit of solubility Unpublished internal reports Expert judgement
Toxicity to aquatic plants	By analogy The mixture is considered not hazardous to aquatic plants as analytical monitoring data show that components hazardous for the environment are not released in quantities sufficient to exert adverse acute effects on aquatic plants. No toxicity at the limit of solubility Unpublished internal reports Expert judgement
Toxicity to microorganisms	
Carbon black	EC50 - 3 h : > 800 mg/l - activated sludge Unpublished reports
potassium iodide	EC50 - 24 h : > 147.6 mg/l - Bacteria Growth inhibition Published data
Chronic toxicity to fish	
potassium iodide	NOEC: > 12.5 mg/l - 90 Days - Oncorhynchus mykiss (rainbow trout) Published data

Terrestrial Compartment

Toxicity to soil dwelling organisms	
Carbon black	This product does not have any known adverse effect on the soil organisms tested.

12.2 Persistence and degradability

Abiotic degradation

Stability in water	
potassium iodide	Not applicable,

Biodegradation

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

potassium iodide	Not applicable (inorganic substance)

12.6 Other adverse effects	no data available

Ecotoxicity assessment

Acute aquatic toxicity	No toxicity at the limit of solubility
Chronic aquatic toxicity	Not classified due to data which are conclusive although insufficient for classification.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Dispose of in accordance with local regulations.

Advice on cleaning and disposal of packaging

- Dispose of in accordance with local regulations.

SECTION 14: Transport information

CN_DG
not regulated

ADR
not regulated

RID
not regulated

IMDG
not regulated

IATA
not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

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

Following last version of regulations are applicable for the chemical classification, SDS and label:

- General Rule for classification and hazard communication of chemicals, GB 13690
- Series standards of Safety rules for classification, precautionary labeling and precautionary statements of chemicals, GB 30000.2~GB 30000.29
- General rules for preparation of precautionary label for chemicals, GB 15258
- Safety data sheet for chemical products—Content and order of sections, GB/T 16483

SECTION 16: Other information

Full text of H-Statements

- H303	May be harmful if swallowed.
- H315	Causes skin irritation.
- H319	Causes serious eye irritation.
- H372	Causes damage to organs through prolonged or repeated exposure.
- H401	Toxic to aquatic life.
- H411	Toxic to aquatic life with long lasting effects.

Key or legend to abbreviations and acronyms used in the safety data sheet

- PC-TWA	Permissible concentration - time weighted average
- TWA	8-hour, time-weighted average

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 any 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.