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

1.1 Product identifier

Trade name : TECHNYL A 50H1 NATURAL

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 (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 : 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)

China (Domestic Only): +86 532 8388 9090 (Qingdao)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Specific target organ toxicity - repeated exposure, Category 2, Kidney	H373: May cause damage to organs through prolonged or repeated exposure if swallowed.

2.2 Label elements

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Hazardous products which must be listed on the label:

- 37640-57-6 1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)

Pictogram :

Signal word : Warning

Hazard statements : H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary statements :

General:
None
Prevention:
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Response:
P314 Get medical advice/ attention if you feel unwell.
Storage:
None
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

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 [%]
1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	37640-57-6	not applicable	Specific target organ toxicity - repeated exposure , Category 2 ; H373	>= 5 - < 10
Talc (Mg3H2(SiO3)4)	14807-96-6	not applicable	not classified	>= 0.1 - < 0.3
calcium distearate	1592-23-0	not applicable	not classified	>= 0.1 - < 0.3
N,N'-ethylenedi(stearamide)	110-30-5	not applicable	not classified	>= 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
Molten form

Auto-ignition temperature	:	> 450 °C
Flammability/Explosive limit	:	Lower flammability/explosion limit : not applicable, solid Upper flammability/explosion limit : not applicable, solid

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 fire fighting 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.

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 control parameters

Components	Value type	Value	Basis
Talc (Mg3H2(SiO3)4)	PC-TWA	1 mg/m3	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
	Form of exposure : Respirable		
Talc (Mg3H2(SiO3)4)	PC-TWA	3 mg/m3	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
	Form of exposure : Total		

Components with workplace foreign Control Parameters

Components	Value type	Value	Basis
Talc (Mg3H2(SiO3)4)	TWA	0.1fibre/cm3	USA. ACGIH Threshold Limit Values (TLV)

	Pneumoconiosis, Lung cancer, Mesothelioma, 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 illuminition., Should not exceed 2 mg/m3 respirable particulate mass., Confirmed human carcinogen		
Talc (Mg3H2(SiO3)4)	TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Form of exposure : Respirable fraction Lower Respiratory Tract irritation, The value is for particulate matter containing no asbestos and < 1% crystalline silica, Not classifiable as a human carcinogen		
calcium distearate	TWA	10 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Eye, skin, & Upper Respiratory Tract irritation, Does not include stearates of toxic metals., Not classifiable as a human carcinogen		
N,N'-ethylenedi(stearamide)	TWA	10 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Eye, skin, & Upper Respiratory Tract irritation, Does not include stearates of toxic metals., Not classifiable as a human carcinogen		

8.2 Exposure controls

Control measures

Engineering measures : Vapour extraction at source

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection : When handling hot material, use heat resistant gloves.
For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses with side-shields

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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 : granules Physical state: solid Colour: natural colour
Odour	:	none to very slight
Odour Threshold	:	no data available
pH	:	not applicable
Melting point/range	:	250 - 270 °C
Flash point	:	> 400 °C closed cup Molten form
Evaporation rate (Butylacetate = 1)	:	no data available
Flammability (solid, gas)	:	no data available
Flammability (liquids)	:	no data available
Flammability/Explosive limit	:	Lower flammability/explosion limit: not applicable, solid Upper flammability/explosion limit: not applicable, solid
Auto-ignition temperature	:	> 450 °C Relative self-ignition temperature for solids Method: EU Test Guideline A16
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	:	> 350 °C
Viscosity	:	Viscosity, dynamic : not applicable, solid Viscosity, kinematic : not applicable, solid
Explosive properties	:	no data available
Oxidizing properties	:	Not considered as oxidizing

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

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 (NOx).
Hydrogen cyanide (hydrocyanic acid)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : Not classified as harmful if swallowed
According to the classification criteria for mixtures.
internal evaluation

Acute inhalation toxicity

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1) : LC0 (dust/mist) : > 2.238 mg/l - rat
Published data

LC50 - 2 h (dust/mist) : 1.237 mg/l - mouse
Published data

Talc (Mg3H2(SiO3)4) : LC50 - 4 h (dust/mist) : 22 mg/l - rat
Published data
Unpublished reports

Not classified as harmful by inhalation

calcium distearate	:	LC0 - 4 h (dust/mist) : 1.241 mg/l Published data Unpublished reports
N,N'-ethylenedi(stearamide)	:	LC50 - 1 h (dust/mist) : > 6.3 mg/l - rat Published data Unpublished reports LC50 - 4 h (dust/mist) : > 1.575 mg/l - rat Method: Converted acute toxicity point estimate Published data Unpublished reports
Acute dermal toxicity	:	Not classified as harmful by contact with skin According to the classification criteria for mixtures. internal evaluation
Acute toxicity (other routes of administration)	:	no data available

Skin corrosion/irritation

Skin irritation

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	4 h - rabbit No skin irritation Method: OECD Test Guideline 404 Unpublished reports
Talc (Mg3H2(SiO3)4)	:	No skin irritation Published data Unpublished reports
calcium distearate	:	rabbit Moderate skin irritation Published data Unpublished reports
N,N'-ethylenedi(stearamide)	:	rabbit No skin irritation Published data Unpublished reports

Serious eye damage/eye irritation

Eye irritation

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	rabbit No eye irritation Method: OECD Test Guideline 405 Unpublished reports
Talc (Mg3H2(SiO3)4)	:	No eye irritation Published data Unpublished reports
N,N'-ethylenedi(stearamide)	:	rabbit slight irritation Published data Unpublished reports

Respiratory or skin sensitization

Sensitisation	:	Not classified as sensitising by skin contact According to the classification criteria for mixtures. internal evaluation

Mutagenicity

Genotoxicity in vitro	:	No information available.
Genotoxicity in vivo	:	No information available.

Carcinogenicity

Carcinogenicity

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	mouse , for males and females Oral By analogy in food Animal testing did not show any carcinogenic effects. Published data rat , for males and females Oral By analogy No carcinogenic effects have been observed in food Published data
Talc (Mg3H2(SiO3)4)	:	rat Oral Animal testing did not show any carcinogenic effects. Published data Unpublished reports rat , male and female Inhalation Animal studies have shown tumour promotion effects Published data Unpublished reports mouse , male and female Inhalation Animal testing did not show any carcinogenic effects. Published data Unpublished reports Not classifiable as a human carcinogen. Published data
calcium distearate	:	mouse Animal testing did not show any carcinogenic effects. Published data Unpublished reports Not classifiable as a human carcinogen. Published data Unpublished reports
N,N'-ethylenedi(stearamide)	:	rat Oral Animal testing did not show any carcinogenic effects. Published data Unpublished reports

Toxicity for reproduction and development

Toxicity to reproduction/Fertility

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1) :

rat , for males and females
drinking water
Method: OECD Test Guideline 422
Gavage
By analogy
no impairment of fertility has been observed
No effect observed on development
No toxicity to reproduction
Unpublished reports

rat , for males and females
Oral
NOAEL parent: 5,375 mg/l
NOAEL F1: 5,375 mg/l

Developmental Toxicity/Teratogenicity

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1) :

rat , male
Application Route: Oral
Method: OECD Test Guideline 414
in food
By analogy
No effect observed on development
No toxicity to reproduction
Unpublished reports

Talc (Mg3H2(SiO3)4) :

rat
Did not show teratogenic effects in animal experiments.
Published data
Unpublished reports

mouse
Did not show teratogenic effects in animal experiments.
Published data
Unpublished reports

hamster
Did not show teratogenic effects in animal experiments.
Published data
Unpublished reports

rabbit
Did not show teratogenic effects in animal experiments.
Published data
Unpublished reports

STOT

STOT - single exposure

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	Toxicology Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
Talc (Mg3H2(SiO3)4)	Toxicology Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	Exposure routes: Ingestion Target Organs: Kidney Toxicology Assessment: May cause damage to organs through prolonged or repeated exposure.
Talc (Mg3H2(SiO3)4)	:	Toxicology Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
N,N'-ethylenedi(stearamide)	:	Toxicology Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	Oral 7 d - rat , male LOEL: 66 mg/kg bw/day Oral 7 d - rat , male NOEL: 20 mg/kg bw/day in food Kidney injury may occur. Unpublished reports Oral 91 d - rat , female NOAEL: 600 mg/kg bw/day By analogy Oral 91 d - rat , female LOAEL: 900 mg/kg bw/day By analogy Oral 91 d - rat , male LOAEL: 75 mg/kg bw/day By analogy in food Published data Oral 91 d - mouse , for males and females 6000 ppm By analogy in food Published data Inhalation - rat LOAEL: 0.00115 mg/l Kidney injury may occur. Published data

N,N'-ethylenedi(stearamide)	:	Oral 28 Days - rat , for males and females NOEL: 1000 mg/kg/day Published data Unpublished reports

Aspiration toxicity

Aspiration toxicity	:	no data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	LC50 - 96 h : > 10,000 mg/l - Danio rerio (zebra fish) Method: OECD Test Guideline 203 Unpublished reports
Talc ($Mg_3H_2(SiO_3)_4$)	:	LC50 - 24 h : > 100 mg/l - Danio rerio (zebra fish) Published data Unpublished reports
N,N'-ethylenedi(stearamide)	:	LC50 - 48 h : > 300 mg/l - Fish Published data Unpublished reports

Acute toxicity to daphnia and other aquatic invertebrates.

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	By analogy LC50 - 48 h : > 1,000 mg/l - Daphnia magna (Water flea) Unpublished reports

Toxicity to aquatic plants

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	By analogy EC50 - 72 h : > 5,000 mg/l - Navicula pelliculosa Method: OECD Test Guideline 201 Growth rate Unpublished reports By analogy NOEC - 72 h : 1,250 mg/l - Navicula pelliculosa Method: OECD Test Guideline 201 Growth rate Unpublished reports

Toxicity to microorganisms

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	EC50 - 3 h : > 10,000 mg/l - activated sludge Unpublished reports NOEC - 3 h : 10,000 mg/l - activated sludge Unpublished reports

Chronic toxicity to fish

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1) : By analogy

NOEC: 1,500 mg/l - 28 d - Oncorhynchus mykiss (rainbow trout)
Unpublished reports

Chronic toxicity to daphnia and other aquatic invertebrates.

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1) : By analogy

NOEC: 18 mg/l - 21 d - Daphnia magna (Water flea)
Unpublished reports

Ecotoxicity assessment

Acute aquatic toxicity : According to the data on the components
The product does not have any known adverse effects on the aquatic organisms tested

12.2 Persistence and degradability

Biodegradability

Biodegradability : Not biodegradable.
internal evaluation

Stability

Stability in water

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1) : By analogy

DT50: Half-life value : > 30 d
pH: 5.0
Temperature of hydrolysis: 25 °C

By analogy

DT50: Half-life value : > 30 d
pH: 7.0
Temperature of hydrolysis: 25 °C

By analogy

DT50: Half-life value : > 30 d
pH: 9.0
Temperature of hydrolysis: 25 °C

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

calcium distearate : Potential bioaccumulation

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

1,3,5-triazine-2,4,6(1H,3H,5H)-trione, compound with 1,3,5-triazine-2,4,6-triamine (1:1)	:	Not classified as Dangerous for the Environment
Talc ($Mg_3H_2(SiO_3)_4$)	:	Not classified as Dangerous for the Environment
calcium distearate	:	Not classified due to lack of data.
N,N'-ethylenedi(stearamide)	:	Not classified as Dangerous for the Environment

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

Advice on Disposal	:	Dispose of in accordance with local regulations.

Advice on cleaning and disposal of packaging

Other data	:	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

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

20576~GB 20602)
-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

H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

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

P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P314	Get medical advice/ attention if you feel unwell.
P501	Dispose of contents/ container to an approved waste disposal plant.

Key or legend to abbreviations and acronyms used in the safety data sheet
Exposure controls/personal protection

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 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.