CRASTIN ® Thermoplastic polyester resin

Ref. 150000000511
Version 3.1 (replaces: Version 3.0)

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This Safety Data Sheet adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

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

1.1. Product identifier

Product name	:	CRASTIN ® Thermoplastic polyester resin
Types	:	CE1064, S650FR, S660FR
Recycling code	:	ISO 11469 : >PBT-FR(17)<

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

Use of the Substance/Mixture	:	Resin for moulding and/or extrusion

1.3. Details of the supplier of the safety data sheet

Company	:	Performance Specialty Products Iberica S.L. Avda. Diagonal, 571 ES-08029 Barcelona Spain
Telephone	:	+34-98-512-4000
Telefax	:	+34-98-512-4090
E-mail address	:	sds-support@che.dupont.com

1.4. Emergency telephone number

+(44)-870-8200418 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Carcinogenicity, Category 2	H351: Suspected of causing cancer.

2.2. Label elements

The product does not need to be labelled in accordance with Article 23 of Regulation 1272/2008/EC.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
(respirable dust)
Hazardous decomposition products
Tetrahydrofuran

SECTION 3: Composition/information on ingredients

Chemical nature of the substance/mixture	:	Polybutylene terephthalate
	:	Additives
Chemical nature of the substance/mixture	:	Hazardous decomposition products
	:	Tetrahydrofuran

3.1. Substances
Not applicable

3.2. Mixtures

Registration number	Classification according to Regulation (EU) 1272/2008 (CLP)	Concentration (% w/w)

Antimony trioxide (CAS-No.1309-64-4) (EC-No.215-175-0)

01-2119475613-35	Carc. 2; H351	>= 0 - < 6.5 %

Antimony trioxide : Note: Laboratory tests/assessments have shown that one or more components in this product is/are not bioavailable in sufficient concentrations to produce adverse effects, and therefore, do not need to be considered in the final hazard labeling of the product.

The above products are compliant to REACH registration obligations; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process (biocide uses, plant protection products), etc.

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	:	Remove from exposure, lie down. Never give anything by mouth to an unconscious person. No hazards which require special first aid measures. If a person vomits when lying on his back, place him in the recovery position.
Inhalation	:	Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Consult a physician after significant exposure.
Skin contact	:	Cool skin rapidly with cold water after contact with molten material. Do not peel polymer from the skin. Obtain medical attention.
Eye contact	:	Flush eyes with water as a precaution. Obtain medical attention.

Ingestion : No hazards which require special first aid measures. Drink water as a precaution.

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 : Carbon dioxide (CO2), Dry powder, Foam, Water

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Large molten masses may ignite spontaneously in air. Water quenching is good practice. Under conditions giving incomplete combustion, hazardous gases produced may consist of: Carbon monoxide Carbon dioxide (CO2) (see also section 10)

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear suitable protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not allow run-off from fire fighting to enter drains or water courses. Solid polymer burns only with difficulty (IEC 60695-11-10 : V0-V1-V2)

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Ventilate the area. Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water courses. Do not contaminate surface water.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Clean up promptly by sweeping or vacuum. Sweep up or vacuum up spillage and collect in suitable container for disposal.

Other information : Use mechanical handling equipment.

6.4. Reference to other sections

Not applicable

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	:	Protect from contamination. When opening containers, avoid breathing vapours that may be emanating. Open container only in well-ventilated area. Provide appropriate exhaust ventilation at dryers, machinery and at places where dust or volatiles can be generated. General precaution for all plastics and elastomers: For personal protection see section 8. In case of insufficient ventilation, wear suitable respiratory equipment. No special handling advice required.
Advice on protection against fire and explosion	:	Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).
Dust explosion class	:	no data available

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	No special storage conditions required. Keep container tightly closed in a dry and well-ventilated place. Protect from contamination.
Further information on storage conditions	:	none
Advice on common storage	:	No special restrictions on storage with other products.
Other data	:	No decomposition if stored and applied as directed.

7.3. Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

If sub-section is empty then no values are applicable. For further information on any control parameters provided, please refer to the relevant regulation.

Components with workplace control parameters

Type Form of exposure	**Control parameters** (Expressed as)	**Update**	**Regulatory basis**

Antimony trioxide (CAS-No. 1309-64-4)

Long-term exposure limit (8-hour TWA reference period)	0.5 mg/m3 (antimony)	2005-04-06	UK. EH40 WEL - Workplace Exposure Limits

Dust (inhalable and respirable fraction)

Long-term exposure limit (8-hour TWA reference period) Inhalable	10 mg/m3	2011-12-01	UK. EH40 WEL - Workplace Exposure Limits
Long-term exposure limit (8-hour TWA reference period) Respirable	4 mg/m3	2011-12-01	UK. EH40 WEL - Workplace Exposure Limits

Derived No Effect Level (DNEL)

- **Antimony trioxide**
  Type of Application (Use): Workers
  Exposure routes: Inhalation
  Health Effect: Long-term - local effects
  Value: 0.5 mg/m3

  Type of Application (Use): Workers
  Exposure routes: Skin contact
  Health Effect: Long-term - systemic effects
  Value: 281 mg/kg body weight (bw) /day

  Type of Application (Use): Consumers
  Exposure routes: Inhalation
  Health Effect: Long-term - local effects
  Value: 0.1 mg/m3

  Type of Application (Use): Consumers
  Exposure routes: Skin contact
  Health Effect: Long-term - systemic effects
  Value: 168.6 mg/kg body weight (bw) /day

  Type of Application (Use): Consumers
  Exposure routes: Ingestion
  Health Effect: Long-term - systemic effects
  Value: 168.6 mg/kg body weight (bw) /day

Predicted No Effect Concentration (PNEC)

- **Antimony trioxide**
  Value: 0.113 mg/l
  Compartment: Fresh water

  Value: 0.011 mg/l
  Compartment: Marine water

  Value: 2.55 mg/l

Compartment: Sewage treatment plants

Value: 11.2 mg/kg dry weight (d.w.)
Compartment: Fresh water sediment

Value: 2.24 mg/kg dry weight (d.w.)
Compartment: Marine sediment

Value: 37 mg/kg dry weight (d.w.)
Compartment: Soil

8.2. Exposure controls

Engineering measures	:	Tests have shown that respirable antimony trioxide dust can not be formed under regular processing conditions.
Eye protection	:	Safety glasses with side-shieldsWear tightly fitting chemical splash goggles and face shield when possibility exists for eye and face contact due to spattering or splashing of molten material.
Hand protection	:	Material: Heat insulating gloves Protective gloves (Type : Kevlar® - heat resistant, use possible until worn out)
Skin and body protection	:	If there is a potential for contact with hot/molten material wear heat resistant clothing and footwear. Regular cleaning of equipment, work area and clothing.
Protective measures	:	No special protective equipment required.
Hygiene measures	:	Wash hands before breaks and at the end of workday. General precaution for all plastics and elastomers: Do not breathe fumes evolved from hot polymer.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Half mask with a particle filter FFP2/FFP3 (EN149)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	: pellets
Colour	: various
Odour	: ether-like
Odour Threshold	: 0.31 ppm tetrahydrofuran
pH	: Not applicable
Melting point/range	: 210 - 225 °C
Boiling point/boiling range	: no data available

Flash point	: Not applicable
Self-Accelerating decomposition temperature (SADT)	: no data available
Flammability (solid, gas)	: no data available
Ignition temperature	: no data available
Thermal decomposition	: > 300 °C
Oxidizing properties	: no data available
Explosive properties	: no data available
Lower explosion limit/ Lower flammability limit	: no data available
Upper explosion limit/ upper flammability limit	: no data available
Vapour pressure	: no data available
Density	: 1.12 - 1.4 g/cm3 , Method: ISO 1183
Relative density	: no data available
Bulk density	: no data available
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Solubility in other solvents	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Relative vapour density	: no data available
Evaporation rate	: no data available

9.2. Other information

No other data to be specially mentioned.

SECTION 10: Stability and reactivity

10.1. Reactivity : no data available

10.2. Chemical stability : no data available

10.3. Possibility of hazardous reactions : None. Further information : During drying, cleaning and moulding, small amounts of hazardous gases and/or particulate matter may be released. These may irritate eyes, nose and throat. Large molten masses may give off hazardous gases. Water quenching is good practice. Stable under normal conditions.

10.4. Conditions to avoid : Avoid heating for prolonged periods above the recommended upper processing limit.

10.5. Incompatible materials : Strong acids and oxidizing agents

10.6. Hazardous decomposition products : Acrolein
Aldehydes
Antimony salts
Tetrahydrofuran
hydrogen bromide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute inhalation toxicity

- Antimony trioxide
  LC50 / 4 h Rat : > 5.52 mg/l
  Method: OECD Test Guideline 403
  Dust

Acute dermal toxicity

- Antimony trioxide
  LD50 / Rabbit : > 8,300 mg/kg

Skin irritation

- Antimony trioxide
  Rabbit
  Classification: Not classified as irritant
  Result: No skin irritation

Eye irritation

- Antimony trioxide
  Rabbit
  Classification: Not classified as irritant
  Result: No eye irritation
  Method: OECD Test Guideline 405
  slight irritation

Respiratory or skin sensitisation

- Antimony trioxide
  Guinea pig Maximisation Test
  Classification: Does not cause skin sensitisation.
  Result: Does not cause skin sensitisation.
  Method: OECD Test Guideline 406

Repeated dose toxicity

- Antimony trioxide
  Oral Rat
  NOAEL: 1,686 mg/kg
  Method: OECD Test Guideline 408
  Increased liver weight

  Inhalation Rat
  Method: OECD Test Guideline 452
  lung effects

Mutagenicity assessment

- Antimony trioxide
  Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured bacterial cells. Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.

Carcinogenicity assessment

- Antimony trioxide
  Suspected human carcinogens An increased incidence of tumours was observed in laboratory animals.

Toxicity to reproduction assessment

- Antimony trioxide
  No toxicity to reproduction Animal testing showed no reproductive toxicity.

Assessment teratogenicity

- Antimony trioxide
  Animal testing showed no developmental toxicity.

Further information

Note: Laboratory tests/assessments have shown that one or more components in this product is/are not bioavailable in sufficient concentrations to produce adverse effects, and therefore, do not need to be considered in the final hazard labeling of the product.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish

- Antimony trioxide
  LC50 / 96 h / Pimephales promelas (fathead minnow): 14.4 mg/l
  Information given is based on data obtained from similar substances.

Toxicity to aquatic plants

- Antimony trioxide
  ErC50 / 72 h / Pseudokirchneriella subcapitata (green algae): > 36.6 mg/l
  Method: OECD Test Guideline 201
  Information given is based on data obtained from similar substances.

  NOEC / 72 h / Pseudokirchneriella subcapitata (green algae): 2.11 mg/l
  Method: OECD Test Guideline 201
  Information given is based on data obtained from similar substances.

Toxicity to aquatic invertebrates

- Antimony trioxide
  LC50 / 48 h / Aquatic invertebrates: 1.77 mg/l
  Information given is based on data obtained from similar substances.

Chronic toxicity to fish

- Antimony trioxide
  NOEC / 28 d / Pimephales promelas (fathead minnow): 4.5 mg/l
  Information given is based on data obtained from similar substances.

Chronic toxicity to aquatic Invertebrates

- Antimony trioxide
  NOEC / 21 d / Daphnia magna (Water flea): 1.74 mg/l
  Method: OECD Test Guideline 211
  Information given is based on data obtained from similar substances.

12.2. Persistence and degradability

no data available

12.3. Bioaccumulative potential

Bioaccumulation

- Antimony trioxide
  Bioaccumulation is unlikely. Information given is based on data obtained from similar substances.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled, when in compliance with local regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.
European Waste Catalogue number	:	07 02 99: Wastes not otherwise specified.

SECTION 14: Transport information

ADR

14.1.	UN number:	Not applicable
14.2.	UN proper shipping name:	Not applicable
14.3.	Transport hazard class(es):	Not applicable
14.4.	Packing group:	Not applicable
14.5.	Environmental hazards:	none

14.6. Special precautions for user:
Not classified as dangerous in the meaning of transport regulations.

IATA_C

14.1.	UN number:	Not applicable
14.2.	UN proper shipping name:	Not applicable
14.3.	Transport hazard class(es):	Not applicable
14.4.	Packing group:	Not applicable
14.5.	Environmental hazards:	none

14.6. Special precautions for user:
Not classified as dangerous in the meaning of transport regulations.

IMDG

14.1.	UN number:	Not applicable
14.2.	UN proper shipping name:	Not applicable
14.3.	Transport hazard class(es):	Not applicable
14.4.	Packing group:	Not applicable
14.5.	Environmental hazards:	none

14.6. Special precautions for user:

Not classified as dangerous in the meaning of transport regulations.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals

Not applicable

Major Accident Hazard Legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Water contaminating class (Germany)

WGK 1 slightly hazardous to water

15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for this/these product(s).

SECTION 16: Other information

Full text of H-Statements referred to under section 3.

H351	Suspected of causing cancer.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-No.	Chemical Abstracts Service number
CLP	Classification, Labelling and Packaging
EbC50	Concentration at which 50% reduction of biomass is observed
EC50	Median effective concentration
EN	European Norm
EPA	Environmental Protection Agency
ErC50	Concentration at which a 50% inhibition of growth rate is observed
EyC50	Concentration at which 50 % inhibition of yield is observed
IATA_C	International Air Transport Association (Cargo)
IBC	International Bulk Chemical Code
ICAO	International Civil Aviation Organization

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ISO	International Standard Organization
IMDG	International Maritime Dangerous Goods
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides and Toxic Substances
PBT	Persistent, Bioaccumulative and Toxic
STEL	Short term exposure limit
TWA	Time Weighted Average (TWA):
vPvB	very Persistent and very Bioaccumulative

Restrictions on use
Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications and DuPont CAUTION Regarding Medical Applications.

Further information
Before use read DuPont's safety information.
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An Exposure Scenario (ES) is not required.

Note: The classification of substances listed in Annex VI to the CLP regulation are derived from assessment of the best knowledge and information available at the time of its publication or subsequent amendments.The information on components provided in sections 11 and 12 of this safety data sheet may in some cases not align with a legally binding classification on the basis of technical progress and availability of new information.

Significant change from previous version is denoted with a double bar.