

## Safety Data Sheet

Date of Revise: 2018.07.10

### Section 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

**Product Identity** PUFF DINO WATER REPELLENTfor FABRIC  
**Alternate Names** DT220

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

**Intended use** See Technical Data Sheet.

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

**Company Name** Chung Tai Sing Chemical Industry Co., Ltd.  
105 NIU PU SOUTH ROAD. HSINCHU. 300, TAIWAN  
**Telephone** 886-3-5387135  
**Fax** 886-3-5396762

#### 1.4. Emergency telephone number

**Emergencyphone #** 886-3-5387135

### Section 2. Hazard identification of the product

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Flam. aerosol 1;H222  
Pressure Gas- H280  
Skin Irrit. 2 - H315  
STOT SE 3 - H336  
Aquatic Acute 1 - H400  
Aquatic Chronic 1 - H410

#### 2.2. Label elements

##### According to Regulation (EC) No 1272/2008



**Danger**

H222 Extremely flammable aerosol.  
H280 Contains gas under pressure; may explode if heated.  
H315 Causes skin irritation.  
H336 May cause drowsiness and dizziness.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary Statements-Prevention:**

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

**Precautionary Statements-Response:**

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P321 Specific treatment (see information on this label).

P332+313 If skin irritation occurs: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

P377 Leaking gas fire - do not extinguish unless leak can be stopped safely.

P381 Eliminate all ignition sources if safe to do so.

P391 Collect spillage.

**Precautionary Statements-Storage:**

P403+235 Store in a well ventilated place. Keep cool.

P410+403 Protect from sunlight. Store in a well ventilated place.

**Precautionary Statements-Disposal:**

P501 Dispose of contents / container in accordance with local / national regulations.

See Technical Data Sheet.

**2.3. Other hazards**

This product contains no PBT/vPvB chemicals.

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**Section 3. Composition/information on ingredients****3.2. Mixtures**

If the product contains substances that present a hazard according to Regulation (EC) No. 1272/2008 [CLP/GHS] (as amended by (EU) 2015/830), they are listed below.

Ingredient/Chemical Designations	Weight %	EC No. 1272/2008 Classification*
<b>Heptane</b> CAS Number: 142-82-5 EC No. 205-563-8 Index No.: 601-008-00-2	25 - 50	Flam. Liq. 2;H225 Asp. Tox. 1;H304 Skin Irrit. 2;H315 STOT SE 3;H336 Aquatic Acute 1;H400 Aquatic Chronic 1;H410
<b>Butane</b> CAS Number: 106-97-8 EC No. 203-448-7 Index No.: 601-004-00-0	25 - 50	Flam. Gas 1;H220
<b>Propane</b> CAS Number: 74-98-6 EC No. 200-827-9	5 - 10	Flam. Gas 1;H220

<b>Index No.:</b> 601-003-00-5		
<b>Poly(tetrafluoroethene)</b> <b>CAS Number:</b> 9002-84-0 <b>EC No.</b> <b>Index No.:</b>	<b>1 - 5</b>	<b>Not Classified</b>

\*The full texts of the phrases are shown in Section 16.

## Section 4. First aid measures

### 4.1. Description of first aid measures

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation</b>	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
<b>Eye</b>	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
<b>Skin</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
<b>Ingestion</b>	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

<b>Overview</b>	EFFECTS OF OVEREXPOSURE: Overexposure may result in light-headedness, staggering gait, giddiness, and possible nausea. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. May cause eye and skin irritation. SIGNS AND SYMPTOMS OF OVEREXPOSURE: Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory, skin, and eye disorders. No available information No available information Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
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Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

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

<b>Notes to physician</b>	Treat symptomatically.
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## Section 5. Fire-fighting measures

### 5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray.

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

Hazardous decomposition: Oxides of Carbon

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

Avoid breathing dust / fume / gas / mist / vapors / spray.

### 5.3. Advice for fire-fighters

Put on appropriate personal protective equipment (see section 8).

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## Section 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3. Methods and material for containment and cleaning up

Small Spill: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Large Spill: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for late disposal.

### 6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

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## Section 7. Handling and storage

### 7.1. Precautions for safe handling

Store in cool, dry ventilated area. Avoid excessive heat. Always keep containers tightly closed when not in use.

Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

See section 2 for further details. - [Prevention]:

### 7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials: Strong acids and oxidizing materials

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

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## Section 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

CAS No.	Ingredient	Source	Value
74-98-6	Propane	OSHA	TWA 1000 ppm (1800 mg/m <sup>3</sup> )
		ACGIH	Ensure Minimal Oxygen Content (ACGIH appendix F)
		NIOSH	TWA 1000 ppm (1800 mg/m <sup>3</sup> )
106-97-8	Butane	OSHA	No Established Limit
		ACGIH	Ensure Minimal Oxygen Content (ACGIH appendix F)
		NIOSH	No Established Limit
142-82-5	Heptane	OSHA	TWA 500 ppm (2000 mg/m <sup>3</sup> )

		ACGIH	TWA: 400 ppmSTEL: 500 ppm
		NIOSH	TWA 85 ppm (350 mg/m <sup>3</sup> ) C 440 ppm (1800 mg/m <sup>3</sup> ) [15-minute]
9002-84-0	Poly(tetrafluoroethene)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

## 8.2. Exposure controls

<b>Respiratory</b>	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
<b>Eyes</b>	Protective safety glasses recommended
<b>Skin</b>	Avoid skin contact. Wear PVC or rubber gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.
<b>Engineering Controls</b>	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
<b>Other Work Practices</b>	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

## Section 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Transparent Liquid
<b>Odor</b>	Odorless
<b>Odor threshold</b>	No available information
<b>pH</b>	No available information
<b>Melting point / freezing point</b>	No available information
<b>Initial boiling point and boiling range</b>	98°C
<b>Flash Point</b>	No available information
<b>Evaporation rate (Ether = 1)</b>	No available information
<b>Flammability (solid, gas)</b>	Gas
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> No available information <b>Upper Explosive Limit:</b> No available information
<b>Vapor pressure (Pa)</b>	No available information
<b>Vapor Density</b>	No available information
<b>Relative density</b>	No available information
<b>Solubility in Water</b>	No available information
<b>Partition coefficient n-octanol/water (Log Kow)</b>	No available information
<b>Auto-ignition temperature</b>	No available information
<b>Decomposition temperature</b>	No available information
<b>Viscosity (cSt)</b>	No available information

### 9.2. Other information

Soluble in most of aliphatic, aromatic, hydrocarbon miscible organic solvent No other relevant information.

## Section 10. Stability and reactivity

### 10.1. Reactivity

Hazardous Polymerization will not occur.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

No available information

### 10.4. Conditions to avoid

Do not expose to heat or store at temperature above 120°F.

### 10.5. Incompatible materials

Strong acids and oxidizing materials

### 10.6. Hazardous decomposition products

Oxides of Carbon

## Section 11. Toxicological information

### 11.1. Information on toxicological effects

#### Product

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

	Classification	Hazard Description
Acute toxicity (oral)	--	Not Applicable
Acute toxicity (dermal)	--	Not Applicable
Acute toxicity (inhalation)	--	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	--	Not Applicable
Respiratory sensitization	--	Not Applicable
Skin sensitization	--	Not Applicable
Germ cell mutagenicity	--	Not Applicable
Carcinogenicity	--	Not Applicable
Reproductive toxicity	--	Not Applicable
STOT-single exposure	3	May cause drowsiness or dizziness.
STOT-repeated exposure	--	Not Applicable
Aspiration hazard	--	Not Applicable

#### Components

##### Acute toxicity

Component	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Propane - (74-98-6)	No data available	No data available	658.00, Rat - Category: NA	No data available	No data available
Butane - (106-97-8)	No data available	No data available	658.00, Rat - Category: NA	No data available	No data available

Heptane - (142-82-5)	17,000.00, Rat - Category: NA	3,000.00, Rabbit - Category: 5	103.00, Rat - Category: NA	No data available	No data available
Poly(tetrafluoroethene) - (9002-84-0)	No data available	No data available	No data available	No data available	No data available

#### Carcinogen Data

CAS No.	Component	Source	Value
74-98-6	Propane	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No
106-97-8	Butane	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No
142-82-5	Heptane	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
9002-84-0	Poly(tetrafluoroethene)	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;

## Section 12. Ecological information

### 12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

#### Aquatic Ecotoxicity

Component	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L	3 hr IC50 Bacteria, mg/L
Propane - (74-98-6)	Not Available	Not Available	Not Available	--
Butane - (106-97-8)	Not Available	Not Available	Not Available	--
Heptane - (142-82-5)	375.00, Oreochromismossambicus	3.90, Daphnia magna	4.338 (72 hr), Pseudokirchneriella subcapitata	--
Poly(tetrafluoroethene) - (9002-84-0)	Not Available	Not Available	Not Available	--

### 12.2. Persistence and degradability

There is no data available on the preparation itself.

### 12.3. Bioaccumulative potential

No available information

### 12.4. Mobility in soil

No available information

#### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

#### 12.6. Other adverse effects

No available information

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### Section 13. Disposal considerations

#### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

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### Section 14. Transport information

	ADR/RID (Land transport)	IMDG (Sea Transportation)	ICAO-TI/IATA-DGR (Air transport)	ADN (Inland waterway transport)
14.1. UN number	1950	1950	1950	Not Applicable
14.2. UN proper shipping name	Aerosols, flammable (each not exceeding 1 L capacity)	Aerosols, flammable (each not exceeding 1 L capacity)	Aerosols, flammable (each not exceeding 1 L capacity)	Not Applicable
14.3. Transport hazard class(es)	2.1	Not Applicable <b>Sub Class:</b> Not Applicable	Not Applicable	Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards	Not Applicable	Marine Pollutant: Yes; (Heptane)	Not Applicable	Not Applicable

#### 14.6. Special precautions for user

No further information

#### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

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### Section 15. Regulatory information

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

##### EU Legislation

REGULATION (EU) 2015/830 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

##### National Legislation

None noted.

#### 15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

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### Section 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We

accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapor.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness and dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

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