

Safety Data Sheet

Date of Revise: 2022/3/3

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

1.1. Product identifier

Product Identity PUFF DINO PU FOAM
Alternate Names DR20 、DR21 、DR31

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 PUFFDINO TRADE CO., LTD.
No.25, Gongyequ 23rd Rd, Nantun Dist,Taichung City 40850, Taiwan
Telephone +886-4-23503555
Fax +886-4-23501867
E-mail service@puffdino.com

1.4. Emergency telephone number

Emergency phone # +886-4-23503555

Section 2. Hazard identification of the product

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable aerosols 1	H222 Extremely flammable aerosol; H229 Pressurized container: may burst if heated
Gases under pressure	H280 Contains gas under pressure; may explode if heated
Acute toxicity, inhalation 4	H332 Harmful if inhaled.
Skin corrosion/irritation 2	H315 Causes skin irritation.
Serious eye damage/eye irritation 2	H319 Causes serious eye irritation.
Skin sensitization 1	H317 May cause an allergic skin reaction.
Carcinogenicity 2	H351 Suspected of causing cancer.
Specific target organ toxicity - single exposure 3	H335 May cause respiratory irritation.
Specific target organ toxicity - repeated exposure 2	H373 May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

According to Regulation (EC) No 1272/2008



Danger

H222 Extremely flammable aerosol.

H229 Pressurized container: may burst if heated.

H280 Contains gas under pressure; may explode if heated.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

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

Precautionary Statements - Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P211 Do not spray on an open flame or other ignition source.

P233 Keep container tightly closed.

P251 Pressurized container: Do not pierce or burn, even after use.

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

P264 Wash thoroughly after handling.

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

P272 Contaminated work clothing should not be allowed out of the workplace.

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.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P308+313 IF exposed or concerned: Get medical advice / attention.

P314 Get Medical advice / attention if you feel unwell.

P333+313 If skin irritation or a rash occurs: Get medical advice / attention.

P337+313 If eye irritation persists: Get medical advice / attention.

P362 Take off contaminated clothing and wash before reuse.

P363 Wash contaminated clothing before reuse.

Precautionary Statements - Storage:

P405 Store locked up.

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

P410+412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

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.

May displace oxygen and cause rapid suffocation.

Section 3. Composition/information on ingredients

3.1. 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*
4,4'-Methylenediphenyl diisocyanate CAS Number: 101-68-8 EC No. 202-966-0 Index No.: 615-005-00-9	48 – 52	Acute tox. 4;H332 STOT RE 2;H373 Eye Irrit. 2;H319; STOT SE 3;H335 Skin Irrit. 2;H315 Resp. Sens. 1;H334 Skin Sens. 1;H317 Carc. 2;H351
Polyether polyol CAS Number: -- EC No. -- Index No.: --	32 – 35	Not Classified
L.P.G. (liquified petroleum gas) CAS Number: 68476-85-7 EC No. 270-704-2 Index No.: 649-202-00-6	8 – 10	Flam. Gas 1;H220 Press. Gas;H280
Dimethyl Ether CAS Number: 115-10-6 EC No. 204-065-8 Index No.: 603-019-00-8	5 – 10	Flam. Gas 1;H220

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

Section 4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation	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.
Eye	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Overview	No specific symptom data available. Treat symptomatically. See section 2 for further details.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.
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Section 5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.

Do not use: water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Carbon Dioxide, Carbon Monoxide

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

5.3. Advice for fire-fighters

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from firefighting to enter drains or water ways.

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

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.

Section 7. Handling and storage

7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

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 oxidizing agents

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

7.3. Specific end use(s)

No available information

Section 8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
101-68-8	4,4'-Methylenediphenyl diisocyanate	OSHA	C 0.2 mg/m ³ (0.02 ppm)
		ACGIH	TWA: 0.005 ppm Ceiling: 0.01 ppm
		NIOSH	TWA 0.05 mg/m ³ (0.005 ppm) C 0.2 mg/m ³ (0.020 ppm) [10 minute]
---	Polyether polyol	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
68476-85-7	L.P.G. (liquefied petroleum gas)	OSHA	TWA 1000 ppm (1800 mg/m ³)
		ACGIH	Ensure Minimal Oxygen Content (ACGIH appendix F)
		NIOSH	TWA 1000 ppm (1800 mg/m ³)
115-10-6	Dimethyl Ether	OSHA	No Established Limit
		ACGIH	TWA: 1000 ppm
		NIOSH	No Established Limit

8.2. Exposure controls

Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes

Protective safety glasses recommended

Skin

Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact. Protective gloves recommended.

Engineering Controls

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.

Other Work Practices

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

Appearance	Yellowish Liquid
Odor	No available information
Odor threshold	No available information
pH	No available information
Melting point / freezing point	No available information
Initial boiling point and boiling range	No available information
Flash Point	No available information
Evaporation rate (Ether = 1)	No available information
Flammability (solid, gas)	Gas
Upper/lower flammability or explosive limits	Lower Explosive Limit: 2.5% Upper Explosive Limit: 8.4%
Vapor pressure (Pa)	506 ~ 608 kPa (25°C)
Vapor Density (Air=1)	1.6 ~ 1.8
Relative density	0.0231 (after reaction)
Solubility in Water	insoluble
Partition coefficient n-octanol/water (Log Kow)	No available information
Auto-ignition temperature	287°C
Decomposition temperature	No available information
Viscosity (cSt)	No available information

9.2. Other information

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

Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Thermal decomposition can give off carbon monoxide (CO) and carbon dioxide(CO₂).

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)	4	Harmful if inhaled.
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	1	May cause allergy or asthma symptoms of breathing difficulties if inhaled.
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	2	Suspected of causing cancer.
Reproductive toxicity	---	Not Applicable
STOT-single exposure	3	May cause respiratory irritation.
STOT-repeated exposure	2	May cause damage to organs through prolonged or repeated exposure.
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
4,4'-Methylenediphenyl diisocyanate - (101-68-8)	7,616.00, Rat - Category: NA	9,400.00, Rabbit - Category: NA	No data available	No data available	No data available
Polyether polyol	No data available	No data available	No data available	No data available	No data available
L.P.G. (liquified petroleum gas) - (68476-85-7)	No data available	No data available	658.00, Rat - Category: NA	No data available	No data available
Dimethyl Ether (115-10-6)	No data available	No data available	308.00, Rat - Category: NA	No data available	No data available

Carcinogen Data

CAS No.	Component	Source	Value
101-68-8	4,4'-Methylenediphenyl diisocyanate	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;
-	Polyether polyol	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
68476-85-7	L.P.G. (liquified petroleum gas)	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
115-10-6	Dimethyl ether	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;

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	3hr IC50 Bacteria, mg/L
4,4'-Methylenediphenyl diisocyanate - (101-68-8)	> 3,000.00, Fish	Not Available	1,640.00 (72 hr), Algae	Not Available
Polyether polyol	Not Available	Not Available	Not Available	Polyether polyol
L.P.G. (liquified petroleum gas) - (68476-85-7)	Not Available	Not Available	Not Available	Not Available
Dimethyl ether - (115-10-6)	1,783.04, Fish	755.549, Daphnia sp	154.917 (96 hr), Algae	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

Section 13. Disposal considerations

13.1. Waste treatment methods

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

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	1950
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)	Aerosols, flammable
14.3. Transport hazard class(es)	2.1	2.1 Sub Class: Not Applicable	2.1	2.1
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards	Not Applicable	Marine Pollutant: No	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

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.

Taiwan (R.O.C) Legislation

Occupational Safety and Health Act, Toxic Chemical Substance Control Act, Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace, Regulations for the Labeling and Hazard Communication of Hazardous Chemicals, Regulations Governing Designating and Handling of Priority Management Chemicals, Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste, Public Hazardous Substances & Flammable Pressurized Gases Establishment Standards & Safety Control Regulations.

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

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.

H280 Contains gas under pressure; may explode if heated.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

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

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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