SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:
DES-CASE STANDARD DISPOSABLE DESICCANT BREATHER
Model numbers: DC-BB, DC-1, DC-2, DC-3, DC-4

1.2. Relevant identified uses of the mixture and uses advised against:
Air dryer/filter for industrial equipment and fluid storage.
This product is available in 5 sizes, but they all have identical materials.

1.3. Details of the supplier of the safety data sheet:
Des-Case Corporation
675 N. Main Street, Goodlettsville, TN 37072 USA
Tel.: 1-615-672-8800
Fax: 1-615-672-0701

1.3.1. Responsible person: Lizelle van den Berg
E-mail: Lizelle.vandenberg@descase.com

1.4. Emergency telephone number: 615-672-8800 (8- 16h)

SECTION 2: HAZARD IDENTIFICATION

2.1. Classification of the mixture

Classification according to Directive 1999/45/EC:

Not considered as hazardous mixture since the desiccant is enclosed within unit and does not expose handler to cobalt chloride while handling.

R phrases: -

S phrases: -

2.2. Label elements

Hazardous substance content: -

No labeling required.

R phrases: -

S phrases: -

2.3. Other hazards
The desiccant is enclosed within unit and does not expose handler to cobalt chloride while handling.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable.

3.2. Mixture:
Description: Every element of Des-Case's Standard Disposable Breathers have been ruggedly designed to work in a wide variety of industries and applications. Des-Case's desiccant breathers incorporate a high-efficiency filter to help sustain cleanliness levels by preventing the ingression of even minute particulate matter. Water adsorbing silica gel creates low relative humidity levels in the headspace to make condensation and absorption by the lubricant unlikely.

Body Material: polycarbonate, nylon, polypropylene, polyester, polyurethane, silica, Buna-N, PVC
Hydrophilic Agent: Silica Gel
Filter Media: Polyester
The desiccant is enclosed within unit and does not expose handler to cobalt chloride while handling.

Composition of the desiccant:

Description	CAS number	EU number	REACH reg. nr.	Conc. (%)	Classification				
					67/548/EEC		CLP		
					Hazard symbol	R phrase	Hazard pict.	Hazard cat.	H phrase
Silica Gel (SiO_2)	7631-86-9	231-545-4	-	99	-	-	-	-	-
Cobalt dichloride	7646-79-9	231-589-4	-	0,5	T; N	49-60-22-42/43-68-50/53	GHS08 GHS07 GHS09 Dgr	Carc. 1B Muta. 2 Repr. 1B Acute Tox. 4 Resp. Sens. 1 Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1	H350i H341 H360F H302 H334 H317 H400 H410

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

IN CASE OF INGESTION:

Measures:

- The ingestion of the product is not likely.

IN CASE OF INHALATION:

Measures:

- The inhalation of the product is not likely.

IN CASE OF SKIN CONTACT:

Measures:

- In case of skin contact, the product will not cause any problems.

IN CASE OF EYE CONTACT:

Measures:

- Eye contact with the product is not likely.

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: FIRE-FIGHTING MEASURES

5.1. Extinguishing media:

5.1.1. Suitable extinguishing media:

Water fog, foam, dry chemical, carbon dioxide.

5.1.2. Unsuitable extinguishing media:

None known.

5.2. Special hazards arising from the substance or mixture:

The formation of dangerous decomposition products greatly depends on the circumstances of the combustion. A complex mixture of airborne solid, liquid and gas substances may occur, such as carbon monoxide, carbon dioxide and unidentified organic compounds (e.g. in case of burning of plastic unit).

5.3. Advice for firefighters:

Wear full protective clothing and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:

Keep unprotected people away, allow only well trained experts wearing suitable protective clothing to abide in the field of accident.

6.1.2. For emergency responders:

None known.

6.2. Environmental precautions:

Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

6.3. Methods and material for containment and cleaning up:
Collect the product mechanically. The damaged, affected units have to be collected properly and have to be transported to waste collection point. The unit is disposable so that it need never be broken open.

6.4. Reference to other sections:
For further and detailed information see section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:
Precautions for safe handling:
Observe conventional hygiene precautions.
The desiccant is enclosed within unit and does not expose handler to cobalt chloride while handling.
The unit is disposable so that it need never be broken open.
Technical measures:
No specific prescription.
Precautions against fire and explosion:
Protect from extreme heat.

7.2. Conditions for safe storage, including any incompatibilities:
Technical measures and storage condition:
Follow all instructions on the label.
Incompatible materials: none known.
Packaging material: no special prescriptions.

7.3. Specific end use(s):
No specific instructions available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Exposure limit values: -

DNEL		Routes of exposure	Exposure frequency:	Remarks:
Worker:	Consumer:			
		Dermal:	Short term (acute) Long term (repeated)	
		Inhalative	Short term (acute) Long term (repeated)	
		Oral	Short term (acute) Long term (repeated)	

PNEC			Exposure frequency:	Remarks:
Water	Soil	Air		
			Short term (single use) Long term (repeated)	
			Short term (single use) Long term (repeated)	
			Short term (single use) Long term (repeated)	

8.2. Exposure controls:
In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1 Appropriate engineering controls
Observe the good industrial hygiene practice.
Ensure adequate ventilation.

8.2.2. Individual protection measures, such as personal protective equipment:
1. Eye/face protection: not necessary during the use of the product.
2. Skin protection:
   a. Hand protection: not necessary during the use of the product.
   b. Other: not necessary during the use of the product.
3. Respiratory protection: not necessary during the use of the product.
4. Thermal hazard: None known.

8.2.3. Environmental exposure controls:
No specific prescription.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Parameter		Test method:	Remarks:
1. **Appearance:**	solid, polyester filter and silica gel hydrophilic substance enclosed in plastic unit.		
2. Odour:	no data available		
3. Odour threshold:	no data available		
4. pH value:	no data available		
5. Melting point/ freezing point:	no data available		
6. Initial boiling point/boiling range:	no data available		
7. Flash point:	no data available		
8. Evaporation rate:	no data available		
9. Flammability:	no data available		
10. Upper/lower flammability or explosive limits:	no data available		
11. Vapour pressure:	no data available		
12. Relative density:	no data available		
13. Solubility(ies):	no data available		
14. Partition coefficient: n-octanol/water:	no data available		
15. Auto-ignition temperature:	no data available		
16. Decomposition temperature:	no data available		
17. Viscosity:	no data available		
18. Explosive properties:	no data available		
19. Oxidizing properties:	no data available		

9.2. Other information:

	DC-BB	DC-1	DC-2	DC-3	DC-4
Unit Height (in/mm)	3.90"/99.06 mm	5.31"/134.9 mm	6.125"/155.6 mm	8.125"/206.4 mm	10.125"/257.2 mm
Unit Diameter (width in/mm)	2.52"/64.01 mm	2.52"/64.01 mm	4"/101.6 mm	4"/101.6 mm	4"/101.6 mm
Shipping Weight (unit/case) (lbs/kg)	0.31 lbs/2.14 lb .14 kg/.97 kg	0.51 lbs/3.32 lbs 0.23 kg/1.51 kg	1.21 lb/7.73 lbs 0.55 kg/3.51 kg	1.87 lbs/11.74 lbs. 0.85 kg/5.32 kg	2.63 lbs/16.13 lbs 1.2 kg/7.33 kg
Amt. of Silica Gel (lbs/kg)	0.13 lbs/58.6 g	0.28 lbs/ 125.3 g	0.66 lbs/0.30 kg	1.22 lbs/0.56 kg	1.88 lbs/ 0.84 kg
Adsorption Capacity (fl oz/ml)	0.79 fl oz/23.3 ml	1.68 fl oz/49.7 ml	4.00 fl oz/118.2 ml	7.45 fl oz/220.3 ml	11.3 fl oz/333 ml
Max. Flow Rate (cfm)	4.55 @ 1 psid	4.16 @ 1 psid	16 @ 1 psid	16 @ 1 psid	16 @ 1 psid
Max. Flow Rate (lpm)	128,84	117,8	453	453	453
Filtration	3µ absolute ($\beta_3 \geq 200$)	3µ absolute ($\beta_3 \geq 200$)	3µ absolute ($\beta_3 \geq 200$)	3µ absolute ($\beta_3 \geq 200$)	3µ absolute ($\beta_3 \geq 200$)
Operating Temp. Range (°F)	neg. 20 to 200	neg. 20 to 200	neg. 20 to 200	neg. 20 to 200	neg. 20 to 200
Operating Temp. Range (°C)	neg. 29 to 93	neg. 29 to 93	neg. 29 to 93	neg. 29 to 93	neg. 29 to 93
Connection Size	3/8" Multi-Fit (NPT, BSPP, BSPT)	3/8" Multi-Fit (NPT, BSPP, BSPT)	1 " Multi-Fit (NPT, BSPT, NPSM)	1 " Multi-Fit (NPT, BSPT, NPSM)	1 " Multi-Fit (NPT, BSPT, NPSM)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
None known.

10.2. Chemical stability:
At normal temperature: stabile at general conditions of work.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials:
None known.

10.6. Hazardous decomposition products:
The formation of dangerous decomposition products greatly depends on the circumstances of the combustion. A complex mixture of airborne solid, liquid and gas substances may occur, such as carbon monoxide, carbon dioxide and unidentified organic compounds (e.g. in case of burning of plastic unit).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute toxicity: none known.
Irritation: none known.
Corrosivity: none known.
Sensitisation: none known.
Repeated dose toxicity: none known.
Carcinogenicity: none known.
Mutagenicity: none known.
Reproduction toxicity: none known.

11.1.1. For substances subject to registration, brief summaries of the information derived from the test conducted:
No data available.

11.1.2. Relevant toxicological properties of the hazardous substances:
No data available.

11.1.3. Information on likely routes of exposure:
Ingestion, inhalation, skin contact, eye contact.

11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:
No data available.

11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:
No data available.

11.1.6. Interactive effects:
No data available.

11.1.7. Absence of specific data:
No information.

11.1.8. Other information:
The desiccant is enclosed within unit and does not expose handler to cobalt chloride while handling.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:
No data available.
Do not enter into water, water courses or soil.

12.2. Persistence and degradability:
No data available.

12.3. Bioaccumulation potential:
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment:
No data available.

12.6. Other adverse effects:
No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:
Disposal according to the local regulations.

13.1.1. Information regarding the disposal of the product:
Disposal according to the local regulations.
The desiccant is enclosed within unit and does not expose handler to cobalt chloride while handling. The unit is disposable so that it need never be broken open.
No special recommendation from the manufacturer.
During the disposal of the product, its residue, and its packaging, the national and local prescriptions should be observed. The EWC codes indicated below are only recommendations, but they may have to be changed due to special circumstances, in such cases new classification may be needed.

13.1.2. Information regarding the disposal of the packaging:
Dispose according to the local regulations.

13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified:
None known.

13.1.4. Sewage disposal:
None known.

13.1.5. Special precautions for any recommended waste treatment
No data available.

SECTION 14: TRANSPORT INFORMATION

Not dangerous good in sense of the transport regulations!

14.1. UN Number:
None.

14.2. UN proper shipping name:
None.

14.3. Transport hazard class(es)
None.

14.4. Packing group:
None.

14.5. Environmental hazards:
No relevant information available.

14.6. Special precautions for user
Ensure that the personnel performing the transportation of the product is aware with the measures necessary in case of an accident or a spillage.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

15.2. Chemical safety assessment: no information available.

SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet: none.
Full text of the abbreviations in the safety data sheet:
DNEL: Derived no effect level. **PNEC**: Predicted no effect concentration. CMR effects: carcinogenity, mutagenicity and toxicity for reproduction: PBT: Persistent, bioaccumulative and toxic. n.d.: not defined. n.a.: not applicable.
Data sources: information from the supplier.
Relevant R-Phrases (number and full text) of Section 2 and 3:
R 22 - Harmful if swallowed.
R 42/43 - May cause sensitization by inhalation and skin contact.
R 49 – May cause cancer by inhalation.
R 50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 60 - May impair fertility.
R 68 - Possible risk of irreversible effects.
Relevant H-Phrases (number and full text) of Section 2 and 3:
H302 – Harmful if swallowed.
H317 – May cause an allergic skin reaction.
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 – Suspected of causing genetic defects
H350i - May cause cancer (inhalation)
H361 – Suspected of damaging fertility.

H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects.
Training advice: no information available.
This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations. The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required. Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.