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Version number 1

Revision: 18.02.2019

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

1.1 Product identifier

Trade name: <u>DAIFLOIL no.1,3,10,20</u> Article number: DO **1.2 Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.

1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: DAIKIN INDUSTRIES, LTD. CHEMICALS DIVISION: Umeda Center Bldg., 4-12, Nakazaki-Nishi 2-chome, Kita-Ku, Osaka, JAPAN Phone: (+81) 6-6373-4345 Fax: (+81) 6-6373-4281

Further information obtainable from: http://www.daikin.com/

1.4 Emergency telephone number: Japan: +81-6-6349-7521 China: +86-512-5-232-0949, +86-21-34151689 South Korea: +82-2-568-1722 Americas: +1-256-306-5000 Europe: +49-211-179 225-0

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 *The substance is not classified, according to the CLP regulation.*

2.2 Label elements Labelling according to Regulation (EC) No 1272/2008: Not applicable Signal word: Not applicable

SECTION 3: Composition/information on ingredients

Information on ingredients:

CAS: 9002-83-9 Polychlorotrifluoroethylene

SECTION 4: First aid measures

4.1 Description of first aid measures General information: Seek medical treatment. After inhalation: Supply fresh air; consult doctor in case of complaints. After skin contact: Remove contaminated clothes immediately. Immediately wash with water and soap and rinse thoroughly. Consult a doctor in case of complaints. After eye contact: Immediately rinse with a lot of water for several minutes. Remove contact lenses if possible. Continue rinsing. Consult an ophthalmologist in case of complaints. After swallowing: Rinse mouth with water. Do not induce vomitting. Consult a doctor in case of complaints. 4.2 Most important symptoms and effects, both acute and chronic: No further relevant information available. 4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.

100%



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5.2 Special hazards arising from the substance or mixture: Hydrogen chloride (HCl) Hydrogen fluoride (HF)
Formation of toxic gases is possible during heating or in case of fire.
5.3 Advice for firefighters: Protective equipment: Wear self-contained breathing apparatus and protective suit. Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation before entering the area. Stay on the windward side. Keep out unauthorized persons.

Wear appropriate protective devices (See Section 8 Exposure Controls/Personal Protection).

Avoid contact with eyes and skin.

Do not swallow the product.

6.2 Environmental precautions: Prevent seepage into sewage system, workpits and cellars.

6.3 Methods and material for containment and cleaning up:

For a small amount of leakage: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders) or collect in an empty container that can be sealed tightly.

For a large amount of leakage: Enclose with banks to avoid outflow. Lead the leakage to a safe place and collect. 6.4 Reference to other sections:

See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Ensure good ventilation/exhaustion at the workplace. Do not handle until all safety precautions have been read and understood. Information about fire - and explosion protection: Keep ignition sources away - Do not smoke. 7.2 Conditions for safe storage, including any incompatibilities: Storage Requirements to be met by storerooms and receptacles: Store in a cool and dry location. Keep containers tightly sealed. Information about storage in one common storage facility: Store away from oxidising agents. See section 10 for information on incompatible materials. Further information about storage conditions: Protect from heat and direct sunlight. Store containers in a well ventilated area. Store locked up. 7.3 Specific end use(s): No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters No further information available. **Ingredients with limit values that require monitoring at the workplace:** Not required. **Additional information:** The lists valid during the making were used as basis.



Printing date 18.02.2019

Version number 1

Revision: 18.02.2019

Page 3/6

Trade name: DAIFLOIL no.1,3,10,20

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures:
Wash hands before breaks and at the end of work.
Do not eat or drink while working.
Keep away from tobacco products.
Respiratory protection:
Use respiratory protective device with filters for organic and acid gas (or airline respirators in some cases), if the product is heated above 100 ℃ and toxic gases is formed.
Use respiratory protective device with organic gas cartridge.
Protection of hands:
Synthetic rubber gloves



Protective gloves

Material of gloves: Rubber Penetration time of glove material The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection:



Safety glasses

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties General Information

Appearance	
Form:	Liquid
Colour:	Clear colorless - light yellow
Odour:	Odourless
pH-value:	No further information available.
Melting point/freezing point:	No further information available.
Initial boiling point and boiling range:	No further information available.
Flash point:	Not applicable.
Explosion limits:	
Lower explosive limit:	No further information available.
Upper explosive limit:	No further information available.
Vapour pressure:	No further information available.
Density:	No further information available.
Solubility in / Miscibility with	
water:	No further information available.
Partition coefficient: n-octanol/water:	No further information available.
9.2 Other information:	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.



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10.2 Chemical stability

Thermal decomposition / conditions to be avoided: To avoid thermal decomposition do not overheat.
10.3 Possibility of hazardous reactions: No dangerous reactions known under normal conditions of use.
10.4 Conditions to avoid: Keep away from heat, sparks, flame, high temperature.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: Danger of toxic fluorine based pyrolysis products.

SECTION 11: Toxicological information

11.1 Information on toxicological effects Acute toxicity Based on available data, the classification criteria are not met. LD/LC50 values relevant for classification: No further information available. Primary irritant effect Skin corrosion/irritation No further information available. Serious eye damage/irritation No further information available. after inhalation: No further information available. Respiratory or skin sensitisation Based on available data, the classification criteria are not met. Additional toxicological information: General effects: Fumes generated during burning may cause "polymer fume fever" (flu-like symptons such as fever, chill, cough). This may last for a whole day and night. Fumes are not absorbed in skin. No sensitizing effect known. Effects of hydrogen fluoride: Low concentration of hydrogen fluoride may cause feeling of dyspnea, cough, irritation in eyes, nose, throat, fever, chill for 1-2 days. After that, dyspnea, cyanosis and pulmonary edema may be seen. High concentration of hydrogen fluoride damages liver and kidney.

Effects of carbonyl fluoride: Skin: Irritation or eruption Eye: Ulcer in cornea, conjunctiva Respiratory system: Irritation Lung: Temporary symptons such as cough, pain, dyspnea Persons who have experienced lung diseases are vulnerable to toxicity caused by excessive exposure to pyrolysis products CMR effects Carcinogenicity Based on available data, the classification criteria are not met. Reproductive toxicity Based on available data, the classification criteria are not met. STOT-single exposure Based on available data, the classification criteria are not met. STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

Chronic study No further information available.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability: No further relevant information available.
Other information: The product is insoluble in water and the biodegradation and ecotoxicity is expected to be low.
12.3 Bioaccumulative potential: No further relevant information available.
12.4 Mobility in soil: No further relevant information available.
12.5 Results of PBT and vPvB assessment
PBT:
No further relevant information available.
No further relevant information available.



Printing date 18.02.2019

Version number 1

Revision: 18.02.2019

Page 5/6

Trade name: DAIFLOIL no.1,3,10,20

vPvB:

No further relevant information available. Not applicable. **12.6 Other adverse effects:** No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods Recommendation: Disposal must be made according to official regulations.

Uncleaned packaging Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number: ADR, ADN, IMDG, IATA 14.2 UN proper shipping name:	Not applicable
ADR, ADN, IMDG, IATA 14.3 Transport hazard class(es):	Not applicable
ADR, ADN, IMDG, IATA	
Class:	Not applicable
14.4 Packing group:	
ADR, IMDĞ, IATA	Not applicable
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user:	Not applicable.
14.7 Transport in bulk according to Annex II of	
MARPOL73/78 and the IBC Code:	Not applicable.
Transport/Additional information:	Avoid direct sunlight. Make sure of no damage, corrosion, leaks on
	the receptacles.
	Take necessary measures for preventing cargo shift.
UN "Model Regulation":	Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
Labelling according to Regulation (EC) No 1272/2008 Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The product is for the industrial use only. We do not guarantee the safety in case the product is used for the other purposes. When using the product for health-care application or food/feed application, consult us in advance. This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: EHS Department Contact: http://www.daikin.com/ Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent



Printing date 18.02.2019

Version number 1

Revision: 18.02.2019

Page 6/6

Trade name: DAIFLOIL no.1,3,10,20

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

* Data compared to the previous version altered.