

Revision: 21.06.2019

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

### 1.1 Product identifier

Trade name: <u>DAI-EL G-901,902,903,912,952,9062,9074,962,964</u> Article number: G900 **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: 25190-89-0 Vinylidene fluoride-tetrafluoroethylene-hexafluoropropylene copolymer

## olymer

100%

## SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Seek medical treatment.
After inhalation: In case of inhaling decomposed gases: supply fresh air and consult a doctor in case of complaints.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
After contact with the molten product, cool rapidly with cold water.
Do not pull solidified product off the skin.
Immediately rinse with warm water and soap.
Consult a doctor in case of complaints.
After eye contact:
Rinse opened eye for several minutes under running water.
Consult an ophthalmologist in case of complaints.
After swallowing: If symptoms persist consult a doctor.
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. For safety reasons unsuitable extinguishing agents: No further information available. 5.2 Special hazards arising from the substance or mixture:

Formation of toxic gases is possible during heating or in case of fire.



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## 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.

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:

Do not allow to enter sewers/surface or ground water.

Do not allow product to reach sewage system or any water course.

6.3 Methods and material for containment and cleaning up: Pick up mechanically.

### 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. Extractors are required on all machines used for thermal processing or powder handling processes. 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. Information about storage in one common storage facility: 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. 7.3 Specific end use(s): No further relevant information available. SECTION 9: Exposure controls/parsonal protection

# 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.

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:

If the product is heated above 200  $\mathcal{C}$  or its compound is heated, fumes and/or toxic vapours may be generated. When there is potential for airborne exposures, wear a full-face-mask with the acid and organic vapor cartridges. Dust respirator, simplified dust respirator **Protection of hands:** 



Protective gloves



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Material of gloves: Rubber Eye protection: Safety glasses

Body protection: Protective work clothing

### **SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and General Information Appearance Form: Colour: Odour: Odour threshold:	Solid material Translucent or light pink Odourless Not determined.
pH-value: Melting point/freezing point: Initial boiling point and boiling range.	No further information available. No further information available. No further information available.
Flash point:	Not applicable.
Flammability (solid, gas):	Product is not flammable.
Decomposition temperature:	No further information available.
Auto-ignition temperature: Explosive properties:	Not determined. Product does not present an explosion hazard.
Explosion limits: Lower explosive limit: Upper explosive limit:	No further information available. No further information available.
Vapour pressure:	No further information available.
Density: Relative density Vapour density Evaporation rate	No further information available. Not determined. Not applicable. Not applicable.
Solubility in / Miscibility with water:	Insoluble.
Partition coefficient: n-octanol/water: Viscosity: Dynamic: Kinematic: 9.2 Other information:	Not applicable. Not applicable. No further relevant information available.
SECTION 10: Stability and reactivity	

10.1 Reactivity No further relevant information available.

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:

Metal powder (e.g. Al, Mg) and fluorine oxidizer. There is a danger of chemical reactions that could cause fire or explosion when the product is heated with them.

### 10.6 Hazardous decomposition products:

As for decomposition products, particulate matters and extremely toxic/corrosive fumes may be generated (*HF*, carbonyl fluoride, monomers, perfluoroisobutylene).

Decomposition products differ depending on the temperature and conditions.



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Organic iodine compounds such as methyl iodide may be generated when iodine which becomes a crosslinking point reacts with decomposed products of organic peroxide.

## SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity no data
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.
Other information (about experimental toxicology): No further information available.
Subacute to chronic toxicity No further information available.
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.

## SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability: The product is thought to be non-biodegradable.
12.3 Bioaccumulative potential: No further relevant information available.
12.4 Mobility in soil: No further relevant information available.
Ecotoxical effects: no data
12.5 Results of PBT and vPvB assessment
PBT:
No further relevant information available.
Not applicable.
vPvB:
No further relevant information available.
Not applicable.
12.6 Other adverse effects: No further relevant information available.



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### **SECTION 13: Disposal considerations**

### 13.1 Waste treatment methods

**Recommendation:** 

Landfill disposal is recommended. In case of incineration, the temperature must be higher than 800  $^{\circ}C$ . Treat exhaust gas such as HF in a suitable way. 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: ADR, ADN, IMDG, IATA 14.3 Transport hazard class(es):	Not applicable Not applicable
ADR, ADN, IMDG, IATA	
Class:	Not applicable
14.4 Packing group:	
ADR, IMDG, 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
UN ''Model Regulation'':	the receptacles. Take necessary measures for preventing cargo shift. 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

*National regulations* No further information available. **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:

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)* 

ICAO: International Civil Aviation Organisation

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)



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LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative \* Data compared to the previous version altered.