

**1: Identification**

**1.1 Product identifier**

**Trade name:**

**DAI-EL G-7000 Series 43**

**G-7251, G-7251E (GN-55), G-7255 (GN-61), G-7261, G-7262 (GN-20), G-7265 (GN-62), (GN-50), G-7351E (GN-59), G-7352E (GN-71), G-7371 (GN-32), G-7373 (GN-33), G-7375 (GN-44), G-7451, G-7452 (GN-21), G-7453 (GN-48), G-7573 (GN-76), G-7851(GN-31), G-7853, (GN-77), GN-C0, GN-C1, GN-B2, GN-C7, GN-C9, GN-D0, GN-D1, GN-D2, GN-D3, GN-D4, GN-D5, GN-D6, GN-D8, GN-D9, GN-E2, GN-E7, G-384 (GN-E8)**

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

**DAIKIN INDUSTRIES, LTD. CHEMICALS DIVISION:**

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**1.4 Emergency telephone number:**

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South Korea: +82-2-568-1722

Americas: +1-256-306-5000

Europe: +49-211-179 225-0

**2: Hazard(s) identification**

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

The product is not classified according to the CLP regulation.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008 Void**

**Signal word Void**

**Hazard statements Void**

**Additional information:**

**EUH210 Safety data sheet available on request.**

**NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

**3: Composition/information on ingredients**

**Chemical Characterization:**

9011-17-0 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-fluoroethene

90-100%

**Description:** CAS: 9011-17-0 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

**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.

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**After skin contact:***Seek medical treatment.**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 away from 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 doctor.***4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.***4.3 Indication of any immediate medical attention and special treatment needed***No further relevant information available.***\* 5: Fire-fighting measures****5.1 Extinguishing media****Suitable extinguishing agents:** *Use fire fighting measures that suit the environment.***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.***5.3 Advice for firefighters****Protective equipment:***Wear fully protective suit.**Mouth respiratory protective device.**Do not inhale explosion gases or combustion gases.***6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures***Ensure adequate ventilation**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 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.***\* 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 splinter removal processes.**Do not handle until all safety precautions have been read and understood.***Information about protection against explosions and fires:** *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 location.***Information about storage in one common storage facility:***See section 10 for information on incompatible materials.***Further information about storage conditions:***Store in a cool place.**Protect from heat and direct sunlight.**Store receptacle in a well ventilated area.***7.3 Specific end use(s)** *No further relevant information available.*

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**8: Exposure controls/personal protection**

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

**8.1 Control parameters** No further information available.

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not eat or drink while working.

Keep away from tobacco products.

**Breathing equipment:** Dust respirator, simplified dust respirator

**Protection of hands:**



Protective gloves

**Material of gloves**

Nitrile rubber, NBR

Rubber gloves

**Penetration time of glove material**

The exact break through 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

**9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:** Solid material

**Color:** Light yellow

**Odor:** Odorless

**Odor threshold:** Not determined.

**pH-value:** No further information available.

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not determined.

**Decomposition temperature:** > 230 °C (> 446 °F) (1% TG)

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

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**Vapor pressure:** No further information available.

**Density:** Not determined.

**Relative density** Not determined.

**Vapor density** Not applicable.

**Evaporation rate** Not applicable.

**Solubility in / Miscibility with Water:** Insoluble.

**Partition coefficient (n-octanol/water):** No further information available.

**Viscosity:**

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

**9.2 Other information** No further relevant information available.

## \* 10: Stability and reactivity

**10.1 Reactivity** No further relevant information available.

**10.2 Chemical stability**

**Thermal decomposition / conditions to be avoided:**

Even at the temperatures reached during the normal hot processing of fluoropolymers, fume that presents a potential health hazard may be generated.

To avoid thermal decomposition do not overheat.

**10.3 Possibility of hazardous reactions**

Could react with powdered metals and metal oxides.

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.

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

## \* 11: Toxicological information

**11.1 Information on toxicological effects**

**Acute toxicity:** No further information available.

**LD/LC50 values that are relevant for classification:** No further information available.

**on the skin:** No further information available.

**on the eye:** No further information available.

**Sensitization:** No further information available.

**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 symptoms 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:**

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*Skin: Irritation or eruption**Eye: Ulcer in cornea, conjunctiva**Respiratory system : Irritation**Lung: Temporary symptoms such as cough, pain, dyspnea**Persons who have experienced lung diseases are vulnerable to toxicity caused by excessive exposure to pyrolysis products***Carcinogenic categories****IARC (International Agency for Research on Cancer)***None of the ingredients is listed.***NTP (National Toxicology Program)***None of the ingredients is listed.***OSHA-Ca (Occupational Safety & Health Administration)***None of the ingredients is listed.***\* 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.***Ecotoxicological effects:** *no data***Additional ecological information:****General notes:** *Due to the consistency and the low water solubility of the product a bioavailability is not probable.***12.5 Results of PBT and vPvB assessment****PBT:** *No further relevant information available.***vPvB:** *No further relevant information available.***12.6 Other adverse effects** *No further relevant information available.***13: Disposal considerations****13.1 Waste treatment methods****Recommendation:***Landfill disposal is recommended.**In case of incineration, the temperature must be higher than 800 °C.**Treat exhaust gas such as HF in a suitable way.**Disposal must be made according to official regulations.***Uncleaned packagings:****Recommendation:** *Disposal must be made according to official regulations.***14: Transport information****14.1 UN-Number****DOT, ADR, ADN, IMDG, IATA** *not regulated***14.2 UN proper shipping name****DOT, ADR, ADN, IMDG, IATA** *not regulated***14.3 Transport hazard class(es)****DOT, ADR, ADN, IMDG, IATA**  
**Class** *not regulated***14.4 Packing group****DOT, ADR, IMDG, IATA** *not regulated***14.5 Environmental hazards:****Marine pollutant:** *No***14.6 Special precautions for user** *Not applicable.*

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**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code****Transport/Additional information:**

Not applicable.

Not dangerous according to the above specifications.

Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles.

Take necessary measures for preventing cargo shift.

**UN "Model Regulation":**

not regulated

**15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

**SARA****Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

**Proposition 65****Chemicals known to cause cancer:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**Carcinogenic categories****EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**National regulations:**

TSCA INVENTORY: All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

No further information available.

**Other regulations, limitations and prohibitive regulations 1****15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**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:** DAI Safety Department**Contact:** <http://www.daikin.com/>

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**Trade name: DAI-EL G-7000 Series 43****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

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

**\* Data compared to the previous version altered.**