

Printing date 26.12.2017

Version number 5

Revision: 26.12.2017

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name: ZEFFLE GK-510****Article number: GK510****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***Flam. Liq. 3 H226 Flammable liquid and vapour.**STOT SE 3 H336 May cause drowsiness or dizziness.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008:***The product is classified and labelled according to the CLP regulation.***Signal word:** Warning**Precautionary statements:***P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**P241 Use explosion-proof electrical/ventilating/lighting equipment.**P261 Avoid breathing dust/fume/gas/mist/vapours/spray.**P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***SECTION 3: Composition/information on ingredients****Information on ingredients:**

<i>Tetrafluoroethylene copolymer</i>	<i>45-55%</i>
--------------------------------------	---------------

<i>CAS: 123-86-4 n-Butyl acetate</i>	<i>45-55%</i>
--------------------------------------	---------------

*R10-66-67**Flam. Liq. 3, H226**STOT SE 3, H336***Additional information:** For the wording of the listed hazard phrases refer to section 16.

Printing date 26.12.2017

Version number 5

Revision: 26.12.2017

**Trade name: ZEFFLE GK-510**

## **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:**

Immediately wash with water and soap and rinse thoroughly.

Remove contaminated clothes immediately.

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 vomiting.

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:**

Fire-extinguishing powder

CO<sub>2</sub>

Dry sand

Alcohol resistant foam

Water haze

Water spray

**For safety reasons unsuitable extinguishing agents:** Water with full jet

### **5.2 Special hazards arising from the substance or mixture:**

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

Extremely flammable; can ignite easily with heat, sparks, 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 small amount of leakage:** Use clean anti-static tools when absorbing the product.

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

Remove ignition sources immediately.

There is a danger of explosion. Prepare fire extinguisher in case of emergency.

Ground all equipment when the product leaks.

### **6.4 Reference to other sections:**

See Section 8 for information on personal protection equipment.

Printing date 26.12.2017

Version number 5

Revision: 26.12.2017

**Trade name: ZEFFLE GK-510***See Section 13 for disposal information.***SECTION 7: Handling and storage****7.1 Precautions for safe handling:***Ensure good ventilation/exhaustion at the workplace.**Never allow exposure to sunlight or strong light until after curing.**Do not handle until all safety precautions have been read and understood.**Handle with care. Avoid jolting, friction and impact.***Information about fire - and explosion protection:***Keep ignition sources away - Do not smoke.**Protect against electrostatic charges.**Use flame proof electric/lighting devices and ventilation equipment.**Ground/bond container and receiving equipment.***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.**Provide solvent resistant, sealed floor.**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:****CAS: 123-86-4 n-Butyl acetate***OEL (Japan) Long-term value: 475 mg/m<sup>3</sup>, 100 ppm**PEL (USA) Long-term value: 710 mg/m<sup>3</sup>, 150 ppm**REL (USA) Short-term value: 950 mg/m<sup>3</sup>, 200 ppm  
Long-term value: 710 mg/m<sup>3</sup>, 150 ppm**TLV (USA) Short-term value: 950 mg/m<sup>3</sup>, 200 ppm  
Long-term value: 713 mg/m<sup>3</sup>, 150 ppm***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 formation of toxic gases is possible while the product is heated.**Use respiratory protective device with organic gas cartridge.***Protection of hands:***Protective gloves*

Printing date 26.12.2017

Version number 5

Revision: 26.12.2017

**Trade name: ZEFFLE GK-510****Material of gloves:** Rubber**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**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance****Form:** Liquid**Colour:** Light yellow**Odour:** Aromatic**pH-value:**

No further information available.

**Melting point/freezing point:**

No further information available.

**Initial boiling point and boiling range:** 124-125 °C (As n-butyl acetate)**Flash point:**

25 °C (SCC)

**Flammability (solid, gas):**

Not applicable.

**Decomposition temperature:**

No further information available.

**Auto-ignition temperature:**

Product is not selfigniting.

**Explosive properties:**

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**Explosion limits:****Lower explosive limit:** 1,7 Vol % (As n-butyl acetate)**Upper explosive limit:** 7,6 Vol % (As n-butyl acetate)**Vapour pressure:**

-

**Density:****Relative density at 20 °C** 1.06**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.**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:** Oxidizing agents**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.

Printing date 26.12.2017

Version number 5

Revision: 26.12.2017

**Trade name: ZEFFLE GK-510****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** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**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 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:****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

**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**

May cause drowsiness or dizziness.

**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.**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.**vPvB:** No further relevant information available.**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.

Printing date 26.12.2017

Version number 5

Revision: 26.12.2017

**Trade name: ZEFFLE GK-510****SECTION 14: Transport information****14.1 UN-Number:****ADR, IMDG, IATA****UN1263****14.2 UN proper shipping name:****ADR:****1263 PAINT, solution****IMDG, IATA****PAINT, solution****14.3 Transport hazard class(es):****ADR, IMDG, IATA****Class:****3 Flammable liquids.****Label:****3****14.4 Packing group:****ADR, IMDG, IATA****III****14.5 Environmental hazards:****Marine pollutant:****No****14.6 Special precautions for user:****Warning: Flammable liquids.****Danger code (Kemler):****30****EMS Number:****F-E,S-D****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.****ADR****Limited quantities (LQ):****5L****Excepted quantities (EQ)****Code: E1****Maximum net quantity per inner packaging: 30 ml****Maximum net quantity per outer packaging: 1000 ml****Transport category:****3****Tunnel restriction code:****D/E****IMDG****Limited quantities (LQ)****5L****Excepted quantities (EQ)****Code: E1****Maximum net quantity per inner packaging: 30 ml****Maximum net quantity per outer packaging: 1000 ml****UN "Model Regulation":****UN1263, PAINT, solution, 3, III****SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Labelling according to Regulation (EC) No 1272/2008****The product is classified and labelled according to the CLP regulation.****Hazard pictograms****GHS02 GHS07****Signal word** **Warning****Hazard-determining components of labelling:*****n*-Butyl acetate**

Printing date 26.12.2017

Version number 5

Revision: 26.12.2017

**Trade name: ZEFFLE GK-510****Hazard statements**

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**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)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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