

Printing date 26.12.2017

Version number 1

Revision: 28.01.2016

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name: ZEFFLE GK-500****Article number: GK500****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:**

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

P281 Use personal protective equipment as required.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

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:**

Tetrafluoroethylene copolymer	55-65%
CAS: 123-86-4 n-Butyl acetate	35-45%
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 1

Revision: 28.01.2016

Trade name: ZEFFLE GK-500

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**General information:** Seek immediate medical advice.

**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.

After contact with the molten product, cool rapidly with cold water.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:**

If symptoms persist consult a doctor.

Rinse mouth with water. Do not induce vomiting.

**4.2 Most important symptoms and effects, both acute and chronic:** No further relevant information available.

**Information for doctor:**

Vapors and fumes liberated during hot processing with this material may cause flu-like symptoms (chills, fever and, sometimes, cough) that may not occur until several hours after exposure and typically pass within about 36 to 48 hours.

**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:**

CO<sub>2</sub>

Dry sand

Fire-extinguishing powder

Alcohol resistant foam

Water spray

Water haze

**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.

**5.3 Advice for firefighters:** Remove receptacles from area of fire if possible.

**Protective equipment:**

Do not inhale explosion gases or combustion gases.

Wear self-contained breathing apparatus and protective suit.

Wear fully protective suit.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures:**

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

Avoid contact with eyes and skin.

Do not inhale the product.

Keep away from ignition sources.

**6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.

**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.

Do not flush with water or aqueous cleansing agents

**6.4 Reference to other sections:**

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Printing date 26.12.2017

Version number 1

Revision: 28.01.2016

Trade name: ZEFFLE GK-500

**SECTION 7: Handling and storage****7.1 Precautions for safe handling:***Use only in well ventilated areas.**Extractors are required on all machines used for thermal processing or powder handling processes.***Information about fire - and explosion protection:***Keep ignition sources away - Do not smoke.**Protect against electrostatic charges.***7.2 Conditions for safe storage, including any incompatibilities:****Storage****Requirements to be met by storerooms and receptacles:***Make floor, wall and columns of the storage location fire-resistant construction. Make beams noncombustible construction.**Store in a cool and dry location.**Provide solvent resistant, sealed floor.***Information about storage in one common storage facility:** *Store away from oxidising agents.***Further information about storage conditions:***Keep container tightly sealed.**Protect from heat and direct sunlight.**Store containers in a well ventilated area.**Store under lock and key and with access restricted to technical experts or their assistants only.***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****Ingredients with limit values that require monitoring at the workplace:****CAS: 123-86-4 n-Butyl acetate**OEL (Japan) 475 mg/m<sup>3</sup>, 100 ppmPEL (USA) 710 mg/m<sup>3</sup>, 150 ppmREL (USA) Short-term value: 950 mg/m<sup>3</sup>, 200 ppmLong-term value: 710 mg/m<sup>3</sup>, 150 ppmTLV (USA) Short-term value: 950 mg/m<sup>3</sup>, 200 ppmLong-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.**Keep away from tobacco products.**Do not eat or drink while working.***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.***Protection of hands:**

Protective gloves

**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.*

Printing date 26.12.2017

Version number 1

Revision: 28.01.2016

Trade name: ZEFFLE GK-500

**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:** 29 °C (SCC)

**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** 1.12

**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:** Danger of toxic fluorine based pyrolysis products.

**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** 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.

**CMR effects**

**Carcinogenicity** Based on available data, the classification criteria are not met.

Printing date 26.12.2017

Version number 1

Revision: 28.01.2016

**Trade name: ZEFFLE GK-500****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.**SECTION 14: Transport information****14.1 UN-Number:****ADR, IMDG, IATA**

UN1263

**14.2 UN proper shipping name:****ADR:****IMDG, IATA**

1263 PAINT, solution

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:****ADR****Limited quantities (LQ):**

5L

**Transport category:**

3

**Tunnel restriction code:**

D/E

**UN "Model Regulation":**

UN1263, PAINT, solution, 3, III

Printing date 26.12.2017

Version number 1

Revision: 28.01.2016

**Trade name: ZEFFLE GK-500****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**Hazard statements**

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

**Precautionary statements**

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

P281 Use personal protective equipment as required.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P405 Store locked up.

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

**Directive 2012/18/EU****Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t**Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t**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

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