Safety Data Sheet (SDS)

Date prepared 14–Apr–2017

Applicable products  
CHUKOH FLO® FABRIC FAF Series , FKF Series

1. Product and company identification

Product name  
See the applicable products above.

Company name  
CHUKOH CHEMICAL INDUSTRIES, LTD.

Address  
ATT New Tower 10F,  2–11–7, Akasaka, Minato-ku, Tokyo

Telephone  
03–6230–4414/81–3–6230–4417

Fax  
03–6230–4413/81–3–6230–4446

Recommended use and restrictions on use  
For industrial use

2. Hazards identification

GHS Classification  
Not applicable

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/Mixture</th>
<th>Chemical name or generic name</th>
<th>Concentration or concentration ranges</th>
<th>Chemical formula</th>
<th>Reference No. in gazetted list in Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fluoro resin</td>
<td>20～82%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Aromatic amide (aramid)</td>
<td>18～78%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Carbon Black *1</td>
<td>2.8% or less</td>
<td>C</td>
<td>1333–86–4</td>
</tr>
</tbody>
</table>


Impurities and stabilizing additives which contribute to the classification of the substance  
No information available

4. First-aid measures

Inhalation  
If fumes from heating or burning are inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention if you feel unwell.

Skin contact  
Wash with plenty of soap and water. If molten polymer contacts skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Seek medical advice/attention if irritation occurs.

Eye contact  
Flush eyes cautiously with water for several minutes. Seek medical advice/attention if irritation persists.

Ingestion  
Rinse mouth. Seek medical advice/attention if you feel unwell.

5. Fire-fighting measures

Extinguishing media  
Use extinguishing media appropriate for surrounding fire: Water, foam, powder, etc.

Specific hazards  
This product hardly flammable. Fire may produce irritating, corrosive, and/or toxic gas.

Specific fire-fighting procedures  
Move product from fire area if you can do so without risk. Fight fire from maximum distance and use unmanned hose holders or monitor nozzles.
Special protective equipment and precautions for firefighters: Wear self-contained breathing apparatus (SCBA). Firefighters should wear protection clothing and self-contained breathing apparatus (SCBA).

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Wear suitable protective equipment (see Section 8, Exposure controls/personal protection) to prevent inhalation and exposure of eyes or skin.
- Environmental precautions: Avoid discharge to rivers and environmental effects.
- Methods and materials for containment and cleaning up: Break into small pieces. Collect if scatter. Dispose in accordance with Section 13.

7. Handling and storage

- Handling:
  - Technical measures: Install equipment in Section 8, Exposure controls/personal protection. Wear protective equipment.
  - Precautions for safe handling: Do not smoke where this product is handled. Do not carry cigarettes, cigars or tobaccos and do not smoke in the workplace as decomposition gas may be inhaled by smoking if the substance contacts them. Wash hands thoroughly after handling. Ensure good ventilation/exhaustion. Avoid breathing dust/fume. Do not use at high temperatures. Do not heat. If this product may be used at high temperatures or heated, provide good ventilation and local exhaust ventilation system.
  - Avoidance of contact: See Section 10, Stability and reactivity.
  - Hygiene measures: Wash hands thoroughly after handling.

- Storage:
  - Conditions for safe storage: Stable at normal storage conditions. Storage at or below 25°C and 60% RH is preferred.
  - Safe containers and packaging materials: No restriction for packaging materials. Use containers which will not be broken.

8. Exposure controls/personal protection

- Allowable concentration: Not set
- Engineering measures: Provide good ventilation and local exhaust ventilation system during heating process.
- Protective equipment:
  - Respiratory protection: Wear appropriate respiratory protection if ventilation is not enough.
  - Hand protection: Wear appropriate gloves.
  - Eye protection: Wear eye protection.
  - Skin and body protection: Wear personal protective equipment including protective clothing and protective mask if necessary.

9. Physical and chemical properties

- Appearance:
  - Physical state: Solid
  - Form: Sheet
  - Color: FAF Series: Lightly blown or Black (FAF-419-32, FAF-407-20)
    FKF Series: Yellow ochre

- Odor: Odorless
- Odor threshold: Not available
- pH: Not available
- Melting point/freezing point: Not available
Boiling point, initial boiling point, Not available
Flash point Not available
Evaporation rate (butyl acetate=1) Not available
Flammability (solid, gas) Flame Retardancy
Flammable/explosive limit Lower Not available
Upper Not available
Vapor pressure Not available
Vapor density (Air=1) Not available
Specific gravity (density) Not available
Solubility Insoluble in water.
Partition coefficient (n-octanol/water) Not available
Autoignition temperature Not available
Decomposition temperature Not available
Viscosity Not available

10. Stability and reactivity

Reactivity Not available

Chemical stability Stable under normal storage and handling conditions.
May react with metal powders such as aluminum and magnesium or with fluorine compounds such as fluorine and chlorine trifluoride and cause fire and explosion.
Decomposes on heating or burning, emitting toxic fumes including those of hydrogen fluoride.

Possibility of hazardous reactions Hazardous reaction or polymerization generating excessive pressure/heat will not occur.

Conditions to avoid No information available

Incompatible materials Strong acid, Strong alkali
Metal powders such as aluminum and magnesium or fluorine compounds such as fluorine and chlorine trifluoride.

Hazardous decomposition products It does not decompose at normal temperature.
However, carbon dioxide, carbon monoxide, trace amounts of nitrogen oxides and hydrocyanic acid are generated as decomposition products during combustion.
Thermal decomposition of this product may evolve the following decomposition products at the following temperatures: Carbonyl fluoride and hydrogen fluoride (above 400°C), Tetrafluoroethylene (above 430°C), Hexafluoropropylene (above 440°C), Perfluoroisobutylene (above 475°C).

11. Toxicological information

Acute toxicity Oral Not available
Dermal Not available
Inhalation (vapor) Not available
Inhalation (dust) Not available

Skin corrosion/irritation Not available
Serious eye damage/eye irritation Not available
Respiratory sensitization Not available
Skin sensitization Not available
Germ cell mutagenicity Not available
Carcinogenicity Not available
Reproductive toxicity Not available
Specific target organ toxicity (single exposure) Not available
<table>
<thead>
<tr>
<th>Specific target organ toxicity (repeated exposure)</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspiration hazard</td>
<td>Not available</td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
<tr>
<td>Effects on humans</td>
<td>Inhalation of fumes from burning may produce polymer fume fever, a temporary flu-like condition with fever, chills and cough. This may last for a whole day and night. Skin absorption will not occur. There are no reports of sensitization.</td>
</tr>
<tr>
<td>Effects of hydrogen fluoride</td>
<td>Inhalation of low concentrations of hydrogen fluoride can initially include symptoms of choking, coughing, and severe eye, nose, and throat irritation, fever, chills for one to two days, followed by difficulty in breathing, cyanosis, and pulmonary edema. Overexposure to hydrogen fluoride can injure the liver and kidneys.</td>
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<tr>
<td>Effects of carbonyl fluoride</td>
<td>Skin: Irritation with discomfort or rash Eye: Corrosion with corneal or conjunctival ulceration Upper respiratory passage: Irritation Lung: Temporary irritation effects with cough, discomfort, difficulty in breathing, or shortness of breath (Individuals with pre-existing diseases of the lungs may have increased susceptibility to the toxicity after excessive exposures to thermal decomposition products.)</td>
</tr>
</tbody>
</table>

12. Ecological information

| Hazardous to the aquatic environment (acute) | Not available |
| Hazardous to the aquatic environment (long-term) | Not available |
| Hazardous to the ozone layer | Does not contain any substances that deplete the ozone layer listed in Annexes to the Montreal Protocol. |

13. Disposal considerations

| Waste from residues | Dispose in accordance with applicable laws and regulations and standards of local governments. Entrust the disposal to a licensed waste disposal contractor or a local public body who conducts the disposal. When entrusting the disposal to a disposal contractor, notify the danger and toxicity thoroughly to the contractor. |
| Contaminated container and packaging | Dispose in accordance with applicable laws and regulations and standards of local governments. |

14. Transport information

| International regulations | Regulatory Information by Sea | Not dangerous goods |
| Domestic regulations (Japan) | Regulatory Information by Air | Not dangerous goods |
| Land transport regulations | Not applicable |
| Marine transport | Not dangerous goods |
| Air transport regulations | Not dangerous goods |

| Special safety measures | Confirm that there is no damage, corrosion, or leakage of the containers before transportation. Avoid direct sunlight at transportation. Load containers not to cause damage, corrosion or leakage and thoroughly prevent load collapse. Do not stack heavy objects. |
| Emergency Response Guidebook No. | None |
15. Regulatory information

Industrial Safety and Health Act
Hazardous Substances to be notified in terms of Whose Names, etc (Article 57-2 of the Act, and Attached Table 9 of Article 18-2 of the Enforcement Order)
(Carbon Black)
*2: Applicable to FAF-410-32, FAF-407-20

16. Other information

Hazard statements herein are made based on the assumption of industrial use and general handling. Handle with care at the actual use by referring to the hazard statements herein.

Restrictions on use
This product is not intended for medical use. Do not use this product for implant or in a way that will contact with the body fluid or tissue. Consult with us in advance if it is expected to use the product in medical field.

References
SDS made by raw material manufacturers.

The information herein may be revised if any new findings are obtained. Values of concentration and physical and chemical properties are not guaranteed values. Hazards identification was prepared based on the documents, information and data available at the time of preparation, but it does not mean that all documents, information and data are covered.