MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY NAME : Hakko Corporation

ADDRESS : 4-5, Shiokusa 2-chome, Naniwa-ku,

Osaka, 556-0024 Japan

SECTION IN CHARGE : Research & Development Center

EMERGENCY TELEPHONE : 81-6-6561-3225 (FAX: 06-6568-0821)

NUMBER/REFERENCE : Sales Division

PRODUCT NAME: Main filter for FA-430

Model: No.A1586

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : N/A

GHS LABEL ELEMENTS : N/A

PICTOGRAM OR SYMBOL: N/A

HAZARD INFORMATION: Fumes evolved from

high-temperature molten

resins are irritating to eyes

and respiratory system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single substance or mixture:

Mixture

General name: Filter unit

Chemical name and content

| Name of composed materials | Rate of weight(%) | Rate(%) | CAS No. | Chemical name |
|--------------------------------|-------------------|---------|-----------|------------------|
| Non-riffled zine-plating sheet | 55.6 | - | - | - |
| Pleatable filter | 22.5 | - | 9003-07-0 | polypropylene |



| Name of composed materials | Rate of weight(%) | Rate(%) | CAS No. | Chemical name |
|-----------------------------------|-------------------|---------|-------------|---------------------|
| Honeycomb Activated carbon filter | 1.13 | | | |
| Adsorbent | - | 55 | 64365-11-3 | Activated carbon |
| Basic material | - | 30 | 9003-11-6 | Polyether |
| | | | 584-84-9 | TDI |
| Glue | - | 15 | 57828-93-0 | 2-PROPENOIC ACID |
| Fibrous activated carbon filter | 0.84 | - | - | - |
| Adsorbent | - | 55 | 64365-11-3 | Activated carbon |
| Basic material | - | 30 | 113669-95-7 | Polythene fiber |
| Glue | - | 15 | 57828-93-0 | 2-PROPENOIC ACID |
| Chloroprene sponge sealing | 1.41 | - | - | - |
| Glue bond | 18.3 | - | - | - |
| aluminium rivets(16) | 0.22 | - | - | - |

4. FIRST-AID MEASURES

Eye contact : Not likely to get into eyes due to physical form. However, if

small pieces of the product get into eyes, immediately flush eyes with water without rubbing them. Rubbing may cause

eye irritation and/or cornea damage.

Inhalation : Not likely to be inhaled due to physical form. However, if

fumes emitted when the product is molten are inhaled, remove the affected person to fresh air. Seek immediate

medical attention if required.

Ingestion : Not likely to be ingested due to physical form. However, if

small pieces of the product are ingested, have the affected

person gargle them out immediately. Seek medical

attention if required.



5. FIRE FIGHTING MEASURES

Extinguishing media : Use water spray, alcohol-resistance foam,

dry chemical power or carbon dioxide.

Hazardous : May include dense black smoke, carbon

combustion products monoxide, nitrogen oxides, hydrogen

chloride and other toxic gases or fumes.

Special fire fighting procedures : • Work from the windward side.

· Shut off fire sources if possible.

 Take appropriate measures to prevent environmental contamination caused by fire extinguishing agent or water.

· Evacuate affected persons to a safe

area.

Protection of fire fighters : • Wear gas mask.

· Wear appropriate protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal protection : Nothing of particular note.

Removing procedures : Carefully sweep up.

7. HANDLING & STORAGE

Handling

Technical measures : (Prevention of fire or explosion)

Keep the product away from heat, spark or fire sources.

The filter is combustible.

Precaution: Washing forbidden

Precaution for safe handling : Heating to higher than 80 $^{\circ}$ C may evolve irritating fumes.

Storage

Suitable storage conditions : Store the product in a cool dry place away from direct

sunlight. Do not place heavy objects on the product.

Avoid contacting with acid and the alkali.

Storage conditions to avoid : Store the product away from heat sources.

Store the product away from fire sources. –No smoking

Store the product away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Administrative level : Not determined.



Allowable concentration : Japan Society for Occupational Health: 2.0mg/m3(Total dust)

; Activated carbon

Protective gear

Protective gear for respiratory : Not required in normal conditions. But a dust respirator should be

used in dusty conditions.

Protective gear for eyes : Not required

Protective gloves : Not required
Protective clothing : Not required

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

APPEARANCE : Solid

Color : Frame : Silver white

Filter: White

Odor : Smell-less

pH: Not applicable

Boiling point/range : Not available

Melting point/Freezing point : Not available

Ignition point : Not available

Explosiveness : None

Specific gravity/Density : Not available

Solubility in water : Insoluble

10. STABILITY AND REACTIVITY

Stability: The product is deemed stable under normal storage and handling

conditions.

Incompatible materials : Acid, Base

Other : Combustion, thermal decomposition or incomplete combustion of

the product may cause carbon monoxide, nitrogen oxides, hydrogen

chloride and other toxic gases or fumes to occur.

11. TOXICOLOGICAL INFORMATION

MUTAGENICITY :

Reverse Mutation Test : Data not available

(Ames Test)

Chromosome Aberration Test : Data not available



12. ECOLOGICAL INFORMATION

Degradation : Data not available
Bioaccumulation : Data not available
Toxicity for fish Data not available

13. DISPOSAL CONSIDERATIONS

The package of the product must be disposed of in a manner conforming to applicable laws and regulations, or by approved subcontractors in a manner specified by the manufacturer.

14. TRANSPORTATION INFORMATION

International rules : Nothing of particular note.

No UN number allocated.

Special safety measures required : The product is not classified as dangerous goods.

Keep the product away from direct sunlight and rainwater

during transportation.

15. REGULATORY INFORMATION

Industrial Safety and Health Law

Hazardous Materials Requiring Notification : Manganese, Nickel, Chrome, Copper,

Solid paraffin(parts made of metals)

Ordinance on Prevention of Dust Hazard : Activated carbon

Ordinance on Prevention of Oxygen Deficiency : Activated carbon

Fire service Act : Designated combustibles

Law Relating to Prevention of Marine Pollution : Not dangerous substances according to

and Maritime Disaster Appended Table 1-2; Polypropylene

16. OTHER INFORMATION

Reference:

MSDS issued by the manufacturer.

This document has been prepared based on the information and data that are available as of this date. Therefore, it may be revised when new information or data has been obtained.

The information and data contained herein are subject to the normal use. The evaluation of dangerousness and toxicity is, therefore, not always applicable. For this reason, the safety precautions suitable for your purpose and method must be taken prior to the use.

