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SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| Product Name | FO (Refer to attachment) | | |
|----------------------------|-----------------------------------------------------------------|--|--|
| General Use | Precision lapping | | |
| MANUFACTURER | | | |
| Company Name | Fujimi Incorporated | | |
| Address | 1-1, Chiryo-2, Nishibiwajima-cho, Kiyosu, Aichi, 452-8502 Japan | | |
| Telephone | 81-58-381-0164 | | |
| Department issuing SDS | | | |
| Company Name | Fujimi Incorporated | | |
| Address | | | |
| Quality Assurance Division | 1-1, Chiryo-2, Nishibiwajima-cho, Kiyosu, Aichi, 452-8502 Japan | | |
| Tel | 81-58-381-0164(Quality Assurance Division) | | |
| Fax | 81-58-382-8677(Quality Assurance Division) | | |
| Emergency contact | 81-58-381-0164(Quality Assurance Division) | | |
| E-mail | msds@fujimiinc.co.jp | | |
| | | | |

2. HAZARDS IDENTIFICATION

GHS classification Health hazards

Specific target organ toxicity - Single exposureCategory 3Specific target organ toxicity - Repeated exposureCategory 1 (Lungs)The other hazard categories are "Not applicable," "Not classified," and "Classification not possible."

GHS label elements

| Pictograms | |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Signal words | Danger |
| Hazard statements | May cause respiratory irritation Causes damage to organs through prolonged or repeated exposure inhalation (Lungs) |
| Precautionary statements | |
| Prevention | Do not breathe dust/fume/gas/mist/vapours/spray. |
| | Use only outdoors or in a well-ventilated area. |
| | Wash thoroughly after handling. |
| | Do not eat, drink or smoke when using this product. |
| Response | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| | Get medical advice/attention if you feel unwell. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. |
| | Store locked up. |

DisposalDispose of contents / container in accordance with local / regional /
national / international regulation.

| <u>Component</u> | <u>Chemical Name</u> | Wt% | <u>CAS Registry#</u> |
|------------------|----------------------|-------|----------------------|
| Al_2O_3 | Aluminium oxide | > 40% | 1344-28-1 |
| $ZrSiO_4$ | Zirconium silicate | < 60% | 10101-52-7 |

| 4. FIRST AID MEASURES | |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INHALATION | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if needed. If breathing has stopped, loosen tight clothing, ensure clear airway, and give artificial respiration. Do not use mouth-to-mouth resuscitation. If vomiting occurs, place on left side and ensure clear airway. |
| SKIN CONTACT | Immediately remove contaminated clothing. Wash skin with running water or shower. If skin irritation or rash occurs, get medical attention. |
| EYE CONTACT | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. |
| INGESTION | If victim feels unwell, contact a physician. Rinse mouth. |
| Protection of first aiders | The rescuer wears a tool for appropriate protection such as rubber gloves, goggles. |
| Expected acute symptom and late symptom | Not available |
| 5. FIRE FIGHTING MEASURES | |
| Fire-Fighting Methods | Combustion or exposure to high heat may cause toxic gases. Wear respiratory protection. The product itself is not flammable. Use spray water to keep containers cool if exposed to flame. Remove containers away from fire area if it can be done safely. Extinguish fire from the windward side where possible. |
| Extinguishing Media | Use extinguishing media most appropriate for the surrounding fire. |
| Extinguishing media that do not use it | Not available |
| Specific hazards | Not available |
| Autoignition Temperature | Not available |
| Explosion Limits: Lower | Not available |
| Explosion Limits: Upper | Not available |
| FIREFIGHTING INSTRUCTIONS | Wear appropriate protective equipment (gloves, glasses, and mask) while extinguishing fire. |
| | |

6. ACCIDENTAL RELEASE MEASURES

| Personal precautions, protective equipment and | Use appropriate personal protective equipment as indicated in Section 8. |
|---------------------------------------------------|---------------------------------------------------------------------------|
| emergency procedures. | |
| Environmental precautions | Do not release into the environment such as sewers or rivers. |
| Material and methods for | Minor spill: Vacuum up or remove in a manner that prevents dust from |
| containment and cleanup | spreading. |
| | Major spill: Cover the area with plastic sheets or similar to prevent the |
| | spill from spreading. Collect in drums for reuse or disposal. |

| Preventive measures for secondary accident | Do not release into sewers, surface water, or groundwater. |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7. HANDLING AND STORAGE HANDLING | Wear appropriate protective equipment and handle in a manner that prevents inhalation of dust. Provide local ventilation to prevent dust build-up. |
| PRECAUTIONS FOR SAFE HANDLING | Avoid dust inhalation. Do not touch, inhale, or swallow. |
| STORAGE | Store in a well-ventilated area. Wear appropriate protective equipment such as protective gloves and protective glasses to prevent contact with the skin, mucous membranes, clothes, or eyes. Avoid eye and skin contact. |
| The safe container materials for packaging. | Keep in the polyethylene container. |
| 8. EXPOSURE CONTROLS, PER | SONAL PROTECTION |
| Engineering Controls | Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use local exhaust device on polisher. |
| Protective Equipment | |
| Eye / Face Protection Hand Protection | Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective gloves to prevent skin exposure. |
| Respiratory Protection | Use protective masks and canisters appropriate for the dust, mist, and gases. |
| Skin and body protection EXPOSURE GUIDELINES | Protective clothes, protective boots, protective aprons ACGIH Al ₂ O ₃ TWA 1mg/m ³ |

ACGIH ZrSiO₄ TWA 5mg/m³, STEL 10mg/m³ (as Zr)

9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | Powder |
|---------------------|----------------|
| Color | Light brown |
| Odor | Odorless |
| Specific Gravity | 4.2 |
| Flash Point | Not available |
| Solubility in Water | Insolubility |
| pH | Not applicable |
| Viscosity | Not available |

10. STABILITY AND REACTIVITY

| Chemical Stability | Stable at normal temperatures and pressure. |
|----------------------------------|---------------------------------------------|
| Conditions to Avoid | Dust generation. |
| Materials to avoid | Not available |
| Hazardous Decomposition Products | Not available |
| Hazardous Polymerization | Not available |

11. TOXICOLOGICAL INFORMATION

| Acute toxicity (oral) | No data is available on the product itself. |
|-----------------------------|---------------------------------------------|
| Acute toxicity (dermal) | No data is available on the product itself. |
| Acute toxicity (inhalation) | No data is available on the product itself. |

| Skin Corrosion/Irritation | No data | is available on the product itself. | |
|----------------------------------|---------------------------------------------|-----------------------------------------------------------|-----|
| | May cau | se irritation to skin and cause skin roughness upon repea | ted |
| | contact, | if a person has hypersensitive constitution. | |
| Eye Damage/Irritation | No data is available on the product itself. | | |
| | May cau | se irritation and inflammation to eyes in the worst case. | |
| Respiratory sensitization | No data is available on the product itself. | | |
| Skin sensitization | No data is available on the product itself. | | |
| Germ cell mutagenicity | No data is available on the product itself. | | |
| Carcinogenicity | No data is available on the product itself. | | |
| Reproductive toxicity | No data is available on the product itself. | | |
| Specific target organ toxicity - | Al_2O_3 | Inhalation of high concentrations of dusts of this | 1) |
| Single exposure | | substance may cause eyes and upper respiratory tract | |
| | | irritation. | |
| Specific target organ toxicity - | Al_2O_3 | Aluminium oxide was the most likely cause for the | 2) |
| Repeated exposure | | development of interstitial fibrosis in these workers. | |
| | | | |

12. ECOLOGICAL INFORMATION HAZARDOUS TO THE AQUATIC ENVIRONMENT No data is available on the product itself.

13. DISPOSAL CONSIDERATIONS

Comply with all national and local regulations. Do not dump this product into sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION

| Not applicable |
|----------------|
| Not applicable |
| Not applicable |
| Not applicable |
| |

15. REGULATORY INFORMATION

| TSCA inventory | All components on TSCA inventory. |
|------------------------------------|-----------------------------------|
| OSHA (Occupational Safety & Health | Applicable |
| Act) Hazard Chemical | |
| TRI(Toxic Release Inventory) | Not applicable |
| | |

16. OTHER INFORMATION

The information contained in this SDS is based on data currently available and is subject to revision as additional knowledge and experience are gained. Precautions are given on the assumption that the product is handled in a usual manner. If the product is to be used in a special manner or environment, proper safety measures must be taken according to the application and method used. The information is provided without any warranty, express or implied, regarding its correctness.

References

- 1) ICSC (International Chemical Safety Cards)
- 2) EHC (Environmental Health Criteria)

Attachment

Product name list

| FO#240 | |
|-----------|--|
| FO#280 | |
| FO#320 | |
| FO#400 | |
| FO#500 | |
| FO#600 | |
| FO#700 | |
| FO#800 | |
| FO#1000 | |
| FO#1200 | |
| FO#1200MR | |
| FO#1500 | |
| FO#2000 | |
| FO#3000 | |
| FO#4000 | |
| FO#6000 | |
| FO#7000 | |
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