Product Name: DEVELOPER IU210C

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: DEVELOPER IU210C used for: bizhub C250/C250P, C252/C252P

Supplier Identification:
Konica Minolta Business Solutions (Canada), Ltd. 369 Britannia Road East Mississauga, Ontario L4Z 2H5
Telephone: (905)890-6600 Facsimile: (905)283-2511
Emergency Telephone No.
CHEMTREC
Telephone: 1-800-424-9300
WHMIS: This product is NOT subject to the controlled products regulations.
2. COMPOSITION / INFORMATION ON INGREDIENTS Substance [ ] Preparation [X]

Major Ingredients:

| [Generic | Name] | [CAS No.] | $[\%]$ |
| :--- | :--- | :--- | :--- |
| Ferrite | Iron oxide | $1309-37-1$ | $60-70$ |
| . | Manganese oxide | $1344-43-0$ | $15-25$ |
| . | Magnesium oxide | $1309-48-4$ | $1-10$ |
| Styrene-acrylic resin | +++ | $1-10$ |  |
| Acryl resin | +++ | $1-10$ |  |
| Organic pigment | +++ | $<1$ |  |

+++: Supplier's confidential information

Hazardous Ingredients:
Chemical Name: Manganese oxide
OSHA Z-Tables(USA):ceiling 5mg/m3

ACGIH-TLV(USA): $0.2 \mathrm{mg} / \mathrm{m} 3$
Worksafe-TWA(Aust): $1 \mathrm{mg} / \mathrm{m} 3$

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## 3. HAZARDS IDENTIFICATION

| Emergency Overview: | Cyan powder (mean dia. is 30um by volume). <br> Almost odorless |
| :--- | :--- |
| Classification: | Not classified as dangerous. (1999/45/EC) |
| Most Important Hazards and Effects of the Products |  |
| Ingestion Effect: | None currently known. <br> Inhalation Effect: <br> None currently known. Minimal respiratory tract irritation may occur as with exposure <br> to large amount of any non-toxic dust. |
| Eye Effect: | None currently known. |
| Skin Effect: | None currently known. |
| Chronic Effects: | Prolonged inhalation of excessive dusts may cause lung damage. Use of this <br> product, as intended, does not result in inhalation of excessive dust. |
| Environment Hazards: | No data are available on the adverse effects of this product on the environment. |
| Specific Hazards: | Dust explosion (like most finely divided organic powders) |

4. FIRST-AID MEASURES

Ingestion: Wash out mouth with water. Drink one or two glasses of water. If symptoms occur, get medical attention.
Inhalation: Move victim to fresh air immediately. If symptoms occur, get medical attention.
Eye Contact: Immediately flush eyes with plenty of water for 15 minutes. If symptoms occur, get medical attention.
Skin Contact: Wash with water and mild soap.

## 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: CO2, water spray, foam and dry chemical
Extinguishing Media to Avoid: Full water jet
Fire and Explosion Hazards: If dispersed in air, like most finely divided organic powders, may form an explosive mixture.
Protection of Firefighters: Use self-contained breathing apparatus(SCBA).
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: None
Environmental Precautions: None
Methods for Cleaning Up: Wear personal protective equipment(See Section 8). Vacuum or sweep material and place in a bag and hold for waste disposal. Use vacuum equipped with High Efficiency Particulate Air(HEPA) filter. Vacuum should be electrically bonded and grounded to dispel static electricity. To avoid dust generation, do not sweep dry.

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## 7. HANDLING AND STORAGE

Handling
Technical Measures: None
Precautions: Do not breathe dust. Avoid contact with eyes.
Safe Handling Advice: Try not to disperse the particulates.
Storage
Technical Measures: None
Storage Conditions: Keep container closed. Store in a cool and dry place. Keep out of reach of children.
Incompatible Products: None
Packaging Materials: Bottles or Cartridge designated by Konica Minolta.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures
Ventilation: $\quad$ None required with intended use.
Control Parameters(As total dust)
ACGIH-TLV(USA): $\quad 10 \mathrm{mg} / \mathrm{m3}$ (Inhalable particles), $\quad 3.0 \mathrm{mg} / \mathrm{m3}$ (Respirable particles)
OSHA-PEL(USA): $\quad 15 \mathrm{mg} / \mathrm{m3}$ (Total dusts), $\quad 5.0 \mathrm{mg} / \mathrm{m} 3$ (Respirable fraction)
DFG-MAK(GER): $\quad 4 \mathrm{mg} / \mathrm{m3}$ (Inhalable fraction), $\quad 1.5 \mathrm{mg} / \mathrm{m3}$ (Respirable fraction)
Worksafe-TWA(Austl.): $\quad 10 \mathrm{mg} / \mathrm{m} 3$
Personal Protective Equipment
Not required under normal conditions. For use other than in normal operating procedures (such as in the event of large spill), goggles and respirators may be required.
Hygiene Measures: Wash hands after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Physical State: Solid
Form: Powder (mean dia. is 30 um by volume)
Odor:
PH
Boiling Point $\left({ }^{\circ} \mathrm{C}\right)$ :
Melting Point( ${ }^{\circ} \mathrm{C}$ ):
Flash Point $\left({ }^{\circ} \mathrm{C}\right)$ :
Ignition Temperature $\left({ }^{\circ} \mathrm{C}\right)$ :
Explosion Properties:
Vapor Pressure:
Specific Gravity:
Solubility:
Partition Coefficient, n-Octanol/Water:

Color: Cyan
Almost odorless
Not applicable
Not applicable
Around 125C(257F) (Softening Point)
Not applicable
No data available
Not applicable
5.0

Insoluble in water.
Not applicable

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## 10. STABILITY AND REACTIVITY <br> Stability: <br> Hazardous Reactions: <br> Conditions to avoid: <br> Materials to Avoid: <br> Hazardous Decomposition Products: Hazardous Polymerization: <br> Stable except above 200C(392F). <br> Dust explosion, like most finely divided organic powders. <br> Electric discharge, throwing into fire. <br> Oxidizing materials. <br> $\mathrm{CO}, \mathrm{CO} 2$, and smoke. <br> Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Ingestion(oral), LD50(mg/kg): >2500 (Rat) *
Dermal, LD50(mg/kg): No data available
Inhalation, LC50(mg/): No data available
Eye irritation: No data available
Skin irritation: Mild irritant (Rabbit) *
Skin sensitizer: Non sensitizer * (Guinea-Pig) *
Local Effects: see Chronic Toxicity or Long term Toxicity
Chronic Toxicity or Long Term Toxicity:
Prolonged inhalation of excessive dust may cause lung damage. It is attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust.
In a study in rats by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in $92 \%$ of rats in the high concentration $\left(16 \mathrm{mg} / \mathrm{m}^{3}\right)$ exposure group, and a minimal to mild degree of fibrosis was noted in $22 \%$ of the animals in the middle $\left(4 \mathrm{mg} / \mathrm{m}^{3}\right)$ exposure group. But no pulmonary change was reported in the lowest $\left(1 \mathrm{mg} / \mathrm{m}^{3}\right)$ exposure group, the most relevant level to potential human exposures.
Carcinogenicity
IARC Monographs: Not listed
NTP(USA): Not listed
OSHA Regulated(USA): Not listed
Mutagenicity:
Teratogenicity:
Negative * (AMES test)
No data available
(*= Based on data for other Konica Minolta Products with similar ingredients)
12. ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment.

| Ecotoxicity: | No data available |
| :--- | ---: |
| Mobility: | No data available |
| Persistence and degradability: | No data available |
| Bioaccumulative potential: | No data available |

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## 13. DISPOSAL CONSIDERATION

When disposing of the waste or recovered material, consult federal, state and/or local regulations for the proper disposal method.

## 14. TRANSPORT INFORMATION

Information on Code and Classifications According to International Regulations
UN Classification: None
Further information: Not a dangerous good under IATA or IMDG.
15. REGULATORY INFORMATION

US Information
Information on the label: Not required
TSCA(Toxic Substances Control Act):
All chemical substances in this product comply with all applicable rules or order under TSCA.
California Proposition 65:
This product contains no chemical substances subject to California Proposition 65.
EU Information
Information on the label (1999/45/EC and 67/548/EEC): Not required
Article14 (2.1) of Directive 1999/45/EC is not applicable to this product.
WHMIS(Canada): This product is NOT subject to the controlled products regulations.
16. OTHER INFORMATION

HMIS Rating: The National Paint and Coating Association(USA): Health: 1 Flammability: 1 Reactivity: 0 Recommended Uses: Starter for Electrophotographic Equipment
Revision Information: Regular revision on revised date.
Literature References:
ANSI Z400.1-1993
ISO 11014-1
Commission Directive 91/155/EEC
H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, R.Kilpper, J.C.MacKenzie, P.Morrow, U.Mohr, S.Takenaka, and R.Mermelstein(1991)

Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats. Fundamental and Applied Toxicology 17, pp.280-299.

## Restrictions:

The above information is believed to be accurate and represents the best information currently available to Our Corporation. However, Our Corporation makes no warranty with respect to such information, and Our Corporation assumes no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.

