

**1. Identification**

**Product identifier** InfoPrint 4100 Micr Developer  
**Other means of identification**  
**Product code** 56Y2100, 56Y2101  
**Synonyms** Company Chemical No.: 940114010  
**Recommended use** Developer for use in InfoPrint printers.  
**Recommended restrictions** None known.

**Manufacturer / Importer / Supplier / Distributor information**

**Company name** Ricoh Company Ltd.  
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Boulder, Colorado 80301-9270  
U.S.A.  
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**Website** www.infoprint.com  
**E-mail** msdsinfo@infoprint.com

**Emergency phone number** 1-760-476-3961; Access: 333114

**2. Hazard(s) identification**

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

**Label elements**

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** None.  
**Precautionary statement**  
**Prevention** Observe good industrial hygiene practices.  
**Response** Get medical attention/advice if you feel unwell.  
**Storage** Store away from incompatible materials.  
**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** Fine particles may form explosive mixtures with air.

**3. Composition/information on ingredients****Mixtures**

Chemical name	CAS number	%
Magnesium oxide	1309-48-4	7-13
Polyester resin	174125-81-6	3-7
Carbon black	1333-86-4	0.1-1
Charge control dye	8005-02-5	0.1-1
Silica	68611-44-9	0.1-1
Wax	9003-07-0	0.1-1

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

**Inhalation** If symptomatic, move to fresh air. Get medical attention if any discomfort continues.

<b>Skin contact</b>	Wash skin with soap and water. Should dermal irritation or dermal sensitization occur, seek medical attention.
<b>Eye contact</b>	Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
<b>Ingestion</b>	Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort continues.
<b>Most important symptoms/effects, acute and delayed</b>	May cause abdominal discomfort if swallowed.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Extinguish with foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	None.
<b>Specific hazards arising from the chemical</b>	Dust may form explosive mixture with air. Fire or high temperatures create: Carbon oxides. Silicium oxide Unidentified organic compounds.
<b>Special protective equipment and precautions for firefighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
<b>Fire-fighting equipment/instructions</b>	Avoid dust formation.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Wear necessary protective equipment.
<b>Methods and materials for containment and cleaning up</b>	Sweep or scoop up and remove. Avoid dust formation. Avoid sparks and prevent accumulation of electrostatic charges. Collect and dispose of spillage as indicated in section 13 of the SDS. Inform authorities if large amounts are involved.
<b>Environmental precautions</b>	Avoid discharge into water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Wear necessary protective equipment. Use personal protection as recommended in Section 8 of the SDS. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in closed original container in a dry place. Keep away from heat, sparks and open flame. Store away from incompatible materials.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m <sup>3</sup>	
Magnesium oxide (CAS 1309-48-4)	PEL	15 mg/m <sup>3</sup>	Total particulate.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m <sup>3</sup>	Inhalable fraction.
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Provide adequate ventilation.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** If significant eye exposure is anticipated, the use of chemical safety goggles is recommended.

#### Skin protection

**Hand protection** If significant skin exposure is anticipated, appropriate gloves should be worn to prevent skin contact with this substance. Suitable gloves can be recommended by the glove supplier.

<b>Other</b>	No protection is ordinarily required under normal conditions of use.
<b>Respiratory protection</b>	No protection is ordinarily required under normal conditions of use and with adequate ventilation. During dust-raising work: If ventilation is insufficient, suitable respiratory protection must be provided.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Color</b>	Black.
<b>Odor</b>	Slight odor.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	2859.8 °F (1571 °C) / Not applicable.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	1.35 (Water = 1)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not applicable.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under normal temperature conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, sparks, flames.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon oxides. Silicium oxide. Unidentified organic compounds.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	No harmful effects expected in amounts likely to be ingested by accident.
<b>Inhalation</b>	Respiratory tract irritation may occur with exposure to large amounts of dust.
<b>Skin contact</b>	Not known to Ricoh Production Print Solutions Company as a dermal irritant or dermal sensitizer.
<b>Eye contact</b>	May cause irritation through mechanical abrasion.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	May cause discomfort if swallowed.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	As with exposure to high concentrations of any dust, irritation of the respiratory tract may occur. Persons with certain pre-existing upper respiratory disorders, such as bronchitis or asthma have an increased risk of irritation.
<b>Skin corrosion/irritation</b>	No data available.
<b>Serious eye damage/eye irritation</b>	May cause temporary eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	No data available.
<b>Skin sensitization</b>	Not known to Ricoh Production Print Solutions Company as a dermal irritant or dermal sensitizer.
<b>Germ cell mutagenicity</b>	No data available.
<b>Carcinogenicity</b>	Pure carbon black, a minor component of this product, is not classified as hazardous when bound in toner polymers.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Carbon black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
<b>Reproductive toxicity</b>	No data available.
<b>Specific target organ toxicity - single exposure</b>	No data available.
<b>Specific target organ toxicity - repeated exposure</b>	No data available.
<b>Aspiration hazard</b>	No data available.
<b>Chronic effects</b>	Chronic exposure may cause potential risk of irreversible pulmonary effects. Chronic exposure is highly unlikely when this product is used as intended.

## 12. Ecological information

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	Not available.
<b>Mobility in general</b>	The product is insoluble in water.
<b>Other adverse effects</b>	Not available.

## 13. Disposal considerations

<b>Disposal instructions</b>	Do not discharge into drains or the environment, please contact your local municipality / waste handler for disposal requirements.
<b>Hazardous waste code</b>	Not regulated.
<b>Waste from residues / unused products</b>	Dispose in accordance with all applicable regulations.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.

## 15. Regulatory information

<b>US federal regulations</b>	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
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