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Product Name: DEVELOPER DV512K

Prepared Date:25-Apr-2011

Revised Date: 14-Oct-2022

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**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

Product Name: DEVELOPER DV512K

Katun PN 41141

KN BIZHUB C224 DEV BLK 600K OEM

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

used for: bizhub C554/C454/C364/C284/C224, C554e/C454e/C364e/C284e/C224e,  
554e/454e/364e/284e/224e

**1.3. Details of the supplier of the safety data sheet**

Supplier Identification:

Konica Minolta Business Solutions Europe GmbH

Europaallee 17, D-30855 Langenhagen, Germany

Telephone: +49-(0)511-7404-361

e-mail address : env@konicaminolta.eu

Facsimile: +49-(0)511-7404-396

**1.4. Emergency telephone number**

Information centre specialized on symptoms of poisoning

Telephone: +49-30-19240

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**2. HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture**

Regulation (EC) No 1272/2008

Classification: Not classified as dangerous.

**Hazard Communication Standard (USA)**

Classification: Not classified as dangerous.

**2.2. Label elements**

Precautionary pictograms: —

Signal word: —

Hazard Statement: —

Precautionary Statements: —

**2.3. Other hazards**

Dust explosion (like most finely divided organic powders).



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**3. COMPOSITION / INFORMATION ON INGREDIENTS****3.2. Mixtures**

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
Carbon black	1333-86-4	< 1
Amorphous silica	7631-86-9	< 1

+++ : Supplier's confidential information

Hazardous Ingredients:

Chemical Name: Carbon black

CAS No.: 1333-86-4

EINECS-No.: 215-609-9

NTP(USA): Not listed

California Proposition 65(USA): Listed

H code(EC): Not applicable

REACH Registration number: 01-2119384822-32-XXXX

IARC Monographs: Group 2B

DFG-MAK(GER): III 3B

Chemical Name: Manganese oxide

CAS No.: 1344-43-0

EINECS-No.: 215-695-8

H code(EC): Not applicable

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**4. FIRST-AID MEASURES****4.1. Description of 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.

**4.2. Most important symptoms and effects, both acute and delayed**

Not available.

**4.3. Indication of any immediate medical attention and special treatment needed**

Not available.

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**5. FIRE-FIGHTING MEASURES****5.1. Extinguishing media**

Suitable Extinguishing Media: CO2, water spray, foam and dry chemical

Extinguishing Media to Avoid: Full water jet

**5.2. Special hazards arising from the substance or mixture**

Fire and Explosion Hazards: If dispersed in air, like most finely divided organic powders, may form an explosive mixture.

**5.3. Advice for firefighters**

Protection of Firefighters: Use self-contained breathing apparatus(SCBA).



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**6. ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Wear personal protective equipment (See Section 8).

**6.2. Environmental precautions**

None

**6.3. Methods and material for containment and cleaning up**

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.

**6.4. Reference to other sections**None

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**7. HANDLING AND STORAGE****7.1. Precautions for safe handling**

Technical Measures: None

Precautions: Do not breathe dust. Avoid contact with eyes.

Safe Handling Advice: Try not to disperse the particulates.

**7.2. Conditions for safe storage, including any incompatibilities**

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 KonicaMinolta.

**7.3. Specific end use(s)**Not available.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTIO****8.1. Control parameters**

Control Parameters (As total dust)

ACGIH-TLV (USA): 10mg/m3 (Inhalable particles), 3.0 mg/m3 (Respirable particles)

OSHA-PEL (USA): 15mg/m3 (Total dusts), 5.0 mg/m3 (Respirable fraction)

DFG-MAK (GER): 4mg/m3 (Inhalable fraction), 1.5mg/m3 (Respirable fraction)

Safe Work Australia-TWA: 10mg/m3

Control Parameters (As Ingredients: Carbon black)

ACGIH-TLV (USA): 3mg/m3

OSHA Z-Table (USA): 3.5mg/m3

Safe Work Australia-TWA: 3mg/m3

Control Parameters (As Ingredients: Manganese oxide)

ACGIH-TLV(USA): 0.1mg/m3(Mn;Inharable Fraction)

0.02mg/m3(Mn;Respirable Fraction)

OSHA Z-Tables(USA):ceiling 5mg/m3

Safe Work Australia-TWA: 1mg/m3(Mn)

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**8.2. Exposure controls**

## Engineering Measures

Ventilation: None required with intended use.

## 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.

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**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

## Appearance

Physical State: Solid

Color: Black

Form: Powder (mean dia. is 30-40 um by volume)

Odor:

Almost odorless

PH

Not applicable

Boiling Point(°C):

Not applicable

Melting Point(°C)/[F]:

Around No data available /[] (Softening Point)

Flash Point(°C):

Not applicable

Auto-Ignition Temperature(°C):

No data available

Upper/ lower flammability or explosive limits

No data available

Explosion Properties:

No data available

Evaporation rate:

No data available

Vapor Pressure:

Not applicable

Vapor density:

Not applicable

Specific Gravity:

5

Solubility:

Insoluble in water.

Partition Coefficient, n-Octanol/Water:

Not applicable

Decomposition temperature:

Not applicable

**9.2. Other information**

No data available

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**10. STABILITY AND REACTIVITY****10.1. Reactivity**

Hazardous Polymerization: Will not occur.

**10.2. Chemical stability**

Stable except above 200C(392F).

**10.3. Possibility of hazardous reactions**

Dust explosion, like most finely divided organic powders.

**10.4. Conditions to avoid**

Conditions to avoid: Electric discharge, throwing into fire.

Materials to Avoid: Oxidizing materials.

**10.5. Incompatible materials**

No Information.

**10.6. Hazardous decomposition products**CO, CO<sub>2</sub>, and smoke.

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**11. TOXICOLOGICAL INFORMATION****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

## Acute Toxicity:

Ingestion(oral), LD50(mg/kg): >2000(Rat) \*  
Dermal, LD50(mg/kg): No data available  
Inhalation, LC50(mg/l): No data available  
Eye irritation: No data available  
Skin irritation: No data available

Skin sensitizer: No data available

Local Effects: see Chronic Toxicity or Long term Toxicity

## Chronic Toxicity or Long Term Toxicity:

In a two-year inhalation study of chronic toxicity and carcinogenicity using a typical toner in rats, there were no lung changes at all in the lowest exposure level (1mg/m<sup>3</sup>), the most relevant level to potential human exposures. A minimal to mild degree of fibrosis was noted in 22% of the animals at the middle exposure level (4mg/m<sup>3</sup>), and a mild to moderate degree of fibrosis was observed in 92% of the rats at the highest exposure level(16mg/m<sup>3</sup>). The lung changes observed in the higher exposure groups are interpreted in terms of "lung overloading", a series of generic responses to the presence of large quantities of respirable, insoluble and relatively benign dusts retained for extended time periods in the lungs. Lung tumor frequency was unchanged among rats exposed to toner at the three exposure levels, and for air-only control rats.

## Carcinogenicity

The IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This evaluation is given to Carbon Black for which there is inadequate human evidence, but sufficient animal evidence. The latter is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung.

Studies performed in animal models other than rats have not demonstrated an association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Mutagenicity: Negative \* (AMES test)

Teratogenicity: No data available

(\*= Based on data for other Konica Minolta Products with similar ingredients)

**11.2. Information on other hazards**No data available.

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**12. ECOLOGICAL INFORMATION**

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

**12.1. Toxicity**

No data available

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

No data available

**12.6. Endocrine disrupting properties**

No data available

**12.7. Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATION****13.1. Waste treatment methods**

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

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**14. TRANSPORT INFORMATION****14.1. UN number or ID number**

None (Not a dangerous good under IATA or IMDG.)

**14.2. UN proper shipping name**

None

**14.3. Transport hazard class(es)**

None

**14.4. Packing group**

None

**14.5. Environmental hazards**

None

**14.6. Special precautions for user**

None

**14.7. Maritime transport in bulk according to IMO instruments**

None

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**15. REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

## EU Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

- Regulation (EC) No 1005/2009 of the European Parliament and of the Council on Substances That Deplete the Ozone Layer: Not applicable
- Regulation (EU) 2019/1021 of the European Parliament and of the Council on Persistent Organic Pollutants (POPs): Not applicable
- Regulation (EU) No 649/2012 of the European Parliament and of the Council on Concerning the Export and Import of Dangerous Chemicals (PIC): Not applicable
- Directive 2012/18/EU of the European Parliament and of the Council on the Control of Major-Accident Hazards Involving Dangerous Substances, Amending and Subsequently Repealing Council Directive 96/82/EC, (Seveso III): Not applicable
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council:
  - Annex XIV- List of Substances Subject To Authorization: Not applicable
  - Annex XVII- Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: Not applicable

## US Information

TSCA (Toxic Substances Control Act):

All chemical substances in this product comply with all applicable rules or order under TSCA.

California Proposition 65:

Ingredient carbon black subject to California Proposition 65 is bound in polymer-matrices so that warnings are not required.

CERCLA (Comprehensive Environmental Response Compensation and Liability Act) :

None.

SARA Title III (Superfund Amendments and Reauthorization Act) 302 Extreme Hazardous Substance :

None.

311/312 Hazard Categories :

None.

313 Reportable Ingredients :

None.

**15.2. Chemical safety assessment**

For this product a chemical safety assessment was not carried out.

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**16. OTHER INFORMATION**

HMIS Rating: The National Paint and Coating Association (USA): Health: 1 Flammability: 1 Reactivity: 0

Explanation of term: IARC 2B means "possible human carcinogen".

## Abbreviations:

ACGIH-TWA: Threshold Limit Value of American Conference of Government Industrial Hygienists

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

DFG-MAK: Maximale Arbeitsplatz-Konzentration by Deutsche Forschungsgemeinschaft

DGR: Dangerous Goods Regulations

EINECS: European Inventory of Existing Commercial Chemical Substances

H-Code: Hazard Code

HMIS: Hazardous Materials Identification System

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods Code

NTP: National Toxicology Program

OEL: Occupational exposure limit

OSHA: Occupational Safety and Health Administration

PBT: Persistent, Bioaccumulative and Toxic

SARA: Superfund Amendments and Reauthorization Act

TSCA: Toxic Substances Control Act

vPvB: very Persistent and very Bioaccumulative

Revision Information: Regular revision on revised date.

## Literature References:

ANSI Z400.1-1993

ISO 11014-1

Commission Directive 91/155/EEC

IARC(2010): IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans,  
Vol. 93, Carbon Black, Titanium Dioxide, and Talc, Lyon, pp. 43-191H.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.

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