Material Safety Data Sheet

Issue Date: 3/16/2006

MSDS Number: TN310 **Product Name:** H24SP1 Toner **Revision:** [00]03/16/2006

Section 1 - Chemical Product and Company Identification

Product Name: H24SP1 Toner **Chemical Formula** NA

CAS Number: NA (mixture) **General Use:** Toner

Future Graphics LLC Part Number: HP1160MKI10KG

Company Name:	Mitsubishi Kagaku Imaging Corporation	**Distributor:**	Same as Manufacturer
Street Address:	401 Volvo Parkway	**Street Address:**	Same as Manufacturer
Town:	Chesapeake	**Town:**	Same as Manufacturer
State:	Virginia	**State:**	Same as Manufacturer
Zip Code:	23320	**Zip Code:**	Same as Manufacturer
Emergency Contacts:	Chemtrec 1-800-424-9300	**Other Contacts:**	757-382-5750

Health	**1**
Fire	**1**
Reactivity	**0**
PPE	**(See Sec. 8)**

<<<>>> EMERGENCY OVERVIEW <<<>>>

This product may cause irritation of the respiratory system, eyes, and skin. This product is stable under normal conditions of use.

Section 2 - Composition and Information on Ingredients

Ingredient **Iron Oxide - Black Pigment** **CAS No.** **Proprietary** **% in Mixture** **35-55**

	OSHA	ACGIH	NIOSH	UNIT OF MEASURE
TWA	10	5	5	mg/cu.meter
STEL	NE	NE	NE	mg/cu.meter
IDLH	NA	NA	2500	mg/cu.meter

Ingredient **Styrene Acrylate Copolymer** **CAS No.** **Proprietary** **% in Mixture** **40-60**

	OSHA	ACGIH	NIOSH	UNIT OF MEASURE
TWA	NE	NE	NE	mg/cu.meter
STEL	NE	NE	NE	mg/cu.meter
IDLH	NA	NA	NE	mg/cu.meter

Ingredient **Wax** **CAS No.** **Proprietary** **% in Mixture** **1-10**

	OSHA	ACGIH	NIOSH	UNIT OF MEASURE
TWA	NE	2	2	mg/cu.meter
STEL	NE	NE	NE	mg/cu.meter
IDLH	NA	NA	NE	mg/cu.meter

*** TOTAL DUST / INHALABLE DUST**
**** RESPIRABLE DUST**
***** Refer to Section 11 - Toxicological Information**

OVERALL MIXTURE:
This product is a mixture of dry chemical components. OSHA regulatory limits set for PARTICULATES NOT

OTHERWISE CLASSIFIED are: 15 mg/cu.meter for TOTAL DUST / INHALABLE DUST and 5 mg/cu.meter for RESPIRABLE DUST.

Section 3 - Hazards Identification

Primary Entry Routes:
Absorption, Inhalation

Target Organs:
NA

Inhalation Effects:
Slight irritation of respiratory tract.

Eye Effects:
Dust may cause irritation by mechanical abrasion.

Skin Effects:
May cause skin irritation.

Ingestion Effects:
NA

Carcinogenicity:
NA

Medical Conditions Aggravated by Long-term Exposure:
Accumulation of dust in the respiratory system may cause moderate congestion.

Chronic Effects and/or Recommendations:
If use generates airborne particles, treat as a NUISANCE PARTICULATE (ACGIH TLV = 10 mg/cu. meter).

Section 4 - First Aid Measures

Inhalation:
Protect yourself with appropriate PPE, remove the person to fresh air. Decontaminate and begin rescue breathing if breathing has stopped and CPR if heart action has stopped. Seek prompt medical attention.

Eye:
DO NOT allow victim to rub or keep eyes tightly shut. Gently lift eyelids and immediately flush eyes with large amounts of water. Remove any contact lenses. Continue to flush for at least 30 minutes, occasionally lifting the upper and lower lids. Seek prompt medical attention.

Skin:
Quickly remove contaminated clothing. Immediately wash area with large amounts of water. Seek prompt medical attention for any reddened skin other than from washing.

Ingestion:
Never give anything by mouth to an unconscious or convulsing person. Contact a Poison Control Center (PCC). Unless the PCC advises otherwise, have the conscious and alert person drink 1 to 2 glasses of water to dilute. Induce vomiting only after recent ingestions due to the possibility of seizures. Seek prompt medical attention.

Additional First Aid Information:

NA

Section 5 - Fire Fighting Measures

Flash Point:	Flash Point Method:
NA	NA

Flammability Classification:	Auto Ignition Temperature:
1 Slight (HMIS, NFPA)	ND

LEL:	UEL:	Burning Rate:
NA	NA	NA

Extinguishing Media:

Water spray, dry chemical, foam, carbon dioxide, or halon-type extinguishers.

Unusual Fire / Explosion Hazards:

May form flammable dust-air mixture.

Hazardous Combustion Products:

Carbon monoxide, carbon dioxide, nitrogen oxide, and smoke. Under certain conditions some aliphatic aldehydes and carboxylic acids may form.

Fire-Fighting Instructions:

Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment:

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Containment Method:

When cleaning up spilled material, keep unnecessary people away, isolate area, and deny entry until the spilled material has been removed. Scoop up material and place in a chemical waste container. Suction up remaining material using a high efficiency vacuum cleaner. Avoid suspending particles in the air. Extreme caution should be used as material presents a slip hazard.

Reporting Requirements:

Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions:

Keep containers closed at all times. Avoid creating dust. Keep away from ignition sources.

Storage Requirements:

Product is prone to gradual oxidation which may reduce quality over time.

Regulatory Requirements:

Follow all applicable local, state, and Federal regulations.

Section 8 - Exposure Controls and Personal Protection

Ventilation

The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release in order to maintain airborne concentrations of the product below OSHA PELs (See Section 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Respiratory Protection

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134 and 1910.137) and, if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given work conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. WARNING! Air purifying respirators do not protect worker in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, peroidic environmental monitoring, maintenance, inspection, cleaning and convenient, sanitary storage areas.

Protective Clothing and Equipment

Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear splash-proof chemical goggles and face shield when working with liquid, unless full facepiece respiratory protection is worn. Contact lenses are not eye protective devices. Appropriate eye protection must be worn

instead of, or in conjunction with contact lenses.

Safety Stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities avalable in work area.

Contaminated Equipment

Separate contaminated work clothes from street clothes. Launder before reuse. Remove material from your shoes and clean personal protective equipment. Never take home contaminated clothing.

Comments

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the restroom, or apply cosmetics.

Additional Information

NA

Section 9 - Physical and Chemical Properties

Boiling Point:	**Freezing or Melting Point:**	**Odor Threshold:**	**Physical State:**
NA	NA	ND	Solid
Viscosity:	**Refractive Index:**	**Vapor Density (Air = 1)**	**Appearance and Odor:**
NA	NA	Heavier than air.	Black, free-flowing powder, odorless.
% Volatiles:	**Surface Tension:**	**Vapor Pressures:**	**Water Solubility:**
NA	NA	NA	Negligible
Density:	**Evaporation Rate:**	**Formula Weight:**	**Other Solubilities:**
1.5-2.5	NA	NA	NA
pH:	**Specifice Gravity where Water = 1 at 4 deg C**		**Additional Comments:**
NA	NA		NA

Section 10 - Stability and Reactivity

Stability:	**Polymerization:**	**Hazardous Decomposition Products:**
Stable under conditions of normal use.	Hazardous polymerization cannot occur.	NA

Chemical Incompatibilities:

NA

Conditions to Avoid:

NA

Other Comments:

NA

Section 11 - Toxicological Information

Checked box indicates that related health effects criteria applies to the overall mixture.

Eye Effects ☐	**Acute Oral Effects** ☐	**Acute Inhalation Effects** ☐	**Mutagenicity** ☐
Skin Effects ☐	**Chronic Effects** ☐	**Carcinogenicity** ☐	**Teratogenicity** ☐

EXPLANATION of HEALTH EFFECTS:

Ames Test Negative

EXPLANATION of TOXICOLOGICAL CRITERIA:

Chemical Component: Iron Oxide - Black Pigment

MAGNETITE: Toxicity Data: 400 mg/kg intrapleural-mouse TDLO
MEDCIAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders
HEALTH EFFECTS:
INHALATION: MAGNETITE: See information on metal fume fever. Repeated or prolonged exposure, greater than 10 years, may cause siderosis, a benign pneumoconiosis. Chronic bronchitis has been associated with siderosis. Dyspnea may be pronounced and increases on exposure to irritants.
ACUTE EXPOSURE:
METAL FUME FEVER: Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.
CHRONIC EXPOSURE:
METAL FUME FEVER: There is no form of chronic metal fume fever; however, repeated bouts with symptoms as described above are quite common. Resistance to the condition develops after a few days of exposure, but is quickly lost in 1 or 2 days.
SKIN CONTACT:
ACUTE EXPOSURE: MAGNETITE: May cause irritation.
CHRONIC EXPOSURE: MAGNETITE: No data available.
EYE CONTACT:
ACTUTE EXPOSURE: MAGNETITE: May cause conjunctivitis, choroiditis, and retinitis. Iron particles embedded in eye tissue may cause ocular siderosis. Discoloration of the iris is one of the earliest symptoms. Siderosis may spread depending on the location of the particle. Rarely, ocular siderosis may cause glaucoma.
CHRONIC EXPOSURE: MAGNETITE: No data available.
INGESTION:
ACUTE EXPOSURE: MAGNETITE: No data available.
CHRONIC EXPOSURE: MAGNETITE: No data available.

Chemical Component: Styrene Acrylate Copolymer

Data Not Available

Chemical Component: Wax

PARAFFIN WAX:
IRRITATION DATA:
500 mg/24(s) skin-rabbit mild; 100 mg/24 hour(s) eyes-rabbit mild
TUMORGENIC DATA:
120 mg/kg implant-rat TDLo; 640 mg/kg implant-mouse TD; 660 mg/kg implant-mouse TD; 560 mg/kg TD

HEALTH EFFECTS:
ACUTE EXPOSURE:
Fumes from heated paraffin wax may cause mild nose and throat irritation with nausea. Animals exposed to paraffin vapors in a concentration sufficient to cause death within 2 hours became hyperactive and developed clonic spasms and limb flexor muscle tetanic contractions which persisted until death.
CHRONIC EXPOSURE:
A 5 year occupational exposure to high concentrations of aerosolized paraffin wax caused dyspnea and hypoxemia, progressing to lipoid pneumonia characterized pathologically by alveolitis involving large lipid-laden macrophages and interstitial fibrosis.

SKIN CONTACT:
ACUTE EXPOSURE:
May cause mild irritation. Heated liquid may burn skin. Sensitization reactions have been reported.
CHRONIC EXPOSURE:
Development of foreign body skin granulomas has been reported following occupational exposure. Paraffin wax, possibly impure, in the oil refining industry has been reported to act as a skin cancer promoter with a latent period of 20 years.

EYE CONTACT:
ACUTE EXPOSURE:
Fumes may cause mild irritation. Heated wax may burn eyes.
CHRONIC EXPOSURE:
No data available
INGESTION:
ACUTE EXPOSURE:
Paraffin wax is not digested or absorbed.
CHRONIC EXPOSURE: No data available.

Section 12 - Ecological Information

Checked box indicates that information regarding the criteria applies to the overall mixture.

Ecotoxicity ☐ **Environmental Fate** ☐ **Environmental Degradation** ☐ **Soil Absorption and Mobility** ☐

EXPLANATION of APPLICABLE ECOLOGICAL CRITERIA:

NA

Section 13 - Disposal Considerations

Disposal:
Waste material may be disposed of, incinerated, or recycled for its iron oxide under conditions that meet all Federal, State and Local regulations. Contact your supplier or a licensed contractor for detailed recommendations.

Disposal Regulatory Requirements:
NA

Container Cleaning and Disposal:
NA

Section 14 - Transport Information

DOT Transportation Data (49CFR 172.101)

Shipping Name:	Label:	Passenger Air and Railcar:
NA	NA	NA
Shipping Symbols:	**Special Provisions:**	**Cargo Aircraft:**
NA	NA	NA
Hazard Class:	**Exceptions:**	**Oceangoing Vessel Stowage:**
NA	NA	NA
ID Number:	**Non-bulk Packaging:**	**Other:**
NA	NA	NA
Packing Group:	**Bulk Packaging:**	
NA	NA	

EXPLANATION of APPLICATION TRANSPORTATION CRITERIA:

NA

Section 15 - Regulatory Information

Checked box(es) indicate that the chemical is subject to the associated regulatory requirements and/or appears on the associated chemical inventory list

Chemical Component: Iron Oxide - Black Pigment **CAS #** Proprietary

40 CFR 261.33	☐	CAA 40 CFR 112	☐	TSCA inventory (US)	☑
40 CFR 261 classified	☐	SARA 40 CFR 311 and 312	☐	AICS inventory (Australia)	☑
RCRA Section 3001	☐	SARA 40 CFR 372.65	☐	EINECS inventory (Europe)	☑
CERCLA RQ established	☐	SARA 40 CFR 355	☐	DSL inventory (Canada)	☑
40 CFR 302.4	☐	OSHA 1910 1000 Z-1 tables	☐	ECL inventory (Korea)	☑
CWA 40 CFR 311(b)(4)	☐	OSHA 1910 subpart Z	☐	ENCS inventory (Japan)	☑
CWA 40 CFR 307(a)	☐			PICCS inventory (Phillipines)	☑
				CHINA inventory	☐

Chemical Component: Styrene Acrylate Copolymer **CAS #** Proprietary

40 CFR 261.33	☐	CAA 40 CFR 112	☐	TSCA inventory (US)	☑
40 CFR 261 classified	☐	SARA 40 CFR 311 and 312	☐	AICS inventory (Australia)	☑
RCRA Section 3001	☐	SARA 40 CFR 372.65	☐	EINECS inventory (Europe)	☑
CERCLA RQ established	☐	SARA 40 CFR 355	☐	DSL inventory (Canada)	☑
40 CFR 302.4	☐	OSHA 1910 1000 Z-1 tables	☐	ECL inventory (Korea)	☑
CWA 40 CFR 311(b)(4)	☐	OSHA 1910 subpart Z	☐	ENCS inventory (Japan)	☑
CWA 40 CFR 307(a)	☐			PICCS inventory (Phillipines)	☑
				CHINA inventory	☐

Chemical Component: Wax **CAS #** Proprietary

40 CFR 261.33	☐	CAA 40 CFR 112	☐	TSCA inventory (US)	☑
40 CFR 261 classified	☐	SARA 40 CFR 311 and 312	☐	AICS inventory (Australia)	☑
RCRA Section 3001	☐	SARA 40 CFR 372.65	☐	EINECS inventory (Europe)	☑
CERCLA RQ established	☐	SARA 40 CFR 355	☐	DSL inventory (Canada)	☑
40 CFR 302.4	☐	OSHA 1910 1000 Z-1 tables	☐	ECL inventory (Korea)	☑
CWA 40 CFR 311(b)(4)	☐	OSHA 1910 subpart Z	☐	ENCS inventory (Japan)	☑
CWA 40 CFR 307(a)	☐			PICCS inventory (Phillipines)	☑
				CHINA inventory	☐

Section 16 - Other Information

Abbreviations: ACGIH - American Conference of Governmental Industrial Hygienists

IDLH - Immediatly Dangerous to Life and Health
NA - Not Applicable to the criteria OR Not Available
ND- Not Determined OR Not Known
NE - None established
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit
RCRA - Resource Conservation Recovery Act
STEL - Short Term Exposure Limit
TLV - Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average

Disclaimer: The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. The information above is provided on the condition that parties receiving the product make their own determination as to the suitability of the product for their particular purpose and assume the risk of use of the product. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. Mitsubishi Kagaku Imaging Corporation has no responsibility or liability for any damage or injury resulting from abnormal use or from any failure to adhere to recommended procedures. Mitsubishi Kagaku Imaging Corporation neither grants, nor shall the party receiving the product imply any authorization to practice any patented invention without a license.

Additional Comments NA

Revision Notes: ACB

<<<<< END OF MSDS>>>>>