SAFETY DATA SHEET

Issue Date: 23-Aug-2011 **Revision Date:** 11-Feb-2015 Version 1

1. IDENTIFICATION

Product Identifier
Product Name Fast Dry Ink

Other means of identification
Size and Part Number 4oz. S42211,16oz. S42214
4oz. AA-208 Certified SMS42211,16oz. AA-208 Certified SMS42214

Recommended use of the chemical and restrictions on use
Recommended use Fast Dry Ink(black and colors)

Details of the supplier of the safety data sheet
Manufacturer Address
M & S Systems, Inc.
951 NC Hwy 66 South Suite B-6
Kernersville, NC 27284

Emergency Telephone Number
Company Phone Number Phone: (336) 996-7118
Fax: (336) 996-0197
Emergency Telephone (24 hr) INFOTRAC 1-352-3500(International)
1-800-535-5053(Noeth America)

2. HAZARDS IDENTIFICATION

Appearance
Color varies by specification

Physical State
Liquid

Odor
Sharp Odor

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity(single exposure)	Category 3
Flammable Liquids	Category 3

Hazards Not Otherwise Classified (HNOC)
May be harmful in contact with skin

Signal Word
Danger

Hazard Statements
Harmful if swallowed
Causes skin irritation
Causes serious eye damage
May cause respiratory irritation. May cause drowsiness or dizziness
Flammable liquid and vapor

Precautionary Statements - Prevention
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well ventilated area
Keep away from heat/sparks/open flames/hot surfaces.--No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and continue rinsing.
Immediately call a poison center or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
IN CASE OF FIRE: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
n-Butyl Alcohol	71-36-3	45-50
2-Ethylhexanol	104-76-7	20-25
Carbon Black	133-86-4	<5

** If Chemical Name/CAS No is “proprietary” and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact — Rinse cautiously with water for several minutes. Remove contact lenses, if present. Continuse rinsing. Immediately call a poison center or doctor/physician.

Skin Contact Remove/Takeoff immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/ attention.

Inhalation Remove victim to fresh mair and keep at rest in a position comfortable for breathing.

Ingestion Call a poison center or doctor/physician if you feel unwell. Rinse Mouth.

Most important symptoms and effects

Symptoms May be harmful in contact with skin. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause drowsiness or dizziness.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing media
Dry Chemical. Alcohol foam. Carbon dioxide (CO2)

Unsuitable Extinguishing media Not determined.

Specific Hazards Arising from the substance or mixture
Flammable liquid and vapor.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO2).

Protective Equipment and precautions for firefighters
Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear including a positive pressure NIOSH approved self-contained breathing apparatus. Water may be ineffective on fire, but can be used to cool containers exposed to fire and heat. Containers exposed to intense heat from fire should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Eliminate all source of ignition. Stop leak if it can be done safely and ventilate area. Dike and pump of large spills into salvage or storage containers. Take up residue or small spills with absorbent material such as clay or vemiculitee. Do not allow product to enter storm or sanitary sewers or waterways.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces."No smoking". Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Keep cool.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Incompatible Materials Strong oxidizing agents.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Guidlines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
n-Butyl Alcohol 71-36-3	TWA:20 ppm	twa: 100 ppm TWA: 300 mg/m^3 (vacated) S* (vacated) Ceiling: 50 ppm (vacated) Ceiling: 150 mg/m^3	LDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m^3
Carbon Black 1333-86-4	TWA: 3 mg/m^3 inhalable fraction	TWA: 3.5 mg/m^3 (vacated) TWA: 3.5 mg/m^3	LDLH: 1750 mg/m^3 TWA: 3.5 mg/m^3 TWA: 0.1 mg/m^3 Carbon Black in presence of Polycyclic aromatic hydrocarbons PAH

Appropriate engineering controls

Engineering Controls Use local exhaust to keep concentrations below TLV. Showers. Eyewash stations.

Individual protection measures, such a personal protective equipment

Eye/Face Protection Use chemical goggles if eye contact is likely.

Skin Body Protection Use impervious gloves if skin contact is a problem.

Respiratory Protection When working with large quantities, use NIOSH approved self-contained breathing apparatus to prevent overexposure.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Keep away from ignition sources. Store in tightly closed containers in a well ventilated area. Do not eat, drink or smoke in area where product is handled. Wash hands with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	**Odor**	Sharp odor
Appearance	Color Varies by specification	**Odor Threshold**	Not determined
Color	Color varies by specification		
Density	2.95/lb/gal		
Specific Gravity	0.35		
% VOC	97.72%		
Density VOC	2.88lb/gal		
% Solids By Weight	67.47%		

Property	Property	Remarks * Method
ph	Not available	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	97.2-117.8 °C / 207-244 °F	
Flash Point	27.8 °C / 82 °F	
Evaporation Rate	>1	(butyl acetate =1
Flammability(Solid, Gas)	Liquid-Not applicable	
Upper Flammability Limits	10.9%	
Lower Flammability Limit	1.6%	
Vapor Pressure	8.8	@20 C (68 F)
Vapor Density	>1	(Air=1
Specific Gravity	Approximately 0.96	
Water Solubility	Negligible	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosives Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerzation will not occur.

Conditions to Avoid
Heat, flames, and sparks. Incompatible Materials.

Incompatible Materials
Strong Oxidizing agents

Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes exposure

Product Information

Eye Contact	Causes serious eye damage.
Skin Contact	Causes skin irritation. May be harmful in contact with skin.
Inhalation	Do not inhale.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
n-Butyl Alcohol 71-36-3	= 790 mg/kg (Rat)	= 3400 mg/kg (Rabbit)	> 17.7 mg/L (Rat) 4h=8000 ppm (Rat) 4h
Cured PhenolFormaldehyde Resin 9003-35-4	> 5 g/kg (Rat)	> 2 g/kg (Rat)	-
2--Ethylhexanol 104-76-7	1516 - 2774 mg/kg (Rat)	-	-
Carbon Black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
Ethyl Cellulose 9004-57-3	> 5 g/kg (Rat)	> 5 g/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposureCarbon black

Carcinogenicity Carbon black is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Carbon Black 1333-86-4	A3	Group 2B		X

LEGEND

ACGIH (American Conference of Governmental Industrial Hygienists
A3-Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B-Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X-Present

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxcity
Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
n-Butyl Alcohol 71-36-3	500: 96 h Desmodesmus subspicatus mg/L EC50 500: 72 h Desmodesmus subspicatus mg/L EC50	1730 - 1910: 96 h Pimephales promelas mg/L LC50 static 1740: 96 h Pimephales promelas mg/L LC50 flow-through 100000 - 500000: 96 h Lepornis macrochirusug/L LC50 static 1910000: 96 h Pimephales promelas ug/L LC50 static		1983: 48 h Daphnia magna mg/L EC50 1897 - 2072: 48 h Daphnia magna mg/L EC50 Static

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-Ethylhexanol 104-76-7	11.5: 72 h Desmodesmus subspicatus mg/L EC50	32 - 37: 96 h Oncorhynchus mykiss mg/L LC50 static 7.5: 96 h Oncorhynchus mykiss mg/L LC50 27 - 29.5: 96 h Pimephales promelas mg/L LC50 flow-through 29.7: 96h Pimephales promelas mg/L LC50 static 10.0 - 33.0: 96 h Lepornis macrochirus mg?l LC50 static		39: 48 h Daphnia magna mg/L EC50
Carbon Black 1333-86-4				5600: 48 h Daphnia magna mg/L EC50

Persistance/Degradability
Not determined

Bioaccumulation
Not determined

Mobility

Chemical Name	Partition Coefficient
n-Butyl Alcohol 71-36-3	0.785
2-Ethylhexanol 104-76-7	3.1

Other Adverse Effects
Not determined.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable reginal, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RSRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
n-Butyl Alcohol 71-36-3		Included in waste stream F039		Included in waste stream U031

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
n-Butyl Alcohol 71-36-3	Toxic

14. TRANSPORT INFORMATION

Note

Please see current shipping paper most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN1210
Proper Shipping Name	Printing Ink
Hazard Class	3
Packing Group	III

IATA

UN/ID No	UN1210
Proper Shipping Name	Printing Ink
Hazard Class	3
Packing Group	III

IMDG

UN/ID No	UN1210
Proper Shipping Name	Printing Ink
Hazard Class	3
Packing Group	III
Marine Pollutant	This material may meet the definition of a marine polutant.

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
n-Butyl Alcohol	Present	X		Present		Present	X	Present	X	X
2-Ethylhexanol	Present	X		Present		Present	X	Present	X	X
Carbon Black	Present	X		Present	Present	Present	X	Present	X	X

LEGEND

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Phillippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
n-Butyl Alcohol 71-36-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
n-Butyl Alcohol 71-36-3	71-36-3	45-50	1.0

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean ater Act(40 CFR 122.21 and 40 122.42)

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemical.

Chemical Name	California Proposition 65
Carbon Black - 1333-86-4	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
n-Butyl Alcohol 71-36-3	X	X	X
2-Ethylhexanol 104-76-7		X	X
Carbon Black 1333-86-4	X	X	X

NFPA	**Health Hazards** Not determined	**Flammability** Not determined	**Instability** Not determined	**Special Hazards** Not determined
HMIS	**Health Hazards** 2	**Flammability** 3	**Instability** 0	**Protection** G

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Revision Note: New Format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of mour knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warrenty orquality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

END OF SAFETY DATA SHEET