Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

Print Date Feb-03-2010 **Revision Date** Feb-03-2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product code **6119**
Product name **Fire Red**
Product description 6100 Series Fast Dry Enamel Screen Ink

Manufacturer or supplier's details

UNITED STATES
Nazdar Company
8501 Hedge Lane Terrace
Shawnee, KS 66227
Tel: 1-913-422-1888
Tel: 1-800-677-4657
Fax: 1-913-422-2294

UNITED KINGDOM
Nazdar Limited
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Chesire SK4 3EG
Tel: +44 161 442 2111

Emergency Telephone Number

USA: Chemtrec: 1-800-424-9300
Outside USA: Chemtrec: 1-703-527-3887

Website: www.nazdar.com
MSDS Information: 1-913-422-1888 ext 2305
MSDS Contact: Regulatory Compliance
email: regcomp@nazdar.com

2. HAZARDS IDENTIFICATION

This product is a preparation. Health hazard information is based on its components.

Appearance Viscous liquid
Flammable Properties Combustible liquid and vapor.
Emergency Overview Aspiration hazard. Harmful: may cause lung damage if swallowed. Irritant. May cause drowsiness and dizziness.

Eyes Causes eye irritation.
Skin May cause skin irritation and/or dermatitis.
Inhalation May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion Harmful if swallowed. Potential for aspiration if swallowed. Risk of serious damage to the lungs (by aspiration).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Stoddard solvent	8052-41-3	10 - 30
Naphtha (petroleum), heavy aromatic	64742-94-5	10 - 30
Talc	14807-96-6	10 - 30
Petroleum naphtha, light aromatic	64742-95-6	1 - 5
1,2,4-Trimethylbenzene (contaminant)	95-63-6	1 - 5
Naphthalene (contaminant)	91-20-3	< 1
1,3,5-Trimethylbenzene (contaminant)	108-67-8	< 0.5
Cobalt Compounds	Trade Secret	< 0.5
Cobalt Compounds	Trade Secret	< 0.5
Ethyl benzene (contaminant)	100-41-4	< 0.5

- *Component names which have the word (contaminant) are constituents contained in Aromatic Hydrocarbon ingredients and are an integral part of the ingredient and cannot be separated. The percentage listed for the contaminant is as contained in the Hydrocarbon ingredient. (Example: 100% Hydrocarbon, 10% Contaminant A, 3% Contaminant B)*

4. FIRST AID MEASURES

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention.

Inhalation Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Ingestion If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties Combustible liquid and vapor.

Suitable Extinguishing Media Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.

Specific Hazards Arising from the Chemical Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.

Environmental Precautions Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
Stoddard solvent	TWA: 100 ppm	TWA: 100 ppm TWA: 525 mg/m^3 TWA: 2900 mg/m^3 TWA: 500 ppm	20000 mg/m^3	TWA: 525 mg/m^3	TWA: 523 mg/m^3 TWA: 100 ppm STEL: 200 ppm STEL: 1050 mg/m^3
Talc	TWA: 2 mg/m^3	TWA: 2 mg/m^3	1000 mg/m^3 containg no asbestos and <1% quartz	TWA: 2 mg/m^3	TWA: 2 mg/m^3

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Ontario TWAEV	Mexico OEL (TWA)
1,2,4-Trimethylbenzene (contaminant)	TWA: 25 ppm			TWA: 25 ppm TWA: 123 mg/m^3	TWA: 125 mg/m^3 TWA: 25 ppm STEL: 35 ppm STEL: 170 mg/m^3
Naphthalene (contaminant)	TWA: 10 ppm Skin STEL: 15 ppm	TWA: 50 mg/m^3 TWA: 10 ppm STEL: 15 ppm STEL: 75 mg/m^3	250 ppm	TWA: 10 ppm TWA: 52 mg/m^3 STEL: 15 ppm STEL: 78 mg/m^3	TWA: 10 ppm TWA: 50 mg/m^3 STEL: 75 mg/m^3 STEL: 15 ppm
1,3,5-Trimethylbenzene (contaminant)	TWA: 25 ppm			TWA: 123 mg/m^3 TWA: 25 ppm	TWA: 125 mg/m^3 TWA: 25 ppm STEL: 35 ppm STEL: 170 mg/m^3
Ethyl benzene (contaminant)	TWA: 100 ppm STEL: 125 ppm	TWA: 435 mg/m^3 TWA: 100 ppm STEL: 125 ppm STEL: 545 mg/m^3	800 ppm 10% LEL	TWA: 100 ppm TWA: 435 mg/m^3 STEL: 125 ppm STEL: 540 mg/m^3	TWA: 100 ppm TWA: 435 mg/m^3 STEL: 545 mg/m^3 STEL: 125 ppm

Engineering Measures Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal Protective Equipment

Respiratory Protection Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.

Eye Protection Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.

Skin Protection Wear protective gloves/clothing. Solvent-resistant apron and boots.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Viscous liquid	**Physical State**	Liquid
Odor	Characteristic	**Odor Threshold**	No information available
pH	No information available	**Autoignition Temperature**	No information available
Boiling point/Boiling Range	>149°C / >300°F	**Melting Point/Range**	No information available
Freezing Point/Range	No information available	**Solubility**	No information available
Evaporation Rate	No information available	**Partition Coefficient (n-octanol/water)**	No information available
Vapour Pressure	No information available	**Vapour Density**	No information available
Flammability (solid, gas)	No information available		

Flammability Limits in Air

Upper No information available

Lower No information available

Flash Point 43°C / 110°F

Method Setaflash closed cup

Photochemically Reactive Yes

Weight Per Gallon (lbs/gal)	8.599	**Specific Gravity**	1.032
VOC by weight %	39.237	**VOC by volume %**	43.722
VOC lbs/gal (less water)	3.377	**VOC grams/liter (less water)**	404.698

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.

Incompatible Products Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO2). Carbon monoxide.

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Naphtha (petroleum), heavy aromatic	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	590 mg/m^3(Rat) 4 h
Petroleum naphtha, light aromatic	8400 mg/kg (Rat)	2000 mg/kg (Rabbit)	5.2 mg/L (Rat) 4 h 3400 ppm (Rat) 4 h
1,2,4-Trimethylbenzene (contaminant)	3400 mg/kg (Rat) 8970 mg/kg (Rat)	3160 mg/kg (Rabbit)	18 g/m^3(Rat) 4 h
Naphthalene (contaminant)	490 mg/kg (Rat)	2500 mg/kg (Rat) 20 g/kg (Rabbit)	340 mg/m^3(Rat) 1 h
1,3,5-Trimethylbenzene (contaminant)	8970 mg/kg (Rat) 5000 mg/kg (Rat)		24 g/m^3(Rat) 4 h
Ethyl benzene (contaminant)	3500 mg/kg (Rat)	15354 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h

Chronic Toxicity

Component	ACGIH	IARC	NTP	OSHA
Naphthalene (contaminant)		Group 2B	Reasonably Anticipated	X
Ethyl benzene (contaminant)	A3	Group 2B		X

ACGIH: (American Conference of Governmental Industrial Hygienists) — *A3 - Animal Carcinogen*
IARC: (International Agency for Research on Cancer) — *Group 2B - Possibly Carcinogenic to Humans*
NTP: (National Toxicity Program) — *Reasonably Anticipated to be a Human Carcinogen*
OSHA: (Occupational Safety & Health Administration) — *X - Present*

Sensitisation No information available
Mutagenic Effects No information available
Reproductive Effects No information available
Developmental Effects No information available
Teratogenicity No information available
Chronic Effects Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system.
Target Organ Effects Blood, Central Vascular System, Central nervous system, Eyes, Kidney, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

We have no quantitative data concerning the ecological effects of this product. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
Naphtha (petroleum), heavy aromatic	72 Hr EC50 Skeletonema costatum: 2.5 mg/L	96 Hr LC50 Pimephales promelas: 19 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 2.34 mg/L; 96 Hr LC50 Lepomis macrochirus: 1740 mg/L [static]	48 Hr EC50 Daphnia magna: 0.95 mg/L
Talc		96 Hr LC50 Brachydanio rerio: >100 g/L [semi-static]	
Petroleum naphtha, light aromatic		96 Hr LC50 Oncorhynchus mykiss: 9.22 mg/L	48 Hr EC50 Daphnia magna: 6.14 mg/L
1,2,4-Trimethylbenzene (contaminant)		96 Hr LC50 Pimephales promelas: 7.72 mg/L [flow-through]	48 Hr EC50 Daphnia magna: 6.14 mg/L

Component	Freshwater Algae	Freshwater Fish	Water Flea
Naphthalene (contaminant)	96 Hr EC50 Skeletonema costatum: 0.4 mg/L	96 Hr LC50 Pimephales promelas: 1.99 mg/L [static]	48 Hr EC50 water flea: 2.16 mg/L
1,3,5-Trimethylbenzene (contaminant)		96 Hr LC50 Pimephales promelas: 3.48 mg/L 96 Hr LC50 Pimephales promelas: 7.72 mg/L [flow-through]	24 Hr EC50 water flea: 50 mg/L
Ethyl benzene (contaminant)	72 Hr EC50 Selenastrum capricornutum: 4.6 mg/L; 96 Hr EC50 Selenastrum capricornutum: >438 mg/L	96 Hr LC50 Oncorhynchus mykiss: 14.0 mg/L [static]; 96 Hr LC50 Pimephales promelas: 9.09 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 150.0 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4.2 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 32 mg/L [static]; 96 Hr LC50 Pimephales promelas: 48.5 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 9.6 mg/L [static]	48 Hr EC50 Daphnia magna: 1.8-2.4 mg/L

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility in Environmental Media No information available

Component	log Pow
Naphtha (petroleum), heavy aromatic	2.9 - 6.1

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

UN1210, Printing Ink, 3, III
In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150 (f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33].

ICAO/IATA

UN1210, Printing Ink, 3, III

IMDG/IMO

UN1210, Printing Ink, 3, III

15. REGULATORY INFORMATION

International Inventories
Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Ethyl benzene (contaminant)	100-41-4	< 0.5	0.1
Naphthalene (contaminant)	91-20-3	< 1	0.1
1,2,4-Trimethylbenzene (contaminant)	95-63-6	1 - 5	1.0

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any HAPs.

U.S. State Regulations

California Prop. 65 WARNING! This product contains a chemical known in the State of California to cause cancer. WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Component	CAS-No	Weight %
Ethyl benzene (contaminant)	100-41-4	< 0.5
Naphthalene (contaminant)	91-20-3	< 1

State Right-to-Know

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Stoddard solvent	Not Listed	Not Listed	X	X	X	X
Naphtha (petroleum), heavy aromatic	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Talc	Not Listed	Not Listed	X	X	X	X
Petroleum naphtha, light aromatic	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
1,2,4-Trimethylbenzene (contaminant)	Not Listed	Not Listed	X	X	X	X
Naphthalene (contaminant)	Not Listed	Not Listed	X	X	X	X
1,3,5-Trimethylbenzene (contaminant)	Not Listed	Not Listed	X	X	X	X
Cobalt Compounds	Not Listed	Not Listed	X	X	Not Listed	Not Listed
Cobalt Compounds	Not Listed	Not Listed	X	X	Not Listed	Not Listed
Ethyl benzene (contaminant)	Not Listed	Not Listed	X	X	X	X

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

Component	WHMIS Classifications of Components
Stoddard solvent	B3, D2B
Talc	D2A
Petroleum naphtha, light aromatic	B3, D2B
1,2,4-Trimethylbenzene (contaminant)	B3
Naphthalene (contaminant)	B4, D2A
1,3,5-Trimethylbenzene (contaminant)	B3
Ethyl benzene (contaminant)	B2, D2A, D2B

Component	NPRI - National Pollutant Release Inventory
Stoddard solvent	Part 5 Substance
Naphtha (petroleum), heavy aromatic	Part 5 Substance Part 4 Substance
Petroleum naphtha, light aromatic	Part 5 Substance
1,2,4-Trimethylbenzene (contaminant)	Part 1, Group 1 Substance; Part 5 Substance Part 5 Substance (except 1,2,4-Trimethyl benzene) Part 4 Substance
Naphthalene (contaminant)	Part 1, Group 1 Substance Part 4 Substance
1,3,5-Trimethylbenzene (contaminant)	Part 5 Substance (except 1,2,4-Trimethyl benzene) Part 4 Substance
Cobalt Compounds	Part 1, Group 1 Substance
Cobalt Compounds	Part 1, Group 1 Substance
Ethyl benzene (contaminant)	Part 1, Group 1 Substance Part 4 Substance

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006
Does NOT contain a listed substance

HMIS:	Health	Flammability	Reactivity	PPE
	2*	2	0	X

16. OTHER INFORMATION

Revision Date Feb-03-2010

Revision Summary New MSDS format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality 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 MSDS