

SAFETY DATA SHEET

Published Date May-15-2019 Revision Date May-15-2019 Revision Number 2.5

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier Product code Product name

Product category

59620 Transparent Orange 59000 Series SV Enamel Screen Ink

Other means of identification Synonyms

Recommended use of the chemical and restrictions on useRecommended usePrinting operations

None

Details of the supplier of the safety data sheet

UNITED STATES Nazdar Company 8501 Hedge Lane Terrace Shawnee, KS 66227 Tel: +001-913-422-1888 Tel: +001-800-677-4657 Fax: +001-913-422-2294 www.nazdar.com UNITED KINGDOM Nazdar Limited Barton Road Heaton Mersey Stockport, England SK4 3EG Tel: +44 161 442 2111

Emergency telephone number

USA: Chemtrec: +001-800-424-9300 Outside USA: Chemtrec: +001-703-527-3887 24 Hour Emergency Phone Number

2. HAZARDS IDENTIFICATION

Classification

Skin sensitization	Category 1A - (H317)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Aspiration toxicity	Category 1 - (H304)
Flammable liquids	Category 3 - (H226)

Label elements



Danger

Hazard Statements

H304 - May be fatal if swallowed and enters airways

H317 - May cause an allergic skin reaction

H372 - Causes damage to organs through prolonged or repeated exposure

H226 - Flammable liquid and vapor

Precautionary Statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P314 - Get medical advice/attention if you feel unwell

P331 - Do NOT induce vomiting

P233 - Keep container tightly closed

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P403 + P235 - Store in a well-ventilated place. Keep cool

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Hazards not otherwise classified (HNOC)

Causes mild skin irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Component	CAS-No	Weight %	Trade Secret	Note
Stoddard solvent	8052-41-3	30 - 60	*	
Naphtha, petroleum, hydrotreated heavy	64742-48-9	1 - 5	*	
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	*	
2-Butanone, oxime	96-29-7	< 1	*	
Ethyl benzene (constituent)	100-41-4	< 0.5	*	1
Cobalt Compounds	Trade Secret	< 0.5	*	
Calcium 2-ethylhexanoate	136-51-6	< 0.5	*	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Note 1. Type of chemical: Constituent

4. FIRST AID MEASURES

Description of first aid measures

General Advice Eye Contact	Show this safety data sheet to the doctor in attendance. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.
Inhalation	Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Most important symptoms and effects, both acute and delayed None under normal use conditions.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

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. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

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

Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

StorageKeep containers tightly closed in a dry, cool and well-ventilated place. Keep away from
open flames, hot surfaces and sources of ignition. Keep container closed when not in use.
Keep out of the reach of children.

Incompatible Products

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ethyl benzene (constituent)

100-41-4

Exposure limits

Component	ACGIH TLV	
Stoddard solvent	TWA: 100 ppm	
8052-41-3		
Xylenes (o-, m-, p- isomers)	TWA: 100 ppm	
1330-20-7	STEL: 150 ppm	
Ethyl benzene (constituent)	TWA: 20 ppm	
100-41-4		
Component	OSHA PEL	
Stoddard solvent	TWA: 500 ppm	
8052-41-3	TWA: 2900 mg/m ³	
Xylenes (o-, m-, p- isomers)	TWA: 100 ppm	
1330-20-7	TWA: 435 mg/m ³	

TWA: 100 ppm

TWA: 435 mg/m³

Component	OSHA PEL (vacated)
Stoddard solvent	TWA: 100 ppm
8052-41-3	TWA: 525 mg/m ³
Xylenes (o-, m-, p- isomers)	TWA: 100 ppm
1330-20-7	TWA: 435 mg/m ³
	STEL: 150 ppm
	STEL: 655 mg/m ³
Ethyl benzene (constituent)	TWA: 100 ppm
100-41-4	TWA: 435 mg/m ³
	STEL: 125 ppm
	STEL: 545 mg/m ³

Component	Ontario TWAEV
Stoddard solvent 8052-41-3	TWA: 525 mg/m ³
Xylenes (o-, m-, p- isomers)	TWA: 100 ppm STEL: 150 ppm
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm

Component	Mexico OEL (TWA)	
Stoddard solvent	TWA/VLE-PPT: 100 ppm	
8052-41-3	TWA/VLE-PPT: 523 mg/m ³	
	STEL/PPT-CT: 200 ppm	
	STEL/PPT-CT: 1050 mg/m ³	
Xylenes (o-, m-, p- isomers)	TWA/VLE-PPT: 100 ppm	
1330-20-7	TWA/VLE-PPT: 435 mg/m ³	
	STEL/PPT-CT: 150 ppm	
	STEL/PPT-CT: 655 mg/m ³	
Ethyl benzene (constituent)	TWA/VLE-PPT: 100 ppm	
100-41-4	TWA/VLE-PPT: 435 mg/m ³	
	STEL/PPT-CT: 125 ppm	
	STEL/PPT-CT: 545 mg/m ³	

Appropriate engineering controls

Engineering Measures	Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.
Individual protection measures, su	ch as personal protective equipment
Eye/Face Protection	Wear safety glasses with side shields (or goggles). If splashes are likely to occur:. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.
Skin Protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Hand Protection	Chemical resistant protective gloves. Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time): eg. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers. Taking into account the varying conditions, the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Due to different glove types, the manufacturer's directions for use should be observed. Replace gloves immediately when torn or any change in appearance is noticed such as dimension, color, flexibility.
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations. Selection of air-purifying or positive-pressure

supplied-air will depend on the specific operation and the potential airborne concentration of the material.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical Physical State Odor	<u>and chemical properties</u> Liquid Characteristic	Appearance Odor Threshold	Colored Liquid No information available
Property	<u>Values</u>	Remarks • Method	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range Flash Point	> 149 °C / 300 °F 46 °C / 115 °F	Cotofloop algood our	
	40 C / 115 F	Setaflash closed cup No data available	
Evaporation rate		NO data available	
Flammability Limit in Air Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	0.97		
Water Solubility	0.07	No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol	/water	No data available	
Autoignition Temperature	, hatol	No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
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Explosive Properties	No data available		
Oxidizing Properties	No data available		
Other Information			
Photochemically Reactive	No		
Weight Per Gallon (lbs/gal)	8.05		
	0.00		
VOC by weight %	VOC by volume %	VOC lbs/gal	VOC grams/liter
(less water)	(less water)	(less water)	(less water)
37.84	No information available	3.05	365.02

10. STABILITY AND REACTIVITY

Reactivity_

No information available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO2). Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Component	Oral LD50
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 6000 mg/kg (Rat)
Xylenes (o-, m-, p- isomers) 1330-20-7	= 3500 mg/kg (Rat)
2-Butanone, oxime 96-29-7	= 930 mg/kg (Rat)
Ethyl benzene (constituent) 100-41-4	= 3500 mg/kg(Rat)
Calcium 2-ethylhexanoate 136-51-6	> 5000 mg/kg (Rat)

Component	Dermal LD50
Naphtha, petroleum, hydrotreated heavy	> 3160 mg/kg (Rabbit)
64742-48-9	
Xylenes (o-, m-, p- isomers)	> 4350 mg/kg (Rabbit)
1330-20-7	
2-Butanone, oxime	1000 - 1800 mg/kg (Rabbit)
96-29-7	
Ethyl benzene (constituent)	= 15400 mg/kg (Rabbit)
100-41-4	
Cobalt Compounds	> 5000 mg/kg (Rabbit)
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Component	Inhalation LC50	
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 8500 mg/m³(Rat)4 h	
Xylenes (o-, m-, p- isomers) 1330-20-7	= 29.08 mg/L (Rat)4 h	
2-Butanone, oxime 96-29-7	> 4.83 mg/L (Rat)4 h	
Ethyl benzene (constituent) 100-41-4	= 17.4 mg/L (Rat)4 h	
Cobalt Compounds	> 10 mg/L (Rat)1 h	
Calcium 2-ethylhexanoate 136-51-6	> 4.8 mg/L (Rat)1 h	

Information on toxicological effects

Symptoms

Specific test data for the substance or mixture is not available.

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

Skin corrosion/irritation	Specific test data for the substance or mixture is not available.
Eye damage/irritation	Specific test data for the substance or mixture is not available.
Irritation	Specific test data for the substance or mixture is not available.
Corrosivity	Specific test data for the substance or mixture is not available.
Sensitization	Specific test data for the substance or mixture is not available.
Mutagenic Effects Carcinogenic effects	reaction. (based on components). Specific test data for the substance or mixture is not available. Specific test data for the substance or mixture is not available.

Reproductive Effects STOT - single exposure	Specific test data for the substance or mixture is not available. Specific test data for the substance or mixture is not available.		
STOT - repeated exposure	Specific test data for the substance or mixture is not available. Causes damage to organs through prolonged or repeated exposure. (based on components).		
Chronic Toxicity	Specific test data for the substance or mixture is not available		
Aspiration hazard	Specific test data for the substance or mixture is not available. May be fatal if swallowed and enters airways. (based on components).		
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.		
Component	ACGIH		
Ethyl benzene (constituent) 100-41-4	А3		
100-41-4			
Component	IARC		
Ethyl benzene (constituent) 100-41-4	Group 2B		

Component	OSHA
Ethyl benzene (constituent)	X
100-41-4	
Cobalt Compounds	Х

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity

Cobalt Compounds

0 % of the mixture consists of ingredient(s) of unknown toxicity

Group 2B

The following values are calculated based on chapter 3.1 of the GHS document mg/kgATEmix (dermal)67,551.00 mg/kgATEmix (inhalation-dust/mist)92.10 mg/lATEmix (inhalation-vapor)676.00 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Specific test data for the substance or mixture is not available.

0.29 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
2-Butanone, oxime	72h EC50 Desmodesmus subspicatus: = 83 mg/L
96-29-7	
Ethyl benzene (constituent)	96h EC50 Pseudokirchneriella subcapitata: > 438 mg/L
100-41-4	96h EC50 Pseudokirchneriella subcapitata: 1.7 - 7.6 mg/L static
	72h EC50 Pseudokirchneriella subcapitata: = 4.6 mg/L
	72h EC50 Pseudokirchneriella subcapitata: 2.6 - 11.3 mg/L static

Component	Fish
Naphtha, petroleum, hydrotreated heavy	96h LC50 Pimephales promelas: = 2200 mg/L
64742-48-9	
Xylenes (o-, m-, p- isomers)	96h LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L (static)
1330-20-7	96h LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L (static)
	96h LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L (flow-through)
	96h LC50 Poecilia reticulata: 30.26 - 40.75 mg/L (static)
	96h LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L
	96h LC50 Lepomis macrochirus: = 19 mg/L
	96h LC50 Cyprinus carpio: = 780 mg/L (semi-static)
	96h LC50 Cyprinus carpio: > 780 mg/L
	96h LC50 Pimephales promelas: = 13.4 mg/L (flow-through)
	96h LC50 Pimephales promelas: 23.53 - 29.97 mg/L (static)
2-Butanone, oxime	96h LC50 Pimephales promelas: 777 - 914 mg/L (flow-through)

Component	Crustacea
	96h LC50 Lepomis macrochirus: = 32 mg/L (static)
	96h LC50 Oncorhynchus mykiss: = 4.2 mg/L (semi-static)
	96h LC50 Pimephales promelas: 9.1 - 15.6 mg/L (static)
	96h LC50 Oncorhynchus mykiss: 11.0 - 18.0 mg/L (static)
100-41-4	96h LC50 Poecilia reticulata: = 9.6 mg/L (static)
Ethyl benzene (constituent)	96h LC50 Pimephales promelas: 7.55 - 11 mg/L (flow-through)
96-29-7	96h LC50 Poecilia reticulata: = 760 mg/L (static)

	48h EC50 water flea: = 3.82 mg/L 48h LC50 Gammarus lacustris: = 0.6 mg/L
2-Butanone, oxime 96-29-7	48h EC50 Daphnia magna: = 750 mg/L
Ethyl benzene (constituent) 100-41-4	48h EC50 Daphnia magna: 1.8 - 2.4 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Component	Partition coefficient
Xylenes (o-, m-, p- isomers) 1330-20-7	2.77 - 3.15
2-Butanone, oxime 96-29-7	0.65
Ethyl benzene (constituent) 100-41-4	3.2

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS		
Waste treatment methods		
Waste Disposal Methods	Contain and dispose of waste according to local regulations.	
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.	
	14. TRANSPORT INFORMATION	
Note:	This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.	
DOT UN/ID no. Proper Shipping Name Hazard Class Packing Group	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]. UN1210 Printing Ink 3 III	
ICAO / IATA / IMDG / IMO UN/ID no. Proper Shipping Name Hazard Class	UN1210 Printing Ink 3	

Packing Group

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15. REGULATORY INFORMATION

International Inventories

All components are listed on the TSCA Inventory. For further information, please contact:. Supplier (manufacturer/importer/downstream user/distributor).

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	CASINO	Weight /6	Values
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	1.0
Ethyl benzene (constituent)	100-41-4	< 0.5	0.1

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:.

Component	CAS-No	Weight %
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5
Ethyl benzene (constituent)	100-41-4	< 0.5
Cobalt Compounds	Trade Secret	< 0.5

U.S. State Regulations

	Massachusetts Right To Know
Stoddard solvent 8052-41-3	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X

	Minnesota Right To Know
Stoddard solvent 8052-41-3	x
Xylenes (o-, m-, p- isomers) 1330-20-7	X
2-Butanone, oxime 96-29-7	X
Ethyl benzene (constituent) 100-41-4	X

	New Jersey Right To Know
Stoddard solvent 8052-41-3	x
Xylenes (o-, m-, p- isomers) 1330-20-7	x
Ethyl benzene (constituent) 100-41-4	x
Cobalt Compounds	Х

Component	Pennsylvania
-	Right To Know

Stoddard solvent 8052-41-3	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Cobalt Compounds	X

California Prop. 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Ethyl benzene (constituent)	Carcinogen

Canada

Component	NPRI - National Pollutant Release Inventory
Stoddard solvent	Part 5, Other Groups and Mixtures
8052-41-3	
Naphtha, petroleum, hydrotreated heavy	Part 5, Other Groups and Mixtures
64742-48-9	
Xylenes (o-, m-, p- isomers)	Part 5, Isomer Groups; Part 4 Substance
1330-20-7	
Ethyl benzene (constituent)	Part 1, Group A Substance; Part 4 Substance
100-41-4	
Cobalt Compounds	Part 1, Group B Substance

16. OTHER INFORMATION

HMIS:	Health	Flammability	Reactivity	Personal Protection
	1 *	2	0	Х

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA (time-weighted average) TŴĂ STEL STEL (Short Term Exposure Limit) Maximum limit value Ceiling

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen A2 - Suspected Human Carcinogen A3 - Animal Carcinogen IARC: (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans Group 2A - Probably Carcinogenic to Humans Group 2B - Possibly Carcinogenic to Humans NTP: (National Toxicity Program) Known - Known Carcinogen Reasonably Anticipated to be a Human Carcinogen **OSHA:** (Occupational Safety & Health Administration)

X - Present

Revision Date

May-15-2019

Pursuant to NOM-018-STPS-2015

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

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 Safety Data Sheet