NAZDAR
INK TECHNOLOGIES

SAFETY DATA SHEET

Published Date	Revision Date	Revision Number
Nov-27-2023	Nov-27-2023	2.6

1. IDENTIFICATION

Product identifier

Product code **DA111**

Product name **Black**

Product category **DA Series SV Screen Ink**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Industrial Printing Operations

Details of the supplier of the safety data sheet

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24 Hour Emergency Phone Number

2. HAZARDS IDENTIFICATION

Classification

Chronic aquatic toxicity	Category 3 - (H412)

Label elements

Hazard statements

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

P273 - Avoid release to the environment

Hazards not otherwise classified (HNOC)

Harmful to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS No.	Weight-%	Trade secret	Note
Barium sulfate	7727-43-7	10 - 30	*	
Ethylene glycol monobutyl ether acetate	112-07-2	5 - 10	*	
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	5 - 10	*	

Carbon black	1333-86-4	1 - 5	*	
Naphthalene (constituent)	91-20-3	0.1 - < 1	*	1

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

Note
1. Hazardous Constituent contained in Complex Substance(s) required for disclosure

4. FIRST-AID MEASURES

Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance.

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 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

Storage Keep 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

Exposure limits

Chemical name	ACGIH TLV
Barium sulfate 7727-43-7	TWA: 5 mg/m³ inhalable particulate matter, particulate matter containing no asbestos and <1% crystalline silica
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm
Carbon black 1333-86-4	TWA: 3 mg/m³ inhalable particulate matter
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin

Chemical name	OSHA PEL
Barium sulfate 7727-43-7	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction
Carbon black 1333-86-4	TWA: 3.5 mg/m³
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m³

Chemical name	OSHA PEL (vacated)
Barium sulfate 7727-43-7	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable fraction
Carbon black 1333-86-4	TWA: 3.5 mg/m³
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m³ STEL: 15 ppm STEL: 75 mg/m³

Chemical name	Ontario TWAEV
Barium sulfate 7727-43-7	TWA: 5 mg/m³ inhalable particulate matter
Ethylene glycol monobutyl ether acetate 112-07-2	TWA: 20 ppm
Carbon black 1333-86-4	TWA: 3 mg/m³ inhalable particulate matter
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin

Chemical name	Mexico OEL (TWA)
Barium sulfate 7727-43-7	TWA/VLE-PPT: 10 mg/m³
Ethylene glycol monobutyl ether acetate 112-07-2	TWA/VLE-PPT: 20 ppm
Carbon black 1333-86-4	TWA/VLE-PPT: 3 mg/m³ inhalable fraction
Naphthalene (constituent) 91-20-3	TWA/VLE-PPT: 10 ppm STEL/PPT-CT: 15 ppm

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, such 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 and chemical properties

Physical state	Liquid	**Appearance**	Colored
Odor	Characteristic	**Odor Threshold**	No information available

Property	Values	Remarks • Method
pH		No data available
Melting Point / Freezing Point	No information available	No data available
Boiling Point / Boiling Range	> 149 °C / 300 °F	
Flash Point	71 °C / 160 °F	Setaflash closed cup
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	1.48	
Water Solubility		No data available
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition Temperature	No information available	No data available
Hyphen		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available

Explosive Properties	No data available
Oxidizing Properties	No data available

Other information

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	12.36

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
10.76	17.34	1.33	159.48

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.

Chemical name	Oral LD50
Barium sulfate 7727-43-7	= 307000 mg/kg (Rat)
Ethylene glycol monobutyl ether acetate 112-07-2	= 2400 mg/kg (Rat)

Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 5000 mg/kg (Rat)
Carbon black 1333-86-4	> 15400 mg/kg (Rat)
Naphthalene (constituent) 91-20-3	= 1110 mg/kg (Rat)

Chemical name	Dermal LD50
Ethylene glycol monobutyl ether acetate 112-07-2	= 1500 mg/kg (Rabbit)
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 2000 mg/kg (Rabbit)
Naphthalene (constituent) 91-20-3	= 1120 mg/kg (Rabbit)

Chemical name	Inhalation LC50
Ethylene glycol monobutyl ether acetate 112-07-2	> 400 ppm (Rat) 4 h
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 590 mg/m^3 (Rat) 4 h
Carbon black 1333-86-4	> 4.6 mg/m^3 (Rat) 4 h
Naphthalene (constituent) 91-20-3	> 0.4 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

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 Specific test data for the substance or mixture is not available.
Carcinogenic effects Specific test data for the substance or mixture is not available.
Reproductive Effects Specific test data for the substance or mixture is not available.
STOT - single exposure 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.
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.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH
Ethylene glycol monobutyl ether acetate 112-07-2	A3
Carbon black 1333-86-4	A3
Naphthalene (constituent) 91-20-3	A3

Chemical name	IARC
Carbon black 1333-86-4	Group 2B
Naphthalene (constituent) 91-20-3	Group 2B

Chemical name	NTP
Naphthalene (constituent) 91-20-3	Reasonably Anticipated

Chemical name	OSHA

Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X

Numerical measures of toxicity - Product Information

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

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 99,999.00 mg/kg
ATEmix (dermal) 27,881.00 mg/kg
ATEmix (inhalation-gas) 99,999.00
ATEmix (inhalation-dust/mist) 27.90 mg/l
ATEmix (inhalation-vapor) 204.50 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Specific test data for the substance or mixture is not available. Harmful to aquatic life with long lasting effects. (based on components).

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants
Ethylene glycol monobutyl ether acetate 112-07-2	72h EC50 Desmodesmus subspicatus: > 500 mg/L

Chemical name	Fish
Ethylene glycol monobutyl ether acetate 112-07-2	96h LC50 Oncorhynchus mykiss: 20 - 40 mg/L
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	96h LC50 Pimephales promelas: = 19 mg/L (static) 96h LC50 Oncorhynchus mykiss: = 2.34 mg/L 96h LC50 Lepomis macrochirus: = 1740 mg/L (static) 96h LC50 Pimephales promelas: = 45 mg/L (flow-through) 96h LC50 Pimephales promelas: = 41 mg/L
Naphthalene (constituent) 91-20-3	96h LC50 Oncorhynchus mykiss: = 1.6 mg/L (flow-through) 96h LC50 Oncorhynchus mykiss: 0.91 - 2.82 mg/L (static) 96h LC50 Pimephales promelas: = 1.99 mg/L (static) 96h LC50 Lepomis macrochirus: = 31.0265 mg/L (static) 96h LC50 Pimephales promelas: 5.74 - 6.44 mg/L (flow-through)

Chemical name	Crustacea
Ethylene glycol monobutyl ether acetate 112-07-2	48h EC50 Daphnia magna: = 37 mg/L
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	48h EC50 Daphnia magna: = 0.95 mg/L
Naphthalene (constituent) 91-20-3	48h EC50 Daphnia magna: 1.09 - 3.4 mg/L Static 48h EC50 Daphnia magna: = 1.96 mg/L Flow through 48h LC50 Daphnia magna: = 2.16 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical name	Partition coefficient
Ethylene glycol monobutyl ether acetate 112-07-2	1.51

Solvent naphtha, petroleum, heavy aromatic 64742-94-5	2.9 - 6.1
Naphthalene (constituent) 91-20-3	3.6

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 Not regulated

ICAO / IATA / IMDG / IMO Not Regulated

15. REGULATORY INFORMATION

International Inventories

All substances are listed as ACTIVE 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.

Chemical name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Ethylene glycol monobutyl ether acetate	112-07-2	5 - 10	1.0
Naphthalene (constituent)	91-20-3	0.1 - < 1	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:.

Chemical name	CAS No.	Weight-%
Ethylene glycol monobutyl ether acetate	112-07-2	5 - 10
Naphthalene (constituent)	91-20-3	0.1 - < 1

US State Regulations

Chemical name	Massachusetts
Barium sulfate 7727-43-7	X
Carbon black 1333-86-4	X

Naphthalene (constituent) 91-20-3	X

Chemical name	**Minnesota Right To Know**
Barium sulfate 7727-43-7	X
Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X

Chemical name	**New Jersey**
Barium sulfate 7727-43-7	X
Ethylene glycol monobutyl ether acetate 112-07-2	X
Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X

Chemical name	**Pennsylvania**
Barium sulfate 7727-43-7	X
Ethylene glycol monobutyl ether acetate 112-07-2	X
Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X

California Proposition 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

Chemical name	**California Proposition 65**
Carbon black	Carcinogen
Naphthalene (constituent)	Carcinogen

This product contains carbon black in a non-respirable form. Inhalation of carbon black is unlikely to occur from exposure to this product

Canada

Chemical name	**NPRI - National Pollutant Release Inventory**
Ethylene glycol monobutyl ether acetate 112-07-2	Part 5 Substance - Volatile Organic Compounds with Additional Reporting Requirements Part 4 Substance - Criteria Air Contaminants
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	Part 5 Substance - Volatile Organic Compounds with Additional Reporting Requirements Part 4 Substance - Criteria Air Contaminants
Naphthalene (constituent) 91-20-3	Part 1, Group A Substance Part 4 Substance - Criteria Air Contaminants

16. OTHER INFORMATION

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

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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
Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated to be a Human Carcinogen
OSHA: (Occupational Safety & Health Administration)
X - Present

Revision Date Nov-27-2023

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