

SAFETY DATA SHEET

Published Date Jul-14-2021 Revision Date Jul-14-2021 Revision Number 2.5

1. IDENTIFICATION

Product identifier Product code	ADE678
Product name	Glass Catalyst
Product category	ADE Series SV Epoxy Screen Ink
Other means of identification Synonyms	None

Recommended use of the chemical and restrictions on useRecommended useIndustrial Printing Operations

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 Corrosion/Irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitization	Category 1A - (H317)
Carcinogenicity	Category 2 - (H351)
Aspiration toxicity	Category 1 - (H304)
Chronic aquatic toxicity	Category 2 - (H411)
Flammable liquids	Category 3 - (H226)

Label elements

Hazard Statements

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation

- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage
- H351 Suspected of causing cancer
- H411 Toxic to aquatic life with long lasting effects
- H226 Flammable liquid and vapor

Precautionary Statements

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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

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

P202 - Do not handle until all safety precautions have been read and understood

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

P308 + P313 - IF exposed or concerned: Get medical advice/attention

- P273 Avoid release to the environment
- P331 Do NOT induce vomiting

P233 - Keep container tightly closed

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)

Harmful to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Component	CAS-No	Weight %	Trade Secret	Note
Resin	Trade Secret	60 - 80	*	
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	10 - 30	*	
Additive	Trade Secret	1 - 5	*	
Naphthalene (constituent)	91-20-3	1 - 5	*	1
Triethylenetetramine	112-24-3	0.1 - < 1	*	
1,2,4-Trimethylbenzene (constituent)	95-63-6	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 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

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

Component	ACGIH TLV
Naphthalene (constituent)	TWA: 10 ppm
	Skin
Component	OSHA PEL

Naphthalene (constituent) TWA: 10 ppm 91-20-3 TWA: 50 mg/m ³
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Component	OSHA PEL (vacated)
Naphthalene (constituent)	TWA: 10 ppm
91-20-3	TWA: 50 mg/m ³
	STEL: 15 ppm
	STEL: 75 mg/m ³
Component	Ontario TWAEV

Component	
Naphthalene (constituent)	TWA: 10 ppm
91-20-3	Skin
Triethylenetetramine	TWA: 0.5 ppm
112-24-3	TWA: 3 mg/m ³
	Skin

Component	Mexico OEL (TWA)
Naphthalene (constituent)	TWA/VLE-PPT: 10 ppm
91-20-3	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 Consideration	Is 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
Odor	Characteristic

Color Odor Threshold Water-white No information available

<u>Property</u> pH Melting Point / Freezing Point Boiling Point / Boiling Range	<u>Values</u> > 149 °C / 300 °F	Remarks • Method No data available No data available	-
Flash Point	41 °C / 105 °F	Tag 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	0.95		
Water Solubility		No data available No data available	
Solubility in other solvents Partition coefficient: n-octanol	/water	No data available	
Autoignition Temperature	, water	No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
Explosive Properties Oxidizing Properties	No data available No data available		
Other Information			
Photochemically Reactive Weight Per Gallon (Ibs/gal)	Yes 7.94		
VOC by weight % (less water) 31.93	VOC by volume % (less water) 33.53	VOC lbs/gal (less water) 2.54	VOC grams/liter (less water) 303.88

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	
Solvent naphtha, petroleum, heavy aromatic	> 5000 mg/kg (Rat)	
64742-94-5		
Additive	= 2413 mg/kg (Rat)	
Naphthalene (constituent) 91-20-3	= 1110 mg/kg (Rat)	
Triethylenetetramine	= 2500 mg/kg (Rat)	
112-24-3	- 2000 mg/kg (Kur)	
1,2,4-Trimethylbenzene (constituent)	= 3280 mg/kg (Rat)	
95-63-6		

Component	Dermal LD50	
Resin	> 2000 mg/kg (Rat)	
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 2000 mg/kg (Rabbit)	
Additive	> 2009 mg/kg (Rabbit)	
Naphthalene (constituent) 91-20-3	= 1120 mg/kg (Rabbit)	
Triethylenetetramine 112-24-3	= 550 mg/kg (Rabbit)	
1,2,4-Trimethylbenzene (constituent) 95-63-6	> 3160 mg/kg (Rabbit)	

Component	Inhalation LC50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 590 mg/m³ (Rat)4 h
Additive	= 1.49 - 2.44 mg/L (Rat)4 h
Naphthalene (constituent) 91-20-3	> 0.4 mg/L (Rat)4 h
1,2,4-Trimethylbenzene (constituent) 95-63-6	= 18 g/m³ (Rat) 4 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. Causes skin irritation (pain, redness and swelling). (based on components).	
Eye damage/irritation	Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components).	
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. May cause an allergic skin reaction. (based on components).	
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. Suspected of causing cancer. (based on components).	
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. 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	
Naphthalene (constituent)	A3	
91-20-3		
Component	IARC	

Naphthalene (constituent) 91-20-3	Group 2B
Component	NTP
•	Reasonably Anticipated
91-20-3	

Component	OSHA
Naphthalene (constituent)	X
91-20-3	

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 documentATEmix (oral)51,086.00 mg/kg mg/lATEmix (inhalation-dust/mist)32.00 mg/lATEmix (inhalation-vapor)234.00 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Component	Algae/aquatic plants
Triethylenetetramine	72h EC50 Desmodesmus subspicatus: = 2.5 mg/L
112-24-3	72h EC50 Pseudokirchneriella subcapitata: = 20 mg/L
	96h EC50 Pseudokirchneriella subcapitata: = 3.7 mg/L

Component	Fish
Resin	96h LC50 Danio rerio: = 7.07 mg/L [semi-static]
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 Pimephales promelas: 5.74 - 6.44 mg/L (flow-through) 96h LC50 Pimephales promelas: = 1.99 mg/L (static) 96h LC50 Lepomis macrochirus: = 31.0265 mg/L (static) 96h LC50 Oncorhynchus mykiss: = 1.6 mg/L (flow-through) 96h LC50 Oncorhynchus mykiss: 0.91 - 2.82 mg/L (static)
Triethylenetetramine	96h LC50 Poecilia reticulata: = 570 mg/L (semi-static)
112-24-3	96h LC50 Pimephales promelas: = 495 mg/L
1,2,4-Trimethylbenzene (constituent) 95-63-6	96h LC50 Pimephales promelas: 7.19 - 8.28 mg/L (flow-through)

Component	Crustacea
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
Triethylenetetramine 112-24-3	48h EC50 Daphnia magna: = 31.1 mg/L
1,2,4-Trimethylbenzene (constituent) 95-63-6	48h EC50 Daphnia magna: = 6.14 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Component	Partition coefficient
Solvent naphtha, petroleum, heavy aromatic	2.9 - 6.1
64742-94-5	
Naphthalene (constituent)	3.6
91-20-3	
Triethylenetetramine	-1.4
112-24-3	
1,2,4-Trimethylbenzene (constituent)	3.63
95-63-6	

13. DISPOSAL CONSIDERATIONS

Other adverse effects

No information available

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 Related Material 3 III		
ICAO / IATA / IMDG / IMO UN/ID no Proper Shipping Name Hazard Class Packing Group	UN1210 Printing Ink Related Material 3 III		

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

<u>SARA 313</u>

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

 Naphthalene (constituent)
 91-20-3
 1 - 5
 0.1

Clean Air Act	Section 112 H	azardous Air F	Pollutants (HA	Ps) (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 %
Naphthalene (constituent)	91-20-3	1 - 5
	•	

U.S. State Regulations

	Massachusetts Right To Know
Naphthalene (constituent)	X
91-20-3	
Triethylenetetramine	X
112-24-3	
1,2,4-Trimethylbenzene (constituent)	Х
95-63-6	

	Minnesota Right To Know
Naphthalene (constituent) 91-20-3	X
1,2,4-Trimethylbenzene (constituent) 95-63-6	X

	New Jersey Right To Know
Naphthalene (constituent)	X
91-20-3	
Triethylenetetramine	X
112-24-3	
1,2,4-Trimethylbenzene (constituent)	X
95-63-6	

	Pennsylvania Right To Know
Naphthalene (constituent)	X
91-20-3	
Triethylenetetramine	X
112-24-3	
1,2,4-Trimethylbenzene (constituent)	X
95-63-6	

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
Naphthalene (constituent)	Carcinogen

<u>Canada</u>

Component	NPRI - National Pollutant Release Inventory
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	Part 5, Other Groups and Mixtures Part 4 Substance (as set out in Section 65 of the List of Toxic Substances in Schedule 1 of the Canadian Environmental Protection Act, 1999)
Naphthalene (constituent) 91-20-3	Part 1, Group A Substance Part 4 Substance (as set out in Section 65 of the List of Toxic Substances in Schedule 1 of the Canadian Environmental Protection Act, 1999)
1,2,4-Trimethylbenzene (constituent) 95-63-6	Part 1, Group A Substance; Part 5, Individual Substances Part 4 Substance (as set out in Section 65 of the List of Toxic Substances in Schedule 1 of the Canadian Environmental Protection Act, 1999)

16. OTHER INFORMATION				
HMIS:	Health 2 *	Flammability 2	Reactivity 0	Personal Protection
Key or legend to abbre Legend - Section 8: EXPO TWA	OSURE CONTROLS/PE	ms used in the safety da RSONAL PROTECTION weighted average)	ata sheet	
STEL Ceiling		t Term Exposure Limit)		
ACGIH: (American Conferen A1 - Known Human Carcinoge A2 - Suspected Human Carcino A3 - Animal Carcinogen IARC: (International Agency Group 1 - Carcinogenic to Hum Group 2A - Probably Carcinoge Group 2B - Possibly Carcinoge NTP: (National Toxicity Prog Known - Known Carcinogen Reasonably Anticipated to be a OSHA: (Occupational Safety X - Present	n ogen for Research on Cancer) nans enic to Humans nic to Humans r am) a Human Carcinogen			

Revision Date Jul-14-2021

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