

SAFETY DATA SHEET

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

Product identifier Product code Product name Product category

NFX35 Hi Sparkle Glitter Blue UV Special Effect 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

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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 2 - (H319)
Skin sensitization	Category 1A - (H317)
Reproductive toxicity	Category 1B - (H360FD)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Chronic aquatic toxicity	Category 3 - (H412)

Label elements



Danger

Hazard Statements H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation

H360FD - May damage fertility. May damage the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H412 - Harmful to aquatic life with long lasting effects

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

P337 + P313 - If eye irritation persists: Get medical advice/attention

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

P314 - Get medical advice/ attention if you feel unwell

P273 - Avoid release to the environment

Hazards not otherwise classified (HNOC)

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Component	CAS-No	Weight %	Trade Secret	Note
Glycol Ether Acrylate	Trade Secret	10 - 30	*	
Acrylated Monomer	Trade Secret	10 - 30	*	
Acrylated Monomer	Trade Secret	10 - 30	*	
Vinyl Functional Monomer	Trade Secret	5 - 10	*	
Acrylated Monomer	Trade Secret	1 - 5	*	
Photoinitiator	Trade Secret	1 - 5	*	
Photoinitiator	Trade Secret	1 - 5	*	
Ethyl benzene (constituent)	100-41-4	< 0.5	*	1
Resin	Trade Secret	< 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. Hazardous polymerization may take place during a fire due to heat. Closed containers could violently rupture.

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 at temperatures between 18°-32°C (65°-90°F). 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. Protect from direct sunlight. Keep away from open flames, hot surfaces
and sources of ignition.

Incompatible Products

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Component	ACGIH TLV	
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm	
Component	OSHA PEL	

Ethyl benzene (constituent) TWA: 100 ppm 100-41-4 TWA: 435 mg/m ³

Component	OSHA PEL (vacated)
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
Ethyl benzene (constituent)	TWA: 20 ppm
100-41-4	

Component	Mexico OEL (TWA)
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.
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.
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 Liquid
Odor	Sweet Mild Acrylic	Odor Threshold	No information available
Property_	<u>Values</u>	Remarks • Method	
рН		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	> 94 °C / > 201 °F	Pensky Martens Closed	Cup (PMCC)
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	1.1		
Water Solubility		No data available	
Solubility in other solvents		No data available	

Partition coefficient: n-octanol/w Autoignition Temperature Decomposition temperature Kinematic viscosity Dynamic viscosity	rater	No data available No data available No data available No data available No data available
Explosive Properties Oxidizing Properties	No data available No data available	
Other Information		
Photochemically Reactive Weight Per Gallon (Ibs/gal)	No 9.15	

VOC by weight %	VOC by volume %	VOC lbs/gal	VOC grams/liter
(less water)	(less water)	(less water)	(less water)
1.58	1.87	0-1	

10. STABILITY AND REACTIVITY

Reactivity

No information available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing. Do not store for longer periods at temperatures above 93°C (200°F).

Conditions to avoid

Temperatures above 93 °C / 200 °F. Protect from direct sunlight. 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
Glycol Ether Acrylate	= 4660 μL/kg (Rat)
Acrylated Monomer	= 5 g/kg (Rat)
Ethyl benzene (constituent)	= 3500 mg/kg (Rat)
100-41-4	

Component	Dermal LD50
Acrylated Monomer	= 3600 mg/kg (Rabbit)
Ethyl benzene (constituent)	= 15400 mg/kg (Rabbit)
100-41-4	
Component	Inhalation LC50

Ethyl benzene (constituent)	= 17.4 mg/L (Rat)4 h
100-41-4	

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 irritation. (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.		
Reproductive Effects	Specific test data for the substance or mixture is not available. May damage fertility. May damage the unborn child. (based on components).		
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. May cause damage to organs through prolonged or repeated exposure. (based on components).		
Chronic Toxicity	Specific test data for the substance or mixture is not available		
Target Organ Effects	Liver, Respiratory system.		
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.		
Component	ACGIH		
Ethyl benzene (constituent) 100-41-4	A3		

Component	IARC
Ethyl benzene (constituent)	Group 2B
100-41-4	

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

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) 4,442.00 mg/kg

ATEmix (dermal) 11,561.00 mg/kg 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

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

Component	Crustacea
Ethyl benzene (constituent)	48h EC50 Daphnia magna: 1.8 - 2.4 mg/L
100-41-4	

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Component	Partition coefficient
Ethyl benzene (constituent)	3.2
100-41-4	

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 Proper Shipping Name	Not regulated Printing Ink	
ICAO / IATA / IMDG / IMO Proper Shipping Name	Not Regulated Printing Ink	

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	CAS-No	Weight %	SARA 313 - Threshold Values
Glycol Ether Acrylate	Trade Secret	10 - 30	1.0
Ethyl benzene (constituent)	100-41-4	< 0.5	0.1

The above glycol ether acrylate is considered a reactive chemical in ultraviolet curable inks. Once initiated by a high dose of ultraviolet light, this glycol ether acrylate rapidly polymerizes (i.e. hardens) and becomes part of the ink film. The polymerization process of UV curable inks is measured in milliseconds.

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 %
Glycol Ether Acrylate	Trade Secret	10 - 30
Xylenes (o-, m-, p- isomers)	1330-20-7	< 1
Glycol Ether Acrylate	Trade Secret	< 0.5
Ethyl benzene (constituent)	100-41-4	< 0.5

U.S. State Regulations

	Massachusetts Right To Know
Ethyl benzene (constituent)	X
100-41-4	

	Minnesota Right To Know
Acrylated Monomer	X
Ethyl benzene (constituent) 100-41-4	X

	New Jersey Right To Know
Glycol Ether Acrylate	X
Ethyl benzene (constituent) 100-41-4	X

	Pennsylvania Right To Know
Glycol Ether Acrylate	X
Ethyl benzene (constituent) 100-41-4	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
Ethyl benzene (constituent)	Part 1, Group A Substance; Part 4 Substance
100-41-4	

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.

16. OTHER INFORMATION

HMIS:	Health 2	Flammability 1	Reactivity 1	Personal Protection X	
Key or legend to abbreviation	Key or legend to abbreviations and acronyms used in the safety data sheet				
Legend - Section 8: EXPOSURE		PERSONAL PROTECTION e-weighted average)			
STEL Ceiling	•	ort Term Exposure Limit) limit value			
ACGIH: (American Conference of G A1 - Known Human Carcinogen A2 - Suspected Human Carcinogen A3 - Animal Carcinogen	overnmental Inc	lustrial Hygienists)			
IARC: (International Agency for Res Group 1 - Carcinogenic to Humans		er)			
Group 2A - Probably Carcinogenic to H Group 2B - Possibly Carcinogenic to H NTP: (National Toxicity Program)					

Known - Known Carcinogen Reasonably Anticipated to be a Human Carcinogen OSHA: (Occupational Safety & Health Administration) X - Present

Revision Date

Sep-07-2018

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