

Safety Data Sheet



SECTION 1: Identification

1.1 GHS Product identifier

Product name	ELMNT .BA
Product number	ELMNT .BA
Brand	ELMNT

1.3 Recommended use of the chemical and restrictions on use

Highly strainable ink for blade-coat patterning.

1.4 Supplier's details

Name	UES, Inc.
Address	4401 Dayton Xenia Rd Dayton OH 45432 United States of America
Telephone	www.ues.com/elmnt (937) 426-6900

1.5 Emergency phone number

(847) 367-7700
(800) 424-9300 - CHEMTREC (USA)
(703) 527-3887 - CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Eye damage/irritation, Cat. 1
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity (single exposure), Cat. 3
- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, oral, Cat. 4
- Eye damage/irritation, Cat. 2A

2.2 GHS label elements, including precautionary statements

Pictogram

Safety Data Sheet
ELMNT .BA



Signal word

Danger

Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness

Precautionary statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection/protective gloves.
P301+P312	IF SWALLOWED: Call a POISON CENTER /doctor/...if you feel unwell,
P302+P352	IF ON SKIN: Wash with plenty of water/...
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/...
P312	Call a POISON CENTER/doctor/.../ if you feel unwell.
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to ...

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Component	Concentration
1-Hexanol (CAS no.: 111-27-3; EC no.: 203-852-3; Index no.: 603-059-00-6) CLASSIFICATIONS: Acute toxicity, oral, Cat. 4. HAZARDS: H302 - Harmful if swallowed.	9 - 11 % (weight)
GALLIUM (CAS no.: 7440-55-3) CLASSIFICATIONS: No data available. HAZARDS: No data available.	64 - 68 % (weight)
Indium (CAS no.: 7440-74-6; EC no.: 231-180-0) CLASSIFICATIONS: Hazardous to the aquatic environment, long-term (chronic), Cat. 2; Skin corrosion/irritation, Cat. 2; Eye damage/irritation, Cat. 2A; Acute toxicity, dermal, Cat. 4; Acute toxicity, inhalation, Cat. 4; Acute toxicity, oral, Cat. 4. HAZARDS: H302 - Harmful if swallowed; H312 - Harmful in contact with skin; H315 - Causes skin irritation; H319 - Causes serious eye irritation; H332 - Harmful if inhaled; H411 - Toxic to aquatic life with long lasting effects.	20 - 24 % (weight)
Rheological Modifier, proprietary* CLASSIFICATIONS: No data available. HAZARDS: No data available.	0.6 - 0.8 % (weight)
Rheological Modifier 2, proprietary* CLASSIFICATIONS: No data available. HAZARDS: No data available.	0.1 - 0.2 % (weight)
Tackifier, proprietary* CLASSIFICATIONS: No data available. HAZARDS: No data available.	0.8 - 1 % (weight)

Safety Data Sheet

ELMNT .BA

Trade secret statement (OSHA 1910.1200(i))

*The specific chemical identities and/or actual concentrations or actual concentration ranges for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give oxygen.
In case of skin contact	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
If swallowed	Never give anything by mouth to an unconscious person. Consult a physician.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

No data available

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical, carbon dioxide, or sand.

5.2 Specific hazards arising from the chemical

Indium : Indium/indium oxides

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep people away from and upwind of spill/leak. Use personal protective equipment.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Keep in suitable, closed containers for disposal. Clean contaminated surfaces thoroughly with soap and water.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Safety Data Sheet

ELMNT .BA

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 20-30 C
Storage class (TRGS 510) 3: Flammable liquids

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Indium (CAS: 7440-74-6 EC: 231-180-0)

TLV® (Inhalation): 0.1 mg/m³ (ACGIH)

Pulmonary edema, Pneumonitis, Dental erosion, Malaise

REL-TWA (Inhalation): 0.1 mg/m³ (NIOSH)

PEL-TWA (Inhalation): 0.1 mg/m³ (Cal/OSHA)

2. Silica, crystalline (CAS: 14808-60-7 EC: 238-878-4)

PEL-TWA (Inhalation): 10 mg/m³ / (% Silica + 2) respirable 30 mg/m³ / (% Silica + 2) total (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 0.05 mg/m³ (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): Ca 0.05 mg/m³ (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

TLV® (Inhalation): 0.025 mg/m³ (resp.) for α-quartz and cristobalite (ACGIH)

3. N-Butyl acetate (CAS: 123-86-4 EC: 204-658-1)

PEL (Inhalation): 150 ppm (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 710 mg/m³ (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 150 ppm, (ST) 200 ppm (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 150 ppm, (ST) 200 ppm (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

TLV® (Inhalation): 150 ppm, (ST) 200 ppm; USA (ACGIH)

OSHA Annotated Table Z-1, www.osha.gov

STEL (Inhalation): 200 ppm, 950 mg/m³ (Cal/OSHA)

California permissible exposure limits for chemical contaminants
(Title 8, Article 107)

PEL (Inhalation): 150 ppm, 710 mg/m³

California permissible exposure limits for chemical contaminants
(Title 8, Article 107)

4. 1-Hexanol (CAS: 111-27-3 EC: 203-852-3)

8.2 Appropriate engineering controls

General industrial hygiene practice.

Safety Data Sheet

ELMNT .BA

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9: Physical and chemical properties and safety characteristics

Basic physical and chemical properties

Physical state	Liquid
Appearance	silver, gray liquid
Color	silver/gray
Odor	alcoholic odor
Odor threshold	No data available
Melting point/freezing point	No data available
Boiling point or initial boiling point and boiling range	No data available
Flammability	No data available
Lower and upper explosion limit/flammability limit	No data available
Flash point	65 C
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	N/A
Kinematic viscosity	No data available
Solubility	No data available
Partition coefficient n-octanol/water (log value)	No data available
Vapor pressure	No data available
Evaporation rate	No data available
Density and/or relative density	No data available
Relative vapor density	3.5

Particle characteristics

No data available

Supplemental information regarding physical hazard classes

No data available

Further safety characteristics (supplemental)

Corrosive to some metals (aluminum, noble metals, etc.)

SECTION 10: Stability and reactivity

10.1 Reactivity

Safety Data Sheet

ELMNT .BA

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up, a dust explosion potential may generally be assumed. Vapor/air mixtures are explosive under intense warming.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Heat, flames and sparks. Keep out of direct sunlight.

10.5 Incompatible materials

Indium : Strong oxidizing agents, Sulphur compounds, Strong acids, Halogens, Acetonitrile, Tellurium, arsenic powder, phosphorous

Silica, crystalline : Hydrogen fluoride

N-Butyl acetate: Strong oxidizing agents, Strong reducing agents, Strong bases

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

The ATE (gas inhalation) of the mixture is: 56250 ppmV

// ----- From the Suggestion report (11/15/2021, 4:15 PM) ----- //

The ATE (dermal) of the mixture is: 4583.33 mg/kg bw

// ----- From the Suggestion report (11/15/2021, 4:15 PM) ----- //

The ATE (gas inhalation) of the mixture is: 18750 ppmV

// ----- From the Suggestion report (11/15/2021, 4:15 PM) ----- //

The ATE (vapor inhalation) of the mixture is: 45.83 mg/l

// ----- From the Suggestion report (11/15/2021, 4:15 PM) ----- //

The ATE (oral) of the mixture is: 1428.57 mg/kg bw

Skin corrosion/irritation

Indium:

Skin - EPISKIN Human Skin Model Test

Result: Based on available data the classification criteria are not met. (OECD Test Guideline 439)

Serious eye damage/irritation

Indium:

Safety Data Sheet

ELMNT .BA

Eyes - In vitro study

Result: Based on available data the classification criteria are not met. (OECD Test Guideline 438)

1-Hexanol:

Causes serious eye irritation

Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

STOT-single exposure

N-BUTYLACETATE

LD50 Oral - Rat - 10,760 mg/kg

Citation: (OECD Test Guideline 423)

N-BUTYLACETATE

LC50 Inhalation - Rat - 21 mg/l - 4 h

Citation: (OECD Test Guideline 403)

N-BUTYLACETATE

LD50 Skin - Rabbit - >14,112 mg/kg

Citation: (OECD Test Guideline 402)

LD50 Oral - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

STOT-repeated exposure

N-BUTYLACETATE

Repeated dose toxicity - Rat - male and female -
inhalation (vapor) - 17 Weeks RTECS: NP9625000

RTECS: LW8600000, NL1050000, AT1430000, UD3150000,
KQ6300000

Irritant effects, Burning sensation, Cough, Wheezing, Laryngitis, Shortness of breath, Respiratory paralysis, Dizziness, Headache, Central nervous system depression, Narcosis, inebriation, euphoria, Nausea, Vomiting, metallic taste, Dermatitis, bone marrow depression, Stomach - Irregularities
- Based on Human Evidence

Aspiration hazard

No data available

Additional information

Safety Data Sheet

ELMNT .BA

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

Toxicity

No data available on product

Persistence and degradability

No data available on product

Bioaccumulative potential

No data available on product

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Dispose of contents/container in accordance with local, state and federal regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. Exert extra care around ignition sources as this material is highly flammable.

Packaging disposal

Dispose of contaminated packaging as unused product.

SECTION 14: Transport information

DOT (US)

UN Number: UN2803

Class: 8

Packing Group: III

Proper Shipping Name: Gallium

Reportable quantity (RQ):

Marine pollutant:

Poison inhalation hazard:

IMDG

UN Number: UN2803

Class: 8

Packing Group: III

EMS Number:

Safety Data Sheet

ELMNT .BA

Proper Shipping Name: Gallium

IATA

UN Number: UN2803

Class: 8

Packing Group: III

Proper Shipping Name: Gallium

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

New Jersey Right To Know Components

Common name: GALLIUM

CAS number: 7440-55-3

Canadian Domestic Substances List (DSL)

Chemical name: Gallium

CAS: 7440-55-3

Pennsylvania Right To Know Components

Indium

CAS-No. 7440-74-6

New Jersey Right To Know Components

Indium

CAS-No. 7440-74-6

Canadian Domestic Substances List (DSL)

Chemical name: Indium

CAS: 7440-74-6

New Jersey Right To Know Components

Common name: SILICA, QUARTZ

CAS number: 14808-60-7

Massachusetts Right To Know Components

Chemical name: Quartz

CAS number: 14808-60-7

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Quartz

CAS-No. 14808-60-7

Pennsylvania Right To Know Components

Chemical name: Quartz

CAS number: 14808-60-7

Canadian Domestic Substances List (DSL)

Chemical name: Quartz (SiO₂)

CAS: 14808-60-7

Safety Data Sheet

ELMNT .BA

California Prop. 65 components

Chemical name: Silica, crystalline
CAS number: 14808-60-7
10/01/1988 - Cancer

Massachusetts Right To Know Components

n-Butyl acetate
CAS number: 123-86-4

New Jersey Right To Know Components

n-Butyl acetate
CAS number: 123-86-4

Pennsylvania Right To Know Components

n-Butyl acetate
CAS number: 123-86-4

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SARA 311/312 Hazards

Fire Hazard

Canadian Domestic Substances List (DSL)

Chemical name: Acetic acid, butyl ester
CAS: 123-86-4

New Jersey Right To Know Components

Common name: n-HEXANOL
CAS number: 111-27-3

Pennsylvania Right To Know Components

Chemical name: 1-Hexanol
CAS number: 111-27-3

Canadian Domestic Substances List (DSL)

Chemical name: 1-Hexanol
CAS: 111-27-3

SECTION 16: Other information

Safety Data Sheet

ELMNT .BA

VERSION: 1.0 Revision Date 11/15/2021 Print Date 11/15/2021

16.1 Further information/disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. UES Inc. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

Copyright 2021 UES Inc. License granted to make unlimited paper copies for internal use only.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact us at ues.com.