UNIPAK LED 485 873 Litho Ink

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : UNIPAK LED 485 873 Litho Ink
Material number : 023801N20

1.2 Relevant identified uses of the substance or mixture and uses advised against

This information is not available.

1.3 Details of the supplier of the safety data sheet

Company :

Telephone :
Telefax :
E-mail address : msds.eckart@altana.com
Responsible/issuing person

1.4 Emergency telephone number

NCEC:
(contract no.: ECKART29003-NCEC)
+44 1235 239671 (Middle East/Africa, call and response in your language)
+1 215 207 0061 (Americas, call and response in your language)
+65 3158 1074 (Asia-Pacific, call and response in your language)

SECTION 2: Hazards identification

GHS Classification

: Acute toxicity, Category 4, Oral, H302
Serious eye damage/eye irritation, Category 2A, H319
Skin sensitisation, Category 1, H317

Reproductive toxicity, Category 2, H361d
Short-term (acute) aquatic hazard, Category 1, H400
Long-term (chronic) aquatic hazard, Category 1, H410

GHS-Labelling

Symbol(s) :

Signal word : Warning

Hazard statements : H302: Harmful if swallowed.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H361d: Suspected of damaging the unborn child.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label

Identification	CAS-No.
copper	7440-50-8
Fatty acids, C18-unsatd., dimers, polymers with acrylic acid, bisphenol A,	216689-76-8

epichlorohydrin and nonanoic acid	
4,4'-Isopropylidenediphenol, ethoxylated, esters with acrylic acid and isononanoic acid	
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	6846-50-0
Glycerol, propoxylated, esters with acrylic acid	52408-84-1
Epoxy acrylate	55818-57-0
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	28961-43-5
2,5-di-tert-butylhydroquinone	88-58-4

SECTION 3: Composition/information on ingredients

Substance name : UNIPAK LED 485 873 LITHO INK

Substance No. :

Hazardous components

Chemical name	CAS-No. EINECS-No.	Classification and labelling	Concentration[%]
Copper	7440-50-8 231-159-6	Acute Tox.;4;H302 ;2A;H319 Aquatic Acute;1;H400 Aquatic Chronic;1;H410	25 - 50
Fatty acids, C18-unsatd., dimers, polymers with acrylic acid, bisphenol A, epichlorohydrin and nonanoic acid	216689-76-8	Skin Sens.;1;H317	10 - 20
4,4'-Isopropylidenediphenol, ethoxylated, esters with acrylic acid and isononanoic acid	Not Assigned919-846-5	Skin Sens.;1B;H317 Aquatic Chronic;2;H411	2,5 - 10

zinc powder — zinc dust (stabilised)	7440-66-6 231-175-3	Aquatic Acute;1;H400 Aquatic Chronic;1;H410	2,5 - 10
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate	6846-50-0 229-934-9	Repr.;2;H361d Aquatic Chronic;3;H412	2,5 - 10
Glycerol, propoxylated, esters with acrylic acid	52408-84-1	Eye Irrit.;2A;H319 Skin Sens.;1;H317	1 - 10
Epoxy acrylate	55818-57-0	Skin Sens.;1;H317	1 - 10
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	28961-43-5	;2A;H319 Skin Sens.;1;H317	1 - 10
2,5-di-tert-butylhydroquinone	88-58-4 201-841-8	Acute Tox.;3;H301 Skin Sens.;1;H317 STOT SE;3;H335 Aquatic Acute;1;H400 Aquatic Chronic;1;H410	0,25 - 1
amines, hydrogenated tallow alkyl	61788-45-2 (90640-32-7) 262-976-6	Acute Tox.;5;H303 ;2;H315 ;1;H318 STOT RE;2;H373 Asp. Tox.;1;H304 Aquatic Acute;1;H400 Aquatic Chronic;1;H410	0,025 - 0,1

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move the victim to fresh air.

Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with soap and plenty of water.

If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

This information is not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Special powder against metal fire, Dry sand, ABC powder
Unsuitable extinguishing media	:	Water, High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

Pick up and transfer to properly labelled containers.
Do not flush with water.
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).

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose

of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion	:	Keep away from heat and sources of ignition. No smoking. Normal measures for preventive fire protection.
Hygiene measures	:	General industrial hygiene practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep away from sources of ignition - No smoking. Do not store near combustible materials. Keep containers tightly closed in a cool, well-ventilated place. To maintain product quality, do not store in heat or direct sunlight. 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. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	:	Protect from humidity and water.
Advice on common storage	:	Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Do not store together with oxidizing and self-igniting products.
Dampness	:	Keep in a dry, cool and well-ventilated place.
Other data	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Germany:

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
Copper	7440-50-8	AGW (inhalable fraction)	1 mg/m3		DE TRGS 900
zinc powder — zinc dust (stabilised)	7440-66-6	AGW (Inhalable fraction)	10 mg/m3	2014-04-02	DE TRGS 900
Peak-limit: excursion factor (category)		2;(II)			
Further information		Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			
zinc powder — zinc dust (stabilised)	7440-66-6	AGW (Alveolate fraction)	1,25 mg/m3	2014-04-02	DE TRGS 900
Peak-limit: excursion factor (category)		2;(II)			
Further information		Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			
Epoxy acrylate	55818-57-0	AGW (Inhalable fraction)	10 mg/m3	2014-04-02	DE TRGS 900
Peak-limit: excursion		2;(II)			

factor (category)					
Further information		General dust value. For this substance no specific occupational exposure limit value is established, since the AGS does not yet have information regarding unspecific action on the respiratory organs in excess of the normal values.Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			
Epoxy acrylate	55818-57-0	AGW (Alveolate fraction)	1,25 mg/m3	2014-04-02	DE TRGS 900
Peak-limit: excursion factor (category)		2;(II)			
Further information		General dust value. For this substance no specific occupational exposure limit value is established, since the AGS does not yet have information regarding unspecific action on the respiratory organs in excess of the normal values.Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).			

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses

: Wear face-shield and protective suit for abnormal processing problems.

Hand protection

Material : Solvent-resistant gloves (butyl-rubber)

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

The exact break through time can be obtained from the protective glove producer and this has to be observed.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Recommended preventive skin protection

Skin should be washed after contact.

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Use suitable breathing protection if workplace concentration requires.

Equipment should conform to EN 14387

Environmental exposure controls

General advice :

: Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform respective authorities.

Water : The product should not be allowed to enter drains, water courses or the soil.

:

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	gold
Odour	:	characteristic
pH	:	No data available
Freezing point	:	No data available
Boiling point/boiling range	:	> 100 °C
Flash point	:	> 100 °C
Bulk density	:	No data available
Flammability (solid, gas)	:	No data available
Auto-flammability	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Miscibility with water	:	immiscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	No data available

Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 22 mm2/s (40 °C)
Flow time	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.

No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : Do not allow evaporation to dryness.

No data available

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

Hazardous decomposition products	:	
Other information	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:

Copper :

Acute oral toxicity	:	The component/mixture is moderately toxic after single ingestion.

zinc powder — zinc dust (stabilised) :

Acute oral toxicity	:	Rat: > 2 000 mg/kg

2,5-di-tert-butylhydroquinone :

Acute oral toxicity	:	The component/mixture is toxic after single ingestion.

amines, hydrogenated tallow alkyl :

Acute oral toxicity	:	LD50 Rat: > 2 000 - 5 000 mg/kg Method: OECD Test Guideline 401

Skin corrosion/irritation

Product

May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product

Eye irritation

Respiratory or skin sensitisation

Product

Causes sensitisation.

May cause sensitisation of susceptible persons by skin contact.

Carcinogenicity

No data available

Toxicity to reproduction/fertility

No data available

Reprod.Tox./Development/Teratogenicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Further information

Product

No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

copper (7440-50-8) :

M-Factor : 10

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

zinc (7440-66-6) :

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

1-isopropyl-2,2-dimethyltrimethylene diisobutyrate (6846-50-0) :

Toxicity to daphnia and other aquatic invertebrates : (Daphnia (water flea)): 2,46 mg/l

Ecotoxicology Assessment

Long-term (chronic) aquatic hazard : Harmful to aquatic life with long lasting effects.

Propylidynetrimethanol, ethoxylated, esters with acrylic acid (28961-43-5) :

Toxicity to daphnia and other aquatic invertebrates : (Daphnia (water flea)): 10 232,73 mg/l

2,5-di-tert-butylhydroquinone (88-58-4) :

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

Amines, hydrogenated tallow alkyl (61788-45-2) :

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Very toxic to aquatic life

with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. In accordance with local and national regulations.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. In accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number

ADR : 3082

TDG

Not dangerous goods

CFR

Not dangerous goods

IMDG : 3082

IATA : 3082

14.2 Proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Copper metal powder)

TDG

Not dangerous goods

CFR

Not dangerous goods

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(,Copper metal powder)

IATA : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Copper metal powder)

14.3 Transport hazard class

ADR : 9

TDG

Not dangerous goods

CFR

Not dangerous goods

IMDG : 9

IATA : 9

14.4 Packing group

ADR

Packaging group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9

TDG

Not dangerous goods

CFR

Not dangerous goods

IMDG

Packaging group	:	III
Labels	:	9
EmS Number	:	F-A, S-F

IATA

Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packaging group	:	III
Labels	:	9

14.5 Environmental hazards

ADR	:	Environmentally hazardous
IMDG	:	Marine pollutant

14.6 Special precautions for user

For single packagings <=5L / 5 kg, or combination packagings containing inner packagings <= 5L / 5 kg net per inner packaging, SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Prohibition/Restriction
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Prohibition/Restriction
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Prohibition/Restriction
Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H303	:	May be harmful if swallowed.
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.
H319	:	Causes serious eye irritation.
H335	:	May cause respiratory irritation.
H361d	:	Suspected of damaging the unborn child.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

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.