

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2015/830



Article No.: 937LED      SERIE/SERIES  
Print date 09.11.2017  
Version 2.0      Revision date 29.10.2017

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

**1.1. product identifiers**

Article No. (manufacturer/supplier): 937LED  
Identification of the substance or mixture SERIE/SERIES

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

Printing ink/-lacquer

**1.3. Details of the supplier of the safety data sheet**

**supplier (manufacturer/importer/downstream user/distributor)**

A.M. Ramp & Co GmbH  
RUco Druckfarben      Telephone: +49.61 98.30 40  
Lorsbacher Str. 28      Telefax: +49.61 98.3 22 88  
D-65817 Eppstein

**Dept. responsible for information:**

E-mail      info@ruco-inks.com

**1.4. Emergency telephone number**

Emergency telephone number      +49.61 98.30 40  
Only available during office hours.

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Skin Irrit. 2 / H315	skin corrosion/irritation	Causes skin irritation.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Repr. 2 / H361	Reproductive toxicity	Suspected of damaging fertility.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.

**2.2. Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard pictograms**



**Danger**

**Hazard statements**

H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P280	Wear protective gloves and eye/face protection.
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 or doctor/ physician.

**contains:**

2-propene acid, reaction products with pentaerythritol  
hexamethylene diacrylate  
phosphin oxide  
oligotriacrylate

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Phosphinic acid ester  
 acrylate  
 urethane acrylate  
 bisphenol-A-epichlorhydrine resin, MW 700<MW<1000  
 carbonic acid amide  
 phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide  
 (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate  
 triacrylate, ethoxylated

**Supplemental Hazard information (EU)**

EUH205      Contains epoxy constituents. May produce an allergic reaction.

**2.3. Other hazards**

**SECTION 3: Composition / information on ingredients**

**3.2. Mixtures**

\*

**Product description / chemical characterization**

**Description**      Pigmentdispersion in reactive resins

**Hazardous ingredients**

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

EC No. CAS No. INDEX No.	REACH No. Chemical name classification: // Remark	Wt %
235-921-9 13048-33-4 607-109-00-8	01-2119484737-22-XXXX hexamethylene diacrylate Eye Irrit. 2 H319 / Skin Irrit. 2 H315 / Skin Sens. 1 H317	15 - 20
	urethane acrylate Eye Irrit. 2 H319 / Skin Sens. 1 H317 01-2119456619-26-XXXX	10 - 15
25068-38-6 603-074-00-8	bisphenol-A-epichlorhydrine resin, MW 700<MW<1000 Eye Irrit. 2 H319 / Skin Irrit. 2 H315 / Skin Sens. 1 H317	10 - 15
629-850-6 1245638-61-2	01-2119490003-49-XXXX 2-propene acid, reaction products with pentaerythrite Acute Tox. 4 H302 / Skin Irrit. 2 H315 / Eye Dam. 1 H318 / Skin Sens. 1 H317 / Aquatic Chronic 2 H411	5 - 10
	carbonic acid amide Acute Tox. 4 H302 / Eye Dam. 1 H318 / Skin Sens. 1 H317 / STOT RE 2 H373 01-2119972295-29-XXXX	5 - 10
278-355-8 75980-60-8	phosphin oxide Skin Sens. 1 H317 / Aquatic Chronic 2 H411 / Repr. 2 H361 01-2119489401-38-XXXX	3 - 5
423-340-5 162881-26-7 015-189-00-5	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide Skin Sens. 1 H317 / Aquatic Chronic 4 H413 01-2119472306-39-XXXX	3 - 5
231-272-0 7473-98-5	phenylketone Acute Tox. 4 H302 / Aquatic Chronic 3 H412 01-2119513212-58-XXXX	2,5 - 3
219-784-2 2530-83-8	[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane Eye Dam. 1 H318 01-2119484613-34-XXXX	1 - 2,5
256-032-2 42978-66-5 607-249-00-X	(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate Eye Irrit. 2 H319 / STOT SE 3 H335 / Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Aquatic Chronic 2 H411	1 - 2,5
500-066-5 28961-43-5	01-2119489900-30-XXXX triacrylate, ethoxylated Eye Irrit. 2 H319 / Skin Sens. 1 H317	1 - 2,5

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919-857-5	01-2119463258-33-XXXX Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics Flam. Liq. 3 H226 / Asp. Tox. 1 H304 / STOT SE 3 H336	1 - 2,5
282-810-6 84434-11-7	01-2119987994-10-XXXX Phosphinic acid ester Skin Sens. 1 H317 / Aquatic Chronic 2 H411	0,5 - 1
	acrylate Eye Irrit. 2 H319 / Skin Sens. 1 H317	0,5 - 1
500-114-5 52408-84-1	01-2119487948-12-XXXX oligotriacrylate Eye Irrit. 2 H319 / Skin Sens. 1 H317	0,25 - 0,5

**Additional information**

Full text of classification: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

**In case of inhalation**

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

**Following skin contact**

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners. Following skin contact  
Conditions to avoid UV-radiation/sunlight  
Causes mild skin irritation.

**After eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

**After ingestion**

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

**4.2. Most important symptoms and effects, both acute and delayed**

In all cases of doubt, or when symptoms persist, seek medical advice.

**4.3. Indication of any immediate medical attention and special treatment needed**

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media:**

alcohol resistant foam, carbon dioxide fire blanket, Powder, spray mist, (water)

**Extinguishing media which must not be used for safety reasons:**

strong water jet

**5.2. Special hazards arising from the substance or mixture**

Inhaling hazardous decomposing products can cause serious health damage.

**5.3. Advice for firefighters**

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours. See protective measures under point 7 and 8.

**6.2. Environmental precautions**

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Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

**6.3. Methods and material for containment and cleaning up**

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

**6.4. Reference to other sections**

Observe protective provisions (see chapter 7 and 8).

## **SECTION 7: Handling and storage**

Persons with a history of skin sensitisation problems should not be employed in any process in which this product is used.

**7.1. Precautions for safe handling**

**Advices on safe handling**

Use only in well-ventilated areas. Keep away from heat sources, sparks and open flames. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRBS 2153)".

**Hints on joint storage**

Keep away from strongly acidic and alkaline materials as well as oxidizers.

**Further information on storage conditions**

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 5 °C and 35 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Keep only in the original container.

**7.3. Specific end use(s)**

Observe technical data sheet. Observe instructions for use.

## **SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limit values**

not applicable

**8.2. Exposure controls**

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

**Occupational exposure controls**

**Respiratory protection**

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

**Hand protection**

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time (maximum wearing time) > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

**Eye protection**

Wear closely fitting protective glasses in case of splashes.

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**Protective clothing**

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

**Protective measures**

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

**Environmental exposure controls**

Do not allow to enter into surface water or drains. See chapter 7. No additional measures necessary.

**SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties \*

**Appearance:**

Physical state:	liquid
Colour:	refer to label
Odour:	characteristic
Odour threshold:	not determined
pH at 20 °C:	not applicable
Melting point/freezing point:	not determined
Initial boiling point and boiling range:	not applicable
Flash point:	> 100 °C
Evaporation rate:	not determined
Flammability (solid, gas):	
burning time (s):	not applicable
Upper/lower flammability or explosive limits:	
Lower explosion limit:	not applicable
Upper explosion limit:	not applicable
Vapour pressure at 20 °C:	2 mbar
Vapour density:	not applicable

**Relative density:**

Density at 20 °C: 1,23 g/cm³

**Solubility(ies):**

Water solubility (g/L) at 20 °C: insoluble

Partition coefficient: n-octanol/water: see section 12

Ignition temperature in °C: not applicable

Decomposition temperature: not applicable

Viscosity at 20 °C: > 90 s 4 mm  
Method: DIN 53211

Explosive properties: not applicable

Oxidising properties: not applicable

9.2. Other information \*

Solid content (%): 98,38 Wt %

**solvent content:**

Organic solvents: 2 Wt %

Water: 0 Wt %

Solvent separation test (%): < 3 Wt % (ADR/RID)

**SECTION 10: Stability and reactivity**

10.1. Reactivity

Not applicable.

10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

10.3. Possibility of hazardous reactions

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Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

**10.4. Conditions to avoid**

This preparation contains material instable under the following conditions: Heat, strong ultraviolet radiation. An exotherm polymerization of the product may thereby be caused. Avoid unintended contact with it. Hazardous decomposition byproducts may form with exposure to high temperatures.

**10.5. Incompatible materials**

Not applicable.

**10.6. Hazardous decomposition products**

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

**SECTION 11: Toxicological information**

Classification according to Regulation (EC) No 1272/2008 [CLP]

No data on preparation itself available.

**11.1. Information on toxicological effects**

**Acute toxicity**

Toxicological data are not available.

**skin corrosion/irritation; Serious eye damage/eye irritation**

Toxicological data are not available.

**Respiratory or skin sensitisation**

Toxicological data are not available.

**Specific target organ toxicity**

Toxicological data are not available.

**Aspiration hazard**

Toxicological data are not available.

**Practical experience/human evidence**

Other observations:

The fractions of acrylic resin in the preparation have an irritant effect. Prolonged or repeated contact with the preparation can lead to irritations of mucous membranes and of skin such as redness, formation of blebs, dermatitis, etc.. Cases of allergic skin reactions have been observed. Liquid splashes can lead to irritations of the eyes. Inhaling of droplets in the air or aerosols may lead to irritations of the respiratory tract. Ingestion may cause nausea, weakness and affect the central nervous system.

**Overall Assessment on CMR properties**

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

**SECTION 12: Ecological information**

**overall evaluation**

Classification according to Regulation (EC) No 1272/2008 [CLP]

There is no information available on the preparation itself.

Do not allow to enter into surface water or drains.

**12.1. Toxicity**

No information available.

**Long-term Ecotoxicity**

Toxicological data are not available.

**12.2. Persistence and degradability**

Toxicological data are not available.

**12.3. Bioaccumulative potential**

Toxicological data are not available.

**Bioconcentration factor (BCF)**

Toxicological data are not available.

**12.4. Mobility in soil**

Toxicological data are not available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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12.6. Other adverse effects

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

**Appropriate disposal / Product Recommendation**

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

**List of proposed waste codes/waste designations in accordance with EWC**

080312 waste ink containing dangerous substances

**packaging**

**Recommendation**

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

**SECTION 14: Transport information**

No dangerous good in sense of this transport regulation.

14.1. UN number

not applicable

14.2. UN proper shipping name

14.3. Transport hazard class(es)

not applicable

14.4. Packing group

not applicable

\*

14.5. Environmental hazards

Land transport (ADR/RID)

not applicable

Marine pollutant

not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

**Further information**

**Land transport (ADR/RID)**

tunnel restriction code

-

**Sea transport (IMDG)**

EmS-No.

not applicable

**Air transport (ICAO-TI / IATA-DGR)**

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

**SECTION 15: Regulatory information**

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

\*

**EU legislation**

**Directive 2010/75/EU on industrial emissions**

VOC-value (in g/L): 19,832

**National regulations**

**Restrictions of occupation**

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

**Other regulations, restrictions and prohibition regulations**

15.2. Chemical Safety Assessment

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Chemical safety assessments for substances in this preparation were not carried out.

**SECTION 16: Other information**

\*

**Full text of classification in section 3:**

Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Skin Irrit. 2 / H315	skin corrosion/irritation	Causes skin irritation.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
STOT RE 2 / H373	Specific target organ toxicity (repeated exposure)	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Repr. 2 / H361	Reproductive toxicity	Suspected of damaging fertility.
Aquatic Chronic 4 / H413	Hazardous to the aquatic environment	May cause long lasting harmful effects to aquatic life.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.
STOT SE 3 / H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
Asp. Tox. 1 / H304	Aspiration hazard	May be fatal if swallowed and enters airways.
STOT SE 3 / H336	Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.

**Remark**

n.a. = not applicable

**Further information**

Classification according to Regulation (EC) No 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

\* Data changed compared with the previous version