

# Material Safety Data Sheet

## According to 91/155 EC

Reviewed on 05.06.2003

### 1 Identification of substance

- **Product details**
- **Trade name:** STARLUXE INK RANGE
- **Product-No:** STARLUXE
- **Application of the substance / the preparation** UV Curable ink
- **Manufacturer/Supplier:**  
Sun Chemical Gibbon  
3 High View Road  
South Normanton  
Derbyshire  
DE55 2DT
- **Informing department:** Product Safety Department
- **Emergency information:**  
Telephone: (01773) 813704  
OUT OF OFFICE 24 HOUR EMERGENCY TEL:- 01689 894000

### 2 Composition/Data on components:

- **Chemical characterization:**
- **Dangerous components, which are presenting a health hazard under the scope of the Dangerous Substances Directive 67/548/EEC.**

Acrylates, multifunctional, "Xi", n.o.s. Xi; R 36/38	25-50%
CAS: 15625-89-5 trimethylolpropane triacrylate EINECS: 239-701-3 Xi; R 36/38-43	10-25%
CAS: 119313-12-1 2-benzyl-2-dimethylamino-4-morpholinobutyrophenone ELINCS: 404-360-3 N; R 50/53	≤ 2.5%
- **Additional information**  
For information about ingredients with occupational exposure limits see section 8.  
For the wording of the listed risk phrases refer to section 16.

### 3 Hazards identification

- **Hazard designation:**



Xi Irritant

- **Information pertaining to particular dangers for man and environment**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.  
R 36/38 Irritating to eyes and skin.  
R 43 May cause sensitisation by skin contact.  
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 4 First aid measures

- **General information**  
When symptoms persist or in all cases of doubt seek medical advice. Never give anything by mouth to an unconscious person.
- **After inhalation**  
Remove to fresh air.  
Keep patient warm and at rest.  
If breathing is irregular or stopped, administer artificial respiration.  
If unconscious place in recovery position and seek medical advice.

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- **After skin contact**  
Remove contaminated clothing immediately.  
Do NOT use solvents or thinners.  
Wash skin thoroughly with soap and water or use recognised skin cleanser.  
In the case of accidental skin contact avoid concurrent exposure to sunlight or other sources of UV radiation which may increase the sensitivity of the skin
- **After eye contact**  
Remove contact lenses.  
Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart.  
Seek medical advice.  
In the case of accidental eye contact avoid concurrent exposure to sunlight or other sources of UV radiation which may increase the sensitivity of the eyes.
- **After swallowing**  
If accidentally swallowed obtain immediate medical attention!  
Keep at rest.  
Do NOT induce vomiting.

### 5 Fire fighting measures

- **Suitable extinguishing agents**  
Alcohol resistant foam, CO<sub>2</sub>, powders, water spray, if applied under high pressure.
- **For safety reasons unsuitable extinguishing agents** Water jet.
- **Special hazards caused by the material, its products of combustion or flue gases:**  
Fire will produce dense black smoke.  
Exposure to hazardous decomposition products may cause a health hazard.  
Appropriate breathing apparatus may be required.  
Cool closed containers exposed to fire with water spray.
- **Protective equipment:** Wear self-contained respiratory protective device
- **Additional information** Collect run-off from fire fighting.

### 6 Accidental release measures

- **Person-related safety precautions:** Ventilate the area.
- **Measures for environmental protection:**  
Do not allow to enter drains.  
If the product contaminates rivers and lakes or sewages inform respective authorities.
- **Measures for cleaning/collecting:**  
Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local regulations.  
Clean preferably with a detergent. Avoid the use of solvents.  
Exposure to daylight may cause the spilled coating to harden within minutes.

### 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
Avoid skin and eye contact.  
Smoking, eating and drinking should be prohibited in application area.  
For personal protection see section 8  
Comply with health and safety at work laws.  
The Manual Handling Operations Regulations may apply to the handling of containers/packages of this product.  
Refer to the guide weight indicated on the container when carrying out assessments.

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

- **Storage**

- **Requirements to be met by storerooms and containers:**

Keep container tightly closed.

Never use pressure to empty: container is not a pressure vessel.

No smoking.

Prevent unauthorized access.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

- **Information about storage in one common storage facility:**

Keep well away from oxidising agents and strongly alkaline or strongly acid materials.

- **Further information about storage conditions:**

Always keep in containers of the same material as the original one.

Store in a dry, well ventilated place.

Keep away from heat and direct sunlight.

Observe label precautions.

Store in accordance with the particular national regulations concerning water pollution.

The principles contained in the HSE guidance note Storage of Packaged Dangerous Substances, should be observed when storing this product.

Store between 5 and 25 °C.

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:**

Provide adequate ventilation.

- **Components with critical values that require monitoring at the workplace:**

Numerical data - if specified - are taken from the valid national lists.

- **Personal protective equipment**

- **General protective and hygienic measures**

ALWAYS WASH YOUR HANDS BEFORE EATING, SMOKING OR USING THE TOILET.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

Regular skin inspection of users of this product is recommended.

- **Breathing equipment:** Not necessary if room is well-ventilated.

- **Protection of hands:**

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Gloves of a length to overlap the sleeves of overalls should be used. Care should be taken to avoid contact with uncured products or substrates.

Radtech recommends the use of:

- single use, disposable, unpowdered nitrile gloves: Use for short duration exposures not exceeding 30 minutes, in situations where only splashes are likely. Do not use where mechanical resistance is required or where puncturing or tearing of the gloves is likely to occur. Replace immediately when punctured or degraded. Do not use when handling formulations containing HDDA or DPGDA.
- minimum 0.45mm thick, unlined, unpowdered, natural rubber latex-free nitrile gloves: Use for longer duration exposure (upto 4 hours for most UV/EB curing acrylates) or mechanical handling activities. Replace immediately when punctured or degraded. Do not use when handling formulations containing HDDA or DPGDA.
- heavy duty, unlined, natural rubber, latex free nitrile gloves: Use when handling solvents. Avoid the use of chlorinated solvents and limit the use of ketones (e.g. acetone, MIBK, MEK) and ethyl and butyl acetates, as they may accelerate glove deterioration.

In all cases, purchase gloves from reputable suppliers, as poor quality gloves may

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increase the risk of contact dermatitis.

Protective gloves may increase the risk of entanglement: Keep hands away from operating rollers or presses.

The glove material has to be impermeable and resistant to the product.

- **Material of gloves**

The selection of suitable gloves depends not only on the material, but also on manufacturing quality, which varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be obtained from the glove manufacturer. Manufacturer guidelines must always be followed.

- **Eye protection:**

Wear approved chemical safety goggles where eye exposure is reasonably probable.

- **Body protection:**

Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

DO NOT USE SOLVENTS OR THINNERS AS SKIN CLEANING AGENTS

- **Limitation and supervision of exposure into the environment**

See Section 12 for detailed information.

### 9 Physical and chemical properties:

- **General Information**

<b>Form:</b>	paste
<b>Smell:</b>	characteristic
<b>Flash point:</b>	> 100°C
<b>Density</b>	not determined
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	partly or not miscible
<b>VOC Content:</b>	0 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**

Stable under recommended storage and handling conditions (see section 7).

This product contains materials which are unstable under the following conditions; exposure to heat ( above 50 C ), strong UV sources, free radical initiators, peroxides, strong alkalis/acidic materials, sunlight or reactive metals. Contact with these could result in uncontrollable exothermic polymerisation.

- **Materials to be avoided:**

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

- **Dangerous products of decomposition:**

Exposure to high temperatures may produce hazardous decompositions: products such as: carbon dioxide, carbon monoxide, smoke, oxides of. nitrogen (NOx).

### 11 Toxicological information

The product is formulated in accordance with the Exclusion List for Printing Inks and Related Products.

There is no data available on the product itself. The Preparation is classified according to the conventional method (calculation method of the EC-directive 88/379/EEC) and is

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classified for toxicological hazards accordingly. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. See Sections 3 and 15 for details of the resulting hazard classification.

Contains a substance which is classified as a skin sensitizer (refer to Section 2 for details). Cases of hypersensitivity may occur, possibly with cross-sensitisation to other acrylate/acrylic materials.

Product has irritant properties.

Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

Ingestion may lead to severe respiratory difficulties, stimulation of the central nervous system and in extreme cases unconsciousness

Liquid splashes in the eye may cause irritant symptoms.

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

**15625-89-5 trimethylolpropane triacrylate**

Oral LD50 5200 mg/kg (rat)

Dermal LD50 5200 mg/kg (Kaninchen)

### 12 Ecological information:

The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.

There are no data available on the product itself.

The product has been assessed following the conventional method in CHIP and is classified for ecological hazards accordingly. See Sections 3 and 15 for details.

- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
See also Sections 5, 6 and 13.  
Harmful to aquatic organisms

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Do not allow into drains or water courses or dispose of where ground or surface waters may be affected.  
Wastes, including emptied containers are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.  
Using information provided in this safety data sheet, advice should be obtained from the relevant environment agency whether the Special Waste Regulations apply.
- **European waste catalogue**  
08 00 00 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS  
08 03 00 wastes from MFSU of printing inks  
08 03 12 waste ink containing dangerous substances  
15 00 00 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED  
15 01 00 packaging (including separately collected municipal packaging waste)  
15 01 10 packaging containing residues of or contaminated by dangerous substances

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- **Uncleaned packagings:**
- **Recommendation:**  
Emptied containers should be supplied to scrap utilisation resp. recycling.  
Not emptied containers are hazardous waste.

### 14 Transport information

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### 15 Regulatory information

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

The provisions of the Health and Safety at work etc. Act (and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

- **Designation according to EC guidelines:**
- **Code letter and hazard designation of product:**  
Xi Irritant
- **Hazard-determining components of labelling:**  
trimethylolpropane triacrylate
- **Risk phrases:**  
36/38 Irritating to eyes and skin.  
43 May cause sensitisation by skin contact.  
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**  
S24/25 Avoid contact with skin and eyes  
29/35 Do not empty into drains; dispose of this material and its container in a safe way.

### 16 Other information:

The information in this safety data sheet is provided in accordance with the requirements of the CHIP Regulations and EC Directive 91/155/EEC.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

- **Relevant R-phrases**  
36/38 Irritating to eyes and skin.  
43 May cause sensitisation by skin contact.  
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Department issuing data specification sheet:** Product Safety Department
- **Contact:** Dr Jackie Morgan

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· **Sources**

Further information and advice can be found in:

The Control of Substances Hazardous to Health Regulations 1999 [SI 1999:437], The Stationary Office.

COSHH Essentials: easy steps to control chemicals [HSG 193], HSE Books. Details of Control Guidance Sheets, which may be relevant to the particular conditions of use, can also be found in this publication.

The Manual Handling Operations Regulations 1992 [SI 1972:917], The Stationary Office. Storage of Packaged Dangerous Substances [HSG71], HSE Books.

Safety in the Use of Inks, Varnishes and Lacquers Cured by Ultra Violet Light or Electron Beam Techniques (PIAC).

Exclusion List for Printing Inks and Related Products 1999, CEPE (from BCF tel: 01372 360660).

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