

LUMI REACT HARD & DETAILED SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name LUMI REACT HARD AND DETAILED

Product No. LRHD

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

Product Class : Mixture of (meth)acrylic acid esters, (meth)acrylated monomers, oligomers and photoinitiators.

Product Use : Use for stereolithography 3D printers with UV-Visible light systems.

1.3. Details of the supplier of the safety data sheet

Supplier LUMI INDUSTRIES

Registered office:

Via Sile 41

31056 Roncade (TV)

Italia

Tel.: 0422789648

email: info@lumindustries.com

Headquarters

P.za Poloni Don Vittorio, 2

31044 Montebelluna (TV)

Italia

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards Not classified.

Human health

Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; STOT SE 3 - H335

Environment

Not classified.

Classification (1999/45/EEC)

Xi; R36/37/38.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



Signal Word

Warning

Hazard Statements

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary Statements

P271

Use only outdoors or in a well-ventilated area.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P305+351+338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313

Get medical advice/attention.

P501

Dispose of contents/container in accordance with national regulations.

Supplementary Precautionary Statements

P261

Avoid breathing vapor/spray.

P264

Wash contaminated skin thoroughly after handling.

P321

Specific treatment (see medical advice on this label).

P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P312	
P332+313	If skin irritation occurs: Get medical advice/attention.
P337	If eye irritation persists:
P362	Take off contaminated clothing and wash before reuse.
P403+233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

(Meth)acrylated monomers (Meth)acrylated oligomers Photoinitiators	
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335	Classification (67/548/EEC) Xi;R36/37/38. R43/51/53 S3, S7/9, S20, S26,S29,S37/39 H303, H402

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Emergency Overview: This product is a liquid (meth) acrylic based resin with an acrylate characteristic odour. This product may cause skin and eye irritation. The inhalation of high vapour concentration may cause a headache and nausea. Get medical attention if any discomfort continues.

Inhalation

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion

If ingested dilute with water by giving glasses of water or milk to the victim. Do not give anything by mouth if the victim is rapidly losing consciousness, is unconscious, or convulsing. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit does not enter the lungs. Get medical attention.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Particular attention should be paid to hair, nose, and ears, and other areas not easily cleaned. Wash clothing before reuse. Get medical attention if any discomfort continues.

Eye contact

Immediately flush with plenty of clean water (under eyelids) for at least 20 minutes. Hold eyelids apart to ensure flushing. Washing within one minute of contact is essential to achieve maximum effectiveness. Seek medical attention immediately. Do not apply oil or oily ointments unless ordered by a physician. Remove any contact lenses and open eyes wide apart. To hospital or eye specialist.

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

Inhalation.

This product is a suspect slight respiratory tract irritation hazard, especially if used at elevated temperature or processes, which may generate aerosols or mists. Symptoms of irritation may include coughing, headache and nausea, mucous production and shortness of breath. No specific health warnings noted.

Ingestion

The product may be harmful if swallowed. It may cause nausea, headache, vomiting, diarrhoea, and/or central nervous system effects. Keep all food in an area separate from storage and use locations. There may be irritation of the throat.

Skin contact

May cause skin irritation. Symptoms may include a slightly localized redness or rash and swelling. Repeated exposure may cause sensitization and allergic skin reaction in some individuals resulting in contact dermatitis, severe irritation, dryness and cracking.

Eye contact

Irritating and may cause redness and pain. Symptoms may include excessive tearing, itching, irritation, blinking and redness.

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

SECTION 5: FIREFIGHTING MEASURES

Flash point: > 100°C / 212°F
Method: Setaflash
Ignition temperature: n.d
Lower explosion limit: n.d
Upper explosion limit: n.d

5.1. Extinguishing media

Extinguishing media: Water spray, foam, dry powder or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Emits irritating vapours. High temperatures, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerization generating heat/pressure and rupture/explosion of closed containers.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Use pressurized air mask if product is involved in a fire. Water spray should be used to cool containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Avoid discharge to the aquatic environment. Do not discharge into drains, watercourses or onto the ground. Dispose of in accordance with all applicable federal, state and local regulations.

6.3. Methods and material for containment and cleaning up

In the event of a spill, immediately remove all sources of ignition. Absorb spillage with suitable absorbent material. Transfer to a container for disposal using appropriate personal protective equipment and non-sparking tools.

6.4. Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

User Exposure -- This product should be used in well-ventilated areas. Product may cause irritation.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry and cool place. Protect from freezing and direct sunlight. Keep away from heat, sparks and open flame. Keep away from food, drink and animal feeding stuffs. > 4 °C (39.2 °F), < 27 °C (80.6 °F). Do not exceed 50°C (122°F) when in storage. Keep containers closed. Avoid ignition sources.

Do not heat containers with steam or electrical equipment. Heating this product above 100°C (210°F) in the presence of air may cause slow oxidative decomposition; above 150°C (300°F), polymerization may occur. Fumes and vapours from this thermal decomposition may be dangerous for health (nitrous vapours, carbon monoxide-carbon dioxide). Do not breathe fumes.

7.3. Specific end use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.2. Exposure controls

Protective equipment



Engineering measures

Provide adequate ventilation.

Respiratory equipment

Wear suitable respiratory protection.

Hand protection

Nitrile or Neoprene gloves are recommended.

Eye protection

Wear tight-fitting goggles or face shield.

Other Protection

Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of skin contact. Wear air-supplied mask in confined areas.

Hygiene measures

Wash hands after contact. Wash hands after handling. Wash promptly with soap & water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination. Provide shower facilities near the work place. Shower after work. Eating, smoking and water fountains prohibited in immediate work area. **DO NOT SMOKE IN WORK AREA!**

Skin protection

Protection suit must be worn.

Environmental Exposure Controls

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid.+/ 100mpas
Solubility	Insoluble in water
Solubility in organic solvents:	Soluble in organic solvents
Relative density	1.10 –1.15 g/cm ³
Vapour pressure	< 0.1 mbar
Flash point	> 93 C > 200 F P/M Pensky-Martens.
Volatile characteristics:	negligible
Electrostatic discharge:	safe
Electric conductivity:	dielectric

9.2. Other information**SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerization: May polymerize.

10.4. Conditions to avoid

Avoid radical forming substances (metal-ions, peroxides)

10.5. Incompatible materials

Materials To Avoid

Strong acids. Strong alkalis. Amines. Organic peroxides/hydro peroxides.

10.6. Hazardous decomposition products

Hazardous decomposition products may include oxides of carbon, nitrogen and various hydrocarbon fragments.

Hazardous Polymerization: Hazardous polymerization may occur. Uncontrolled polymerization may cause rapid evolution of heat and increase in pressure that could result in violent rupture of sealed storage vessels or containers.

SECTION 11: TOXICOLOGICAL INFORMATION11.1. Information on toxicological effects

Toxicological information

No data recorded.

Inhalation

May cause irritation to the respiratory system. No specific health warnings noted.

Eye contact

Irritating to eyes.

Route of entry

Inhalation. Skin absorption. Ingestion.

Specific effects

Dermatitis

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

Dangerous for the environment if discharged into watercourses. This substance is not readily biodegradable. Dispose of in accordance with all applicable federal, state and local regulations.

12.1. Toxicity12.2. Persistence and degradability12.3. Bioaccumulative potential12.4. Mobility in soil12.5. Results of PBT and vPvB assessment12.6. Other adverse effects**SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Contact a licensed professional waste disposal service to dispose of this mixture. As with all foreign substances, do not allow to enter the storm or sewer drainage systems. Avoid release to the Environment. Contaminated Packaging: Dispose of as unused product. Expose the open emptied container to light, then dispose.

SECTION 14: TRANSPORT INFORMATION

General The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

International Air Transport Association: Not regulated as dangerous good

International Maritime Dangerous Goods: Not regulated as hazardous material

European Agreement of Dangerous Goods by Road/Rail: Not regulated as hazardous material

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Transport Labels No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EUROPEAN ECONOMIC COMMUNITY (EEC)

CANADA REGS

Components	EPA* TSCA	CA Prop65	EINECS	European Community Standards	Listed as dangerous chemicals per ESIS	EEC Symbol	DSL	NDSL
(Meth)acrylated Monomers	Yes	No	Yes	None	No	Xi : Irritant, N : Harmful R36/37/38, R43/51/53 S3,S7/9,S20, S26,S29,S37/39	Yes	Yes
(Meth)acrylated oligomers	Yes	No	Yes	None	No	Xi; Irritant, R36/37/38, R43 S3,S7/9,S20, S26,S29,S37/39	Yes	Yes
Photoinitiators	Yes	No	Yes	None	No	H303, H402	Yes	No

All the components present in this product at concentrations equal to or greater than 0.1% are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Substance Preparation Classification : **Harmful & Irritant**

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2. Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

Risk Phrases In Full

R36/37/38 Irritating to eyes, respiratory system and skin.
R43 May cause sensitization by skin contact

Hazard Statements In Full

H319 Causes serious eye irritation.
H315 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
H315 Causes skin irritation.
H335 May cause respiratory irritation.

Safety Phrases:

S3 Keep in a cool place
S7/9 Keep container
S20 When using do not eat or drink
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S29 Do not empty into drains
S36 Wear suitable protective clothing
S37/39 Wear suitable gloves and eye/face protection --

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302: Pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986, (SARA) and 40 CFR 372 Part 372, this product does not contain chemicals subject to the reporting requirements under Section 313.
California Proposition 65: This product does not contain chemicals, which are known to the state of California to cause cancer.

Disclaimer

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.