MATERIAL SAFETY DATA SHEET
Last upgrade: May 27, 2013

1 Chemical product and company information
Product: IRIX RESIN
Chemical name: Acrylate Ester Blend
Product use: Material for DigitalWax series stereolithography systems
Manufacturer: DWS S.R.L.
Via Lago di Levico, 3 I-36010 Zanè – Vicenza – Italy
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2 Composition/Information on ingredients
Component (wt%) Classification
Acrylate monomers 45-70 R36/38, R43, S36/37
Inorganic filler 30-55 R36/38, R43, S36/37
Photoinitiator 0-1 Xn – N, R62 – R51/53, S61
Stabilizers 0.1-1
These chemicals are not considered to be carcinogenic by NTP, IARC, ACGIH, OSHA.
This product is considered to be a hazardous chemical.

3 Hazards identification
Emergency Overview
This product can cause skin irritation and eye irritation. This product can cause skin sensitization.
Avoid contact with skin and eyes.
Potential Health Effects:
Eyes: The product is an eye irritant and is likely to polymerize, forming a solid adhere to eye tissue.
Skin: The product causes skin irritation, and is likely to polymerize, forming a solid that can adhere to skin.
Prolonged or repeated exposures could cause sensitization.
Ingestion: Ingestion of the product is unlikely. However, if ingested, gastrointestinal irritation and nausea are expected to occur with more serious symptoms developing upon ingestion of larger amounts.
Inhalation: Because of low volatility of the product, inhalation is unlikely under normal conditions. Aerosols or vapors from processing at elevated temperatures would cause respiratory irritation. Prolonged or repeated exposures could cause sensitization.

4 First aid measures
Inhalation: Move affected person to fresh air.
Skin Contact: Wash with plenty of soap and water.
Eye Contact: Flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion: If swallowed, immediately give 2 glasses of water and induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

5 Fire fighting measures
Flash point: > 200°C
Upper Flammable Limit: Not available
Lower Flammable limit: Not available
Flammability Classification: Combustible
Rate of Burning: Not available
Hazardous Combustion products: Carbon monoxide, carbon dioxide
Extinguishing media: Carbon dioxide, dry chemical, chemical foam, water
Fire fighting instructions: Wear full protective clothing including helmet and facemask

6 Accidental release measures
Use appropriate Personal Protective Equipment during clean up.
Remove source of heat, sparks, flame, impact, friction or electricity. Dike spill. Prevent liquid from entering sewers, waterways or low areas. Soak up with sawdust, sand, oil dry or other absorbent material.
Liquid solidifies when exposed to sunlight or another ultraviolet light source. Solidify waste material before disposal.

7 Handling and storage
Handling Procedures: Do not breathe vapors or mists. Prevent skin and eye contact. Wash thoroughly after handling.
Storage Procedures: Keep container tightly closed and in a cool place. Do not store or consume food, drink or smoke in areas where they may become contaminated with this material.

8 Personal protection
Generally Applicable Control Measure and Precautions:
Use only with adequate ventilation. Keep away from heat, sparks and flames. Keep container in a cool place.

Personal Protection Equipment:
Wearing safety glasses is needed as part of good industrial hygiene work practices.

Wear rubber, latex or other impervious gloves to avoid skin contact when handling the liquid resin. Once the liquid material has been exposed to ultraviolet light and thermally treated in accordance with specified methods, it becomes a solidified mass. Contact with the solidified material is not likely to be hazardous. Personal protective equipment is not necessary to handle the solidified material.

9 Physical and chemical properties
Appearance: Slurry
Odour: slight acrylic
IRIX RESIN
Photosensitive resin for stereolithography

pH: NA
Melting point: <-18°C
Initial boiling point: NA
Flash point: > 200°C
Evaporation rate: NA
Flammability: NA
Upper/Lower flammability: NA
Vapour pressure: NA
Vapor density: NA
Specific gravity: 1.6-1.7 at 25°C
Water solubility: slight
Partition coefficient: NA
Auto-ignition temperature: NA
Decomposition temperature: NA
Viscosity: 4000-10000 mPa·s

10 Stability and reactivity
Instability: Exposure to white light, ultraviolet light or excessive heat will cause the product to solidify.
Incompatibility: Incompatible with strong oxidizers, acids or bases.
Decomposition: Strong acids or bases may cause hydrolysis.
Polymerization: Polymerization can occur. Conditions leading to polymerization are exposure to light or excessive heat.

11 Toxicological information
No toxicity data is available for this mixture. The mixture contains components that can cause skin irritation and skin sensitization in susceptible individuals, eye irritation, and respiratory tract irritation. Persons with preexisting skin conditions or allergies may have increased susceptibility to the effects of overexposure.

Component Analysis:
Component
Photoinitiator LD50 Oral >2000mg/kg(rats)

None of the components in this material is listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

Exposure Limits:
TLV (ACGIH): Not Established
PEL (OSHA): Not Established

12 Ecological information
General product information: No information available for product.
This product is harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Avoid release to the environment.

Component Analysis:
Component
Photoinitiator LC50 48h (Oryzias latipes) 1 -10mg/l EC50 0.5h 1.0mg/l

13 Disposal considerations
Do not contaminate drains, soil or surface waters with the material or its container. Avoid disposal. Attempt to utilize product completely. Dispose of in compliance with all applicable regulations. Prior to disposal of unused material, consult an approved waste disposal operative to ensure regulatory compliance.

14 Transport information
Keep container under the condition of 5-30°C while transporting. Maximum: 30°C.
IATA Information: Not regulated as a dangerous good.
IMDG Information: Not regulated as a hazardous material.
ADR Information: Not regulated as a hazardous material.
RID Information: Not regulated as a hazardous material.

15 Regulatory information
European Union Regulatory Information
R36/38 Irritating to eyes and skin.
R43 May cause sensitization by skin contact
S36/37 Wear suitable protective clothing and gloves.
Xn Harmful
N Dangerous for the environment
R51/53 Toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.
S61 Avoid release to the environment.

16 Other information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. DWS S.r.l. shall not be held liable for any damage resulting from handling or from contact with the product.

Key
ACGIH = American Conference of Governmental Industrial Hygienists
ADR/RID = European Agreement of Dangerous Goods by Road/Rail
OSHA = Occupational Safety and Health Administration
IATA = International Air Transport Association
IARC = International Agency for Research on Cancer
IMDG = International Maritime Dangerous Goods
NTP = National Toxicology Program