

SAFETY DATA SHEET

In accordance with 29 C.F.R. 1910.1200 and GHS Rev. 5

KRYSTALIS™ MICROSCOPE SLIDE SEALANT

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name KRYSTALIS™ Microscope Slide Sealant
Product Number(s) HHI002.1-8
Synonyms A permanent adhesive for cementing cover glass to microscope slides.
Brand KRYSTALIS™

The product is a mixture. See Section 3.

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

Identified uses Laboratory chemicals
Uses advised against Not for food, drug, pesticide or biocidal product use.

1.3 Details of the supplier of the safety data sheet

Company	Hempstead Halide Inc Heidenheimer-Marine Bldg. 305 21 st Street Galveston, TX 77550 USA	Hempstead Allied Ltd Leda House 20 Station Road Cambridge CB1 2JD GB
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Telephone (+1) 409-572-2505 (+44) (0) 1223 663178

Emergency Telephone Number

Inside the USA: (+1) 800-222-1222 (AAPCC)
Outside the USA: (+44) (0)845-46-47 (NHS Direct)

2. HAZARD IDENTIFICATION

2.1 Classification of the mixture

This chemical mixture is considered hazardous under the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Classification in accordance with 29 CFR 1910:

Acute Toxicity (Category 4)	H332
Carcinogenicity (Category 1A)	H350

Eye Irritation (Category 2)	H319
Flammable Liquid (Category 1)	H225
Mutagenicity (Category 1B)	H340

For the full text of H-Statements referred to in this section, see Section 16

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word: Danger

Hazard statements:

H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.

Precautionary statements:

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P261	Avoid breathing dust/fumes/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	If exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
P501	Dispose of contents/container to an approved waste disposal plant.

GHS additional information:

H362

May cause harm to breast-fed children.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: none**3. COMPOSITION/INFORMATON ON INGREDIENTS**

COMPONENT	SYNONYMS	CAS-NO	EC-NO	CONCENTRATION
2-Methylpropyl acetate	Isobutyl acetate	110-19-0	203-745-1	25-40% w/w
1-Methoxypropyl acetate	Lunazard	108-65-6	283-392-2	10-25% w/w
2-Propanone	Acetone	67-64-1	200-662-2	10-25% w/w
Cellulose nitrate	Celloidin	9004-70-0	618-392-2	2.5-10% w/w
1,3-Diethyl-1,3-diphenylurea	Ethyl centralite	85-98-3	201-645-2	1-4% w/w
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	Kodaflex txib	6846-50-0	229-934-9	1-2.5% w/w
Toluene	Methylbenzene	108-88-3	203-625-9	1-2.5% w/w
Isopropanol	Isopropyl alcohol	67-63-0	200-661-7	1-2.5% w/w

4. FIRST AID MEASURES**4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the physician in attendance. Move away from the affected area.

If inhaled

Move person into fresh air. If not breathing, give artificial respiration and consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use a dry chemical, carbon dioxide or similar ABC fire extinguisher for incipient fire. Water may be used to cool and prevent rupture of containers that are exposed to heat from fire.

5.2 Special hazards arising from the mixture

DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

5.3 Advice for firefighters

Evacuate all persons from the fire area to a safe location. Move non-burning material, if feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat. Use water spray to disperse vapors if a spill or leak has not ignited.

5.4 Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see Section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage. Collect with absorbent materials and place spilled product and all materials used in a container for disposal according to local regulations (see Section 13).

6.4 Reference to other sections

For disposal see Section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition. No smoking. Do not pressurize, cut, weld, braze, solder, drill, grind or expose container to heat, flame, sparks or other sources of ignition. Take measures to prevent the buildup of electrostatic charge. For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers closed when not in use. Store in cool, well-ventilated space away from incompatible materials.

7.3 Specific end use(s)

Apart for the uses mentioned in Section 1.2, no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****Components and workplace control parameters**

COMPONENT	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
2-Methylpropyl acetate	150 ppm	No data	150 ppm	No Data
1-Methoxypropyl acetate	No Data	No Data	No Data	No Data
2-Propanone	250 ppm	500 ppm	1,000 ppm	No Data
Cellulose nitrate	No Data	No Data	No Data	No Data
1,3-Diethyl-1,3-diphenylurea	No Data	No Data	No Data	No Data
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	No Data	No Data	No Data	No Data
Toluene	20 ppm	No Data	200 ppm	300 ppm
Isopropanol	No Data	No Data	No Data	No Data

8.2 Exposure controls**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday.

Personal protective equipment**Eye/face protection**

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EC).

Skin protection

Handle with chemical-resistant gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Wear a complete suit protective against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirator and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EC).

Control of environment exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Colorless, mobile, oily liquid
b) Odor	Strong solvent
c) Odor threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling point range	No data available
g) Flash point	-56 °C (-69 °F)
h) Evaporation rate	Faster than Diethyl Ether
i) Flammability (solid, gas)	Supports combustion
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	0.791 g/ml at 20° C (68° F)
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of hazardous reaction

No data available

10.4 Conditions to avoid

Heat, flames and sparks

10.5 Incompatible materials

Acids, bases and oxidizing agents

10.6 Hazardous decomposition products

No data available. In the event of fire *see* Section 5.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

The acute effects of this mixture have not been tested. Data on individual components:

CAS-NO	EC-NO.	COMPONENT	Oral LD50	DERMAL LD50	VAPOR LC50
110-19-0	203-745-1	2-Methylpropyl acetate	15400mg/Kg Rat	>17400mg/Kg Rabbit	>20mg/L
108-65-6	283-392-2	1-Methoxypropyl acetate	8532mg/Kg Rat	>5000mg/Kg Rabbit	>20mg/L
67-64-1	200-662-2	2-Propanone	1800/Kg Rat	20000mg/Kg Rabbit	50.1mg/L Rat
9004-70-0	618-392-2	Cellulose nitrate	>5000mg/Kg Rat	>5000mg/Kg	20mg/L
85-98-0	201-645-2	1,3-Diethyl-1,3-diphenylurea	781mg/Kg Rat	>2000mg/Kg Rat	198mg/L Rat
6846-50-0	229-934-9	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	3200mg/Kg Rat	>2000mg/Kg Rabbit	>20mg/L
108-88-3	203-625-9	Toluene	2600mg/Kg Rat	12000mg/Kg Rabbit	12.5mg/L Rat
67-63-0	200-661-7	Isopropanol	1870mg/Kg Rat	4059 mg/Kg Rabbit	72.6mg/L Rat

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

Additional information

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Do not allow this product to be released into the environment. Comply with all applicable government regulations as to the disposition and disposal of this product.

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bio-accumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment is not required and not conducted.

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORTATION INFORMATION

DOT (US): CONSUMER COMMODITY
IMDG: LIMITED QUANTITY UN1950
IATA: ID8000, CONSUMER COMMODITY, 9

15. REGULATORY INFORMATION

SARA 302 Components

Chemicals in this product are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This product contains the following substances subject to the reporting requirements of Section 313 of SARA Title III and 40 C.F.R. 372:

Toluene CAS-No. 108-88-3
 Isopropanol CAS-No. 67-63-0

SARA 311/312 Hazards

This product has been reviewed according to the EPA Hazard Categories under Sections 311 and 312 of SARA Title III and is considered to meet these categories: Fire Hazard, Acute Health Hazard and Chronic Health Hazard.

Massachusetts Right to Know Components KRYSTALIS™ Sealant

COMPONENT	CAS-NO
2-Methylpropyl acetate	110-19-0
1-Methoxypropyl acetate	108-65-6
2-Propanone	67-64-1
Cellulose nitrate	9004-70-0
1,3-Diethyl-1,3-diphenylurea	85-98-3
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0
Toluene	108-88-3
Isopropanol	67-63-0

Pennsylvania Right to Know Components KRYSTALIS™ Sealant

COMPONENT	CAS-NO
2-Methylpropyl acetate	110-19-0
1-Methoxypropyl acetate	108-65-6
2-Propanone	67-64-1
Cellulose nitrate	9004-70-0
1,3-Diethyl-1,3-diphenylurea	85-98-3
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0
Toluene	108-88-3
Isopropanol	67-63-0

New Jersey Right to Know Components

KRYSTALIS™ Sealant

COMPONENT	CAS-NO
2-Methylpropyl acetate	110-19-0
1-Methoxypropyl acetate	108-65-6
2-Propanone	67-64-1
Cellulose nitrate	9004-70-0
1,3-Diethyl-1,3-diphenylurea	85-98-3
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0
Toluene	108-88-3
Isopropanol	67-63-0

California Prop. 65 Components

KRYSTALIS™ Sealant

COMPONENT	CAS-NO
2-Methylpropyl acetate	110-19-0
1-Methoxypropyl acetate	108-65-6
2-Propanone	67-64-1
Cellulose nitrate	9004-70-0
1,3-Diethyl-1,3-diphenylurea	85-98-3
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0
Toluene	108-88-3
Isopropanol	67-63-0

WARNING: This product contains a chemical known to the State of California to cause cancer.

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

16. OTHER INFORMATION**Full Text of H-Statements referred to under Sections 2 and 3.**

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H304	May be fatal if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

HMIS Rating

Health Hazard:	2
Reactivity	0
Flammability:	4
Physical Hazard:	Unrated

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