Safety Data Sheet

Cirlex®

SECTION 1: Identification

1.1 Product identifier

Product name	Cirlex®

1.2 Other means of identification

Cirlex® HNZT
Cirlex® HZT
Cirlex® CL HN

1.3 Recommended use of the chemical and restrictions on use

Do not use in medical applications involving permanent implantation in the human body.

1.4 Supplier's details

Name	Fralock
Address	28525 West Industry Drive Valencia, CA 91350 USA
Telephone	(661) 702-6999

1.5 Emergency phone number(s)

(661) 702-6999

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

Not a hazardous substance or mixture.

2.2 GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Other hazards which do not result in classification

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

Components

Component	Concentration
Inert polyimide film CLASSIFICATIONS: No data available.	**< 100 % (weight)**
Dimethyl acetamide (CAS no.: 127-19-5; EC no.: 204-826-4) CLASSIFICATIONS: Toxic to reproduction, Cat. 1B; Acute toxicity, inhalation, Cat. 4; Acute toxicity, dermal, Cat. 4.	**< 1 % (weight)***

*Less than 1 ppm dimethyl acetamide was extracted from film by distilled water at 40 °C for 4 hours.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Get medical advice/ attention if you feel unwell.
If inhaled	Not a likely route of exposure. In case of exposure to nuisance dust: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.
In case of skin contact	Wash with water. Call a poison center or doctor if irritation develops or persists.
In case of eye contact	Not a likely route of exposure. In case of exposure to nuisance dust: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor if you feel unwell.
If swallowed	Not a likely route of exposure. Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical
Hazardous combustion products: Carbon oxides, nitrogen oxides.

5.3 Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
The flammability characteristic of polyimide film is reported as self-extinguishing. Cirlex® chars but does not burn in air. Cirlex® will burn in an atmosphere of 100% oxygen.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable personal protective equipment to prevent any contamination of skin, eyes and personal clothing. For personal protection see section 8. Avoid breathing dust, gas, mist, vapors, or spray. Ensure adequate ventilation. Be aware of slipping hazard.

6.2 Environmental precautions
Do not allow to enter drains or waterways.

6.3 Methods and materials for containment and cleaning up
Stop leak if you can do it without risk. Sweep up and shovel into suitable containers for disposal.

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
The processing of polyimide films can cause the generation of static charge. Keep the product away from flammable materials. Observe good industrial hygiene practices when handling the product. Do not eat, drink or smoke while handling. Wash hands with soap and water after handling.

7.2 Conditions for safe storage, including any incompatibilities
Keep in a dry and well-ventilated place. Store away from flammable materials.

Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Dimethyl acetamide (CAS: 127-19-5)
PEL (Inhalation): 10 ppm (OSHA)

PEL (Inhalation): 35 mg/m^3 (OSHA)

PEL (Inhalation): 10 ppm (Cal/OSHA)

REL (Inhalation): 10 ppm (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

Particulates Not Otherwise Regulated (nuisance dust of polyimide polymer)
PEL (Inhalation): 15 mg/m^3 (total dust) (OSHA)

PEL (Inhalation): 5 mg/m^3 (respirable fraction) (OSHA)

PEL (Inhalation): 10 mg/m^3 (total dust) (Cal/OSHA)

REL (Inhalation): 5 mg/m^3 (respirable fraction) (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

8.2 Appropriate engineering controls
Safe handling of polyimide at high temperatures requires adequate ventilation. Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

Eye/face protection
Safety glasses are recommended

Skin protection
Wear protective gloves. Consult manufacturer specifications for further information.

Body protection
Wear protective clothing.

Respiratory protection
Respirators are not needed for normal use. Where risk assessment shows air-purifying respirators are appropriate use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards
No data available.

Environmental exposure controls
Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Dark amber to black transparent film
Odor	No odor
Odor threshold	No data available.
pH	Not applicable.
Melting point/freezing point	No data available.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	Not applicable.
Upper/lower explosive limits	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	No data available.
Specific gravity	>1.4
Solubility(ies)	Insoluble in water
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	Not applicable.
Explosive properties	No data available.
Oxidizing properties	No data available.

Other safety information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Stable at normal temperatures and storage conditions.

10.2 Chemical stability
Stable under normal storage conditions.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
No data available.

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
Hazardous decomposition products: Carbon oxides, nitrogen oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Based on available data, classification data are not met

Components:

Dimethyl acetamide (CAS: 127-19-5)
LD50 (oral) – rat - 4300mg/kg
LD50 (skin) – rabbit - 2240mg/kg
LC50 (inhalation) – rat - 2475ppm/1H

Skin corrosion/irritation
Based on available data, classification data are not met

Serious eye damage/irritation
Based on available data, classification data are not met

Respiratory or skin sensitization
Based on available data, classification data are not met

Germ cell mutagenicity
Based on available data, classification data are not met

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

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
Based on available data, classification data are not met

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

Additional information
No data available.

SECTION 12: Ecological information

Toxicity
No data available on product

Persistence and degradability
No data available on product

Bioaccumulative potential
No data available on product

Mobility in soil
No data available.

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

SECTION 13: Disposal considerations

Disposal of the product
Disposal should be in accordance with applicable Federal, State and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

California Prop. 65 Components
Warning! This product can expose you to chemicals including dimethyl acetamide, which is known to the State of California to cause birth defects or other reproductive harm.

Chemical name: dimethyl acetamide
CAS number: 127-19-5
21/05/2010 – Developmental toxicity
20/12/2013 - Male reproductive toxicity

Massachusetts Right To Know Components
Dimethyl acetamide (CAS: 127-19-5)

New Jersey Right To Know Components
Dimethyl acetamide (CAS: 127-19-5)

Pennsylvania Right To Know Components
Dimethyl acetamide (CAS: 127-19-5)

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

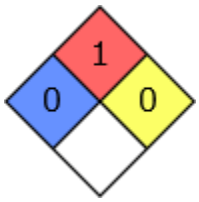
SARA 311/312 Hazards
No SARA Hazards

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

HMIS Rating

Cirlex®	
HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

Date of issue: May 01, 2019.

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. All materials may present unknown hazards and should be used with caution. In no event shall we be held liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if we have been advised of the possibility of such damages.