CRAYVALLAC® OPTIMA

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
900 First Avenue
King of Prussia, Pennsylvania 19406

Arkema Coating Resins

Customer Service Telephone Number: (877) 331-6696
(Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation: CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: CRAYVALLAC® OPTIMA
Synonyms: Not available
Molecular formula: Complex Mixture
Chemical family: Micronized wax
Product use: Additive for :Paints, Coatings, Inks, Adhesives

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: off-white
Physical state: solid
Form: powder
Odor: oily

***Classification of the substance or mixture:**
See Supplemental Hazard Statements below.

GHS-Labelling

Signal word: **Warning**

Hazard statements:
This material is considered hazardous under the OSHA Hazard Communication Standard criteria, based on hazard(s) not otherwise classified.

Supplemental Hazard Statements:

May form combustible dust concentrations in air.

Supplemental information:

Potential Health Effects:
The product, in the form supplied, is not anticipated to produce significant adverse human health effects.

Other:
Handle in accordance with good industrial hygiene and safety practice. Mechanical irritation effects from dust exposure are possible at ambient temperature.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Proprietary amide wax	Proprietary*	>= 60 - < 100 %	Not classified
Proprietary Vegetable Derivative	Proprietary*	>= 10 - < 30 %	Not classified
Proprietary polymer	Proprietary*	>= 5 - < 10 %	Not classified

*The specific chemical identity is withheld because it is trade secret information of Arkema Inc.

**For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

Inhalation:
If inhaled, remove victim to fresh air.

Skin:

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
Immediately flush eye(s) with plenty of water.

Ingestion:
If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information) and Section 11 (Toxicology Information) of this SDS.

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

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

5. FIREFIGHTING MEASURES

Extinguishing media (suitable):
Foam, Carbon dioxide (CO2), Dry chemical

Extinguishing media (unsuitable):
High volume water jet

Protective equipment:
Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:
Do not use a solid stream of water.
A solid stream of water can cause a dust explosion.
Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:
When burned, the following hazardous products of combustion can occur:
Carbon oxides
Nitrogen oxides
Hazardous organic compounds
Dust clouds generated during handling and/or storage can form explosive mixtures with air. Dust explosion characteristics vary with the particle size, particle shape, moisture content, contaminants, and other variables.
Note: Check that all equipment is properly grounded and installed to satisfy electrical classification requirements. As with any dry material, pouring this material or allowing it to free-fall or to be conveyed through chutes or pipes can accumulate and generate electrostatic sparks, potentially causing ignition of the material itself, or of any flammable materials which may come into contact with the material or its container.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:
Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel. Ventilate the area. Eliminate all ignition sources. Avoid dust formation and dispersal of dust in the air. Wet down (dampen) the spilled material with water. Sweep or scoop up using non-sparking tools and place into suitable properly labeled containers for prompt disposal. The sweepings should be wetted down further with water. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Implement workplace practices such that dusts are not allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Protective equipment:
Appropriate personal protective equipment is set forth in Section 8.

7. HANDLING AND STORAGE

Handling

General information on handling:
Avoid breathing dust.
Keep away from heat, sparks and flames.
Keep container closed.
Avoid creating dust in handling, transfer or clean up.
Prevent dust accumulation.
Implement routine housekeeping practices to ensure that dusts do not accumulate on surfaces.
Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.
Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations.
Container hazardous when empty.
Follow label warnings even after container is emptied.
RESIDUAL DUSTS MAY EXPLODE ON IGNITION.
DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.
Improper disposal or reuse of this container may be dangerous and/or illegal.
Emptied container retains product residue.
Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin, and clothing.

Storage

General information on storage conditions:
Keep in a dry, cool place.Store in closed containers, in a secure area to prevent container damage and subsequent spillage.Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity.Ensure that all storage and handling equipment is properly grounded and installed to satisfy electrical classification requirements.Static electricity may accumulate when transferring material.All metal and groundable storage containers, including but not limited to drums, cylinders, Returnable Intermodal Bulk Containers (RIBCs) and Class C Flexible Intermodal Bulk Containers (FIBCs) must be bonded and grounded during filling and emptying operations.Observe all federal, state and local regulations and National Fire Protection Association (NFPA) Codes, which pertain to the specific local conditions of storage and use, including NFPA 654.

Storage stability – Remarks:
Stable under recommended storage conditions.

Storage incompatibility – General:
Store separate from:
Strong oxidizing agents
Do not store this material in containers made of:
Plastic materials

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Particles Not Otherwise Specified / Nuisance Dust (Proprietary)

US. ACGIH Threshold Limit Values

Form:	Inhalable particles.
Time weighted average	10 mg/m3
Form:	Respirable particles.
Time weighted average	3 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Form:	Respirable fraction.
PEL:	5 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Form:	Total dust
PEL:	15 mg/m3

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Respirable fraction.
Time weighted average	15millions of particles per cubic foot of air

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Total dust
Time weighted average	50millions of particles per cubic foot of air

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Respirable fraction.
Time weighted average	5 mg/m3

US. OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Total dust
Time weighted average	15 mg/m3

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:
Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above).If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Check that all dust control equipment such as local exhaust ventilation, material transport systems, and air-material separation devices involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.Isolation devices may be appropriate to prevent propagation from one unit to another.Ensure that dust-handling systems are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).Consult ACGIH ventilation manual, NFPA Standard 91 and NFPA Standard 654 for design of exhaust system and safe handling.

Respiratory protection:
Avoid breathing dust. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134. Wear a NIOSH-approved respirator

Skin protection:
Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Eye protection:
Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	off-white
Physical state:	solid
Form:	powder
Odor:	oily

Odor threshold:	No data available
Flash point	Not applicable
Auto-ignition temperature:	No data available.
Lower flammable limit (LFL):	No data available
Upper flammable limit (UFL):	No data available
pH:	Not applicable
Density:	No data available
Specific Gravity (Relative density):	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Boiling point/boiling range:	No data available
Melting point/range:	248 - 266 °F (120 - 130 °C)
Freezing point:	No data available
Evaporation rate:	No data available
Solubility in water:	insoluble
Solubility in other solvents: [qualitative and quantative]	Soluble in most organic solvents
Viscosity, dynamic:	Not applicable
Oil/water partition coefficient:	> 6 (Method: OECD Test Guideline 117)
Thermal decomposition:	No data available
Flammability:	See GHS Classification in Section 2

10. STABILITY AND REACTIVITY

Stability:
This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Hazardous reactions:
Hazardous polymerization does not occur.

Materials to avoid:
Strong oxidizing agents

Conditions / hazards to avoid:
Keep away from heat and sources of ignition. Avoid moisture.

Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products
Carbon oxides
Nitrogen oxides
Hazardous organic compounds

11. TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for CRAYVALLAC® OPTIMA

Acute toxicity

Oral:
Acute toxicity estimate > 5,000 mg/kg.

Dermal:
Acute toxicity estimate > 5,000 mg/kg.

Data for Proprietary amide wax (Proprietary)

Acute toxicity

Oral:
No deaths occurred. (rat) LD0 > 2,000 mg/kg.

Dermal:
No deaths occurred. (rat) LD0 > 2,000 mg/kg.

Inhalation:
No deaths occurred. (rat) 4 h LC0 > 5.14 mg/l. (dust)

Skin Irritation:
Practically non-irritating. (rabbit) Irritation Index: 0.2/8. (4 h)

Eye Irritation:
Not irritating. (rabbit) Irritation Index: 0 / 110.

Skin Sensitization:
Not a sensitizer. Guinea pig maximization test. Skin allergy was observed. (Weak response)

Repeated dose toxicity
Repeated inhalation administration to rat / affected organ(s): lung / signs: irritation, changes in organ weights / (No significant impairment of function.)

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

Developmental toxicity
Reproductive/Developmental Effects Screening Assay. oral (rat) / No birth defects were observed.

Reproductive effects
Reproductive/Developmental Effects Screening Assay. oral (rat) / No toxicity to reproduction.

Data for Proprietary Vegetable Derivative (Proprietary)

Acute toxicity

Oral:
Practically nontoxic. (rat) LD0 > 20,000 mg/kg.

Dermal:
No deaths occurred. (rat) LD0 = 2,000 mg/kg. (data for a similar material)

Inhalation:
No deaths occurred. (rat) 6 h LC0 = 1.86 mg/l. (dust/mist, data for a similar material)

Skin Irritation:
Practically non-irritating. (rabbit) (data for a similar material)

Eye Irritation:
Causes mild eye irritation. (rabbit) (data for a similar material)

Skin Sensitization:
Not a sensitizer. Guinea pig maximization test. No skin allergy was observed (data for a similar material)

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in a laboratory test using: bacteria

Human experience
Skin contact:
Skin: Sensitization described in isolated cases.

Data for Proprietary polymer (Proprietary)

Acute toxicity

Oral:
Practically nontoxic. LD50 > 5,000 mg/kg.

Dermal:
Practically nontoxic. LD50 > 5,000 mg/kg.

Skin Irritation:
Causes mild skin irritation.

Eye Irritation:
Mild eye irritation

Other information
The information presented is from representative materials with this Chemical Abstract Service (CAS) Registry number. The results vary depending on the size and composition of the test substance.

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway
Data on this material and/or its components are summarized below.

Data for Proprietary amide wax (Proprietary)

Biodegradation:
Inherently biodegradable. (60 d) biodegradation 30 %

Octanol Water Partition Coefficient:
log Pow > 6

Data for Proprietary Vegetable Derivative (Proprietary)

Biodegradation:
Readily biodegradable. (28 d) biodegradation 64 %

Octanol Water Partition Coefficient:
log Pow = 18.75 (calculated)

Ecotoxicology
Data on this material and/or its components are summarized below.

Data for Proprietary amide wax (Proprietary)

Aquatic toxicity data:
No effect up to the limit of solubility. Danio rerio (zebra fish) 96 h LL50 > 100 mg/l (nominal concentrations reported, Water accommodated fraction was tested.)

Algae:
No effect up to the limit of solubility. Pseudokirchneriella subcapitata (green algae) 72 h EL50 > 100 mg/l (nominal concentrations reported, Water accommodated fraction was tested.)

Microorganisms:
Activated sludge 60 d NOEC >= 2 mg/l

Chronic toxicity to aquatic invertebrates:

No effect up to the limit of solubility. Reproduction & survival test. / Daphnia magna (Water flea) 21 d NOEC > 100 mg/l

Data for Proprietary Vegetable Derivative (Proprietary)

Aquatic toxicity data:
No effect up to the limit of solubility. Danio rerio (zebra fish) 96 h LC50 > 1,000 mg/l (nominal concentrations reported)

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 48 h EC50 > 100 mg/l (data for a similar material)

Algae:
No effect up to the limit of solubility. Desmodesmus subspicatus (green algae) 72 h EC50 > 100 mg/l (data for a similar material)

13. DISPOSAL CONSIDERATIONS

Waste disposal:
Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT): not regulated

International Maritime Dangerous Goods Code (IMDG): not regulated

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
US. Toxic Substances Control Act	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	This product contains one or several components that are not on the Canadian DSL nor NDSL lists.
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to

Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Conforms to
Australia Inventory of Chemical Substances (AICS)	AICS	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Does not conform
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Does not conform

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:
The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:
Fire Hazard

SARA Title III – Section 313 Toxic Chemicals:
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.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations

New Jersey Right to Know

No components are subject to the New Jersey Right to Know Act.

Pennsylvania Right to Know

Chemical name	CAS-No.
Proprietary amide wax	Proprietary
Proprietary Vegetable Derivative	Proprietary
Proprietary polymer	Proprietary

California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

Miscellaneous:

Other information:	Refer to National Fire Protection Association (NFPA) Code 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Latest Revision(s):

Reference number:	200002496
Date of Revision:	02/23/2017
Date Printed:	02/23/2017

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Arkema has implemented a Medical Policy regarding the use of Arkema products in Medical Devices applications that are in contact with the body or circulating bodily fluids (http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html) Arkema has designated Medical grades to be used for such Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices , and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.
It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.