DURASTRENGTH® 442

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: DURASTRENGTH® 442
Synonyms: Not available
Molecular formula: Complex mixture
Chemical family: acrylic polymer
Product use: Impact modifier

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: white
Physical state: solid
Form: pellets
Odor: slightly acrylic

***Classification of the substance or mixture:**
Not a hazardous substance or mixture.

GHS-Labelling

Supplemental Hazard Statements:
Processing may release vapors and/or fumes which cause eye, skin and respiratory tract irritation.

Supplemental information:

Potential Health Effects:
The product, in the form supplied, is not anticipated to produce significant adverse human health effects.
Contains high molecular weight polymer(s). Effects due to processing releases: Irritating to eyes, respiratory system and skin.
Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness, (severity of effects depends on extent of exposure).

Other:
Handle in accordance with good industrial hygiene and safety practice. (pellets/granules) This product may release fume and/or vapor of variable composition depending on processing time and temperature.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Acrylic copolymer	Proprietary*	>= 60 - <= 100 %	Not classified
Carbonic acid calcium salt (1:1)	471-34-1	>= 1 - < 5 %	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. If molten polymer gets on the skin, cool rapidly with cold water. Do not peel solidified product off the skin. Obtain medical treatment for thermal burns. Remove material from clothing. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
Immediately flush eye(s) with plenty of water. Obtain medical treatment for thermal burns.

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):
Water spray, Carbon dioxide (CO2), Foam, Dry chemical

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:
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
Sulphur oxides
Hazardous organic compounds

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. Ventilate the area. Sweep up and shovel into suitable properly labeled containers for prompt disposal. Possible fall hazard – floor may become slippery from leakage/spillage of product. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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.
Avoid breathing processing fumes or vapors.
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. This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage. Store in upright position only. Keep container closed when not in use.

Storage stability – Remarks:
Stable under recommended storage conditions.

Storage incompatibility – General:
Store separate from:
Oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Carbonic acid calcium salt (1:1) (471-34-1)

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

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.

Respiratory protection:
Avoid breathing dust. Avoid breathing fumes or vapors. 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 and substances released during processing. 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.

Skin protection:
Processing of this product releases vapors or fumes which may cause skin irritation. Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after contact with processing fumes or vapors. Wash thoroughly after handling.

Eye protection:
Use good industrial practice to avoid eye contact. Processing of this product releases vapors or fumes which may cause eye irritation. Where eye contact may be likely, wear chemical goggles and have eye flushing equipment available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	white
Physical state:	solid
Form:	pellets
Odor:	slightly acrylic
Odor threshold:	No data available
Flash point	Not applicable
Auto-ignition temperature:	878 °F (470 °C)
Lower flammable limit (LFL):	Not applicable
Upper flammable limit (UFL):	Not applicable
pH:	Not applicable
Density:	No data available
Specific Gravity (Relative density):	1.09 Water=1 (liquid)
Vapor pressure:	Not applicable

Vapor density:	Not applicable
Boiling point/boiling range:	No data available.
Melting point/range:	No data available
Freezing point:	No data available.
Evaporation rate:	No data available
Solubility in water:	insoluble
Viscosity, dynamic:	No data available
Particle size:	0.01 - 0.5 mm
Oil/water partition coefficient:	No data available
Thermal decomposition:	No data available
Flammability:	See GHS Classification in Section 2

10. STABILITY AND REACTIVITY

Stability:
The product is stable under normal handling and storage conditions.

Hazardous reactions:
Hazardous polymerization does not occur.

Materials to avoid:
Oxidizing agents

Conditions / hazards to avoid:
See HANDLING AND STORAGE section of this SDS for specified conditions. See Hazardous Decomposition Products below.

Hazardous decomposition products:

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

11. TOXICOLOGICAL INFORMATION

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

Data for Acrylic copolymer (Proprietary)

Other information
The information presented is from representative materials in this chemical class. The results may vary depending on the test substance.
Effects due to processing releases or residual monomer:
Possible cross sensitization with other acrylates and methacrylates

Data for Carbonic acid calcium salt (1:1) (471-34-1)

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 = 6,450 mg/kg.

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

Inhalation:
No deaths occurred. (rat) 4 h LC0 >= 3 mg/l. signs: No specific toxic effects (aerosol, Maximum concentration technically possible)

Skin Irritation:
Not irritating. (rabbit) Irritation Index: 0.0 / 8.0. (4 h)

Eye Irritation:
Causes mild eye irritation. (rabbit)

Skin Sensitization:
Not a sensitizer. LLNA: Local Lymph Node Assay. (mouse) No effect is reported.

Repeated dose toxicity
Repeated oral administration to rat, mouse / No adverse systemic effects reported.

Genotoxicity

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

Developmental toxicity
Exposure during pregnancy. dietary (sheep) / bone effects in lambs (at doses that produce effects in mothers, blood chemistry changes)
Exposure during pregnancy. dietary (rat) / No birth defects were observed.

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

Human experience
General:
Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.

Human experience
Inhalation:

Upper respiratory tract: Local irritation, coughing. (dust) (severity of effects depends on extent of exposure)

Human experience
Ingestion:
Kidney: failure, weakness, nausea. (effects of excessive exposure)

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway
No data are available.

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

Data for Carbonic acid calcium salt (1:1) (471-34-1)

Aquatic toxicity data:
No effect up to the limit of solubility. Oncorhynchus mykiss (rainbow trout) 96 h

Aquatic invertebrates:
No effect up to the limit of solubility. Daphnia magna (Water flea) 48 h

Algae:
No effect up to the limit of solubility. Desmodesmus subspicatus (green algae) 72 h

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 > 1,000 mg/l

13. DISPOSAL CONSIDERATIONS

Waste disposal:
Where possible recycling is preferred to disposal or incineration. If recycling is not an option, incinerate or dispose of in accordance with federal, state, and local regulations. Pigmented, filled and/or solvent laden product may require special disposal practices 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	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Conforms to
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	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

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:
No SARA Hazards

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):

Chemical name	CAS-No.	Reportable quantity
Benzenesulfonic acid, dodecyl-, sodium salt	25155-30-0	1000 lbs

United States – State Regulations

New Jersey Right to Know

Chemical name	CAS-No.
Carbonic acid calcium salt (1:1)	471-34-1

Pennsylvania Right to Know

Chemical name	CAS-No.
Acrylic copolymer	Proprietary
Carbonic acid calcium salt (1:1)	471-34-1
Benzenesulfonic acid, dodecyl-, sodium salt	25155-30-0

Pennsylvania Right to Know – Environmentally Hazardous Substance(s)

Chemical name	CAS-No.
Benzenesulfonic acid, dodecyl-, sodium salt	25155-30-0

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:	200010080
Date of Revision:	07/05/2016
Date Printed:	07/05/2016

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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.