

Section 1: Identification

1.1. Product identifier

Product form : Substance
Product Identifier(s) : Dymalink® 4070
Dymalink® 4070 ABC123, where ABC123 can be any combination of letters and/or numbers other than EPMP
CAS-No. : Trade secret

1.2. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Rubbers

1.3. Details of the supplier of the safety data sheet

Resin Solutions, LLC
665 Stockton Drive, Suite 100
Exton, PA 19341

For non-emergency product information:
Phone: +1-484-284-8998
Email: product.stewardship@resinsolutions.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (Toll Free USA & Canada) / 703-527-3887 (Multiple languages)
Resin Solutions, LLC: +1-484-284-8989 (Language: English only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Combustible Dust
Serious eye damage/eye irritation Category 2A
Skin sensitization, category 1B

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS US) : Warning

Hazard statements (GHS-US) : **May cause an allergic skin reaction**
Causes serious eye irritation
May form combustible dust concentrations in air

Precautionary statements (GHS-US) : Avoid breathing dust.
Wash hands, forearms and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear face protection, eye protection, protective gloves.
If on skin: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see Section 4.1 of SDS or information on this label).
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Dispose of contents and container in accordance with all local, regional, national and international regulations.
Wash contaminated clothing before reuse.

2.3. Hazards not otherwise classified

Other hazards which do not result in classification : May ignite spontaneously if exposed to air
Flowing product can create electrical charge, resulting sparks may ignite dust or cause an explosion in some concentration ranges

Dymalink® 4070

Safety Data Sheet

May cause slight irritation to the skin.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

2.5. Additional information

Based on conditions common to industrial workplace use of this product : See section 7: Handling and Storage

Based on professional judgment, inconclusive testing, or sensitive individuals : Dust from this product may cause respiratory irritation.
May cause mild skin irritation.

Section 3: Composition/Information on ingredients

3.1. Substance

Name : Dymalink® 4070
CAS-No. : 63451-47-8; Trade secret
Chemical name : Zinc monomethacrylate

The specific chemical identity is being withheld as a trade secret.

Where concentrations in this product are displayed as ranges, it is due to batch-to-batch variability.

Impurities and/or Stabilizing Additives which Contribute to the Classification:

Name	CAS-No.	% (Weight Percent)
Zinc dimethacrylate (Impurity)	13189-00-9	7 - 13
Zinc oxide (Impurity, not contributing to the hazard classification)	1314-13-2	≤ 4

3.2. Mixture

Not applicable

Section 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact : Gently wash with plenty of soap and water. If irritation persists, consult a doctor.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth out with water. If necessary seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : May cause an allergic skin reaction. May cause mild skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray or fog. Carbon dioxide. Foam. Dry chemical. Dry powder. Sand.
Unsuitable extinguishing media : Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the chemical

Fire hazard : Vapors generated from overheating/melting/decomposition may be flammable and may cause fire/explosion if source of ignition is present.
Explosion hazard : Potential dust explosion hazard. When dust becomes airborne and is exposed to an ignition source, sufficient combustible/flammable dust may exist to burn in the open or explode if confined. Local exhaust and general room ventilation are both essential to prevent accumulation of flammable vapor or dust mixtures.
Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Metallic oxides. Metallic peroxides. Toxic fumes.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Avoid raising powdered materials into airborne dust, creating an explosion hazard. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Fight fire from safe distance and protected location.

Dymalink® 4070

Safety Data Sheet

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Complete protective clothing. Self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Emergency procedures for non-emergency personnel : Ensure adequate ventilation. Avoid breathing dust. Avoid contact with skin and eyes. Remove ignition sources. Evacuate unnecessary personnel. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures for emergency responders : No additional requirement.

6.2. Methods and material for containment and cleaning up

For containment : Sweep up or vacuum up the product. Avoid creating or spreading dust.

Methods for cleaning up : Dispose of materials or solid residues at an authorized site.

6.3. Reference to other sections

See section 8. Exposure controls/personal protection.

Section 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all contact with skin, eyes, or clothing. Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with elevated temperature or molten product to prevent burns. Avoid raising powdered material due to explosion hazard. Prevent the build-up of electrostatic charge. Use only non-sparking tools. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Refer to the latest edition of the National Fire Protection Association (NFPA) 654 publication, "Standard for the Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries", and "Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosions" (OSHA SHIB, July 31, 2005, updated Nov. 12, 2014, <https://www.osha.gov/dts/shib/shib073105.html>) for a complete discussion on dust explosion prevention and control measures. Although these publications discuss inerting as a method of protection against dust explosion, an inert gas atmosphere is not recommended during handling of this material because the inhibitor in this product requires oxygen to be effective.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Electrical equipment should conform to the National Electric Code.

Storage conditions : Keep container tightly closed in a cool, well-ventilated place. Store in a dry, cool area. Protect from moisture.

This material must be stored under the specified conditions. At elevated storage temperatures, the material may undergo self-reaction. In a low-oxygen, high-temperature environment, it may polymerize. In a normal-oxygen, high-temperature environment, it may oxidize. At temperatures at or above about 150°C (about 300°F), either self-reaction may accelerate rapidly. Both reactions generate heat and may result in fire.

Incompatible materials : Strong oxidizing agents. Strong acids. Strong bases. Strong reducing agents. Iron. copper.

Storage temperature : 10 – 32 °C

Section 8: Exposure controls/personal protection

8.1. Occupational Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV, or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Dymalink® 4070 (Trade secret)		
USA ACGIH	ACGIH OEL TWA	10 mg/m ³ (inhalable dust) 3 mg/m ³ (respirable dust)
USA ACGIH	Remark (ACGIH)	Particulates, not otherwise classified
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
USA OSHA	Remark (OSHA)	Particulates, not otherwise classified
Zinc dimethacrylate (13189-00-9)		
USA ACGIH	ACGIH OEL TWA	10 mg/m ³ (inhalable dust) 3 mg/m ³ (respirable dust)
USA ACGIH	Remark (ACGIH)	Particulates, not otherwise classified

Dymalink® 4070

Safety Data Sheet

Zinc oxide (1314-13-2)		
USA ACGIH	ACGIH OEL TWA	2 mg/m ³
USA ACGIH	ACGIH OEL STEL	10 mg/m ³
USA ACGIH	Remark (ACGIH)	TLV® Basis: Metal fume fever
USA OSHA	OSHA PEL (TWA) [1]	5 mg/m ³
IDLH	IDLH	500 mg/m ³
Mexico	OEL TWA [1]	10 mg/m ³
Mexico	OEL STEL	10 mg/m ³
Mexico	Remark (MX)	Fiebre por humos metálicos

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Safety shower. Eye fountain.
Hand protection	: Protective gloves. nitrile rubber gloves. Do not use natural rubber gloves. Product used with solvents : wear thick (> 0.5 mm) nitrile gloves. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility, etc.) is noticed.
Eye protection	: Chemical goggles or face shield.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Combined gas/dust mask with filter type A/P2.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Color	: White.
Odor	: Slightly acidic.
Odor threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 231 °C (101.3 kPa)
Freezing point	: Not applicable
Initial boiling point and boiling range	: Decomposes below boiling point at 240°C
Flash point	: No data available
Auto-ignition temperature	: 354.4 °C (101.3 kPa)
Decomposition temperature	: > 200 °C
Flammability	: No data available
Vapor pressure	: 0.00000124 mPa (20°C)
Relative vapor density at 20°C	: Not applicable
Relative density	: 1.9177 (20 °C)
Solubility	: Soluble in : acetic acid. Water: < 10 mg/l practically insoluble
Partition coefficient n-octanol/water (Log Kow)	: 0.17
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosion limits	: No data available

9.2. Other information

Explosive properties	: Dust may form explosive mixture in air.
Minimum ignition energy	: 500 – 1000 mJ

Section 10: Stability and reactivity

10.1. Reactivity

Unstable (reactive) on depletion of inhibitor.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

This material must be stored under the specified conditions. At elevated storage temperatures, the material may undergo self-reaction. In a low-oxygen, high-temperature environment, it may polymerize. In a normal-oxygen, high-temperature environment, it may oxidize. At temperatures at or above about 150°C (about 300°F), either self-reaction may accelerate rapidly. Both reactions generate heat and may result in fire.

Dymalink® 4070

Safety Data Sheet

Normal use of this product in a high-temperature process under recommended conditions will not result in these hazardous reactions.

10.4. Conditions to avoid

Avoid the build-up of electrostatic charge. Avoid dust formation. High temperature. Direct sunlight. Sparks. Open flame. Conditions which remove all oxygen from the product (the inhibitor requires presence of oxygen to prevent autopolymerization). High humidity. This product is an anhydrous salt that will readily absorb moisture upon exposure to a humid atmosphere.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases. Strong reducing agents. Iron. copper.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation. Ingestion. Skin and eye contact.

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Study performed using the finished product, including impurities.

Dymalink® 4070 (Trade secret)	
LD50 oral rat	> 2000 mg/kg (OECD 423 method)
LD50 dermal rabbit	No clinical signs indicative of systemic toxicity were observed in any animals (skin sensitization study).
LC50 inhalation rat	> 5.32 mg/l/4h (OECD 436 method) Read-across (Analogy) Zinc dimethacrylate

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : May cause an allergic skin reaction.
Study performed using the finished product, including impurities

Germ cell mutagenicity : Not classified
Ames test : negative

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
Not applicable

Section 12: Ecological information

12.1. Toxicity

Ecology - general : Do not allow product to spread into the environment.

Dymalink® 4070 (Trade secret)	
LC50 - Fish [1]	2.06 mg/l (OECD 203 method)
EC50 - Crustacea [1]	8.7 mg/l (OECD 202 method)

Dymalink® 4070

Safety Data Sheet

ErC50 algae	0.24 mg/l (OECD 201 method)
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12.2. Persistence and degradability

Dymalink® 4070 (Trade secret)	
Persistence and degradability	Readily biodegradable.
Biodegradation	99 % (OECD 301B method)

12.3. Bioaccumulative potential

Dymalink® 4070 (Trade secret)	
Partition coefficient n-octanol/water (Log Kow)	0.17
Bioaccumulative potential	Bioaccumulation unlikely.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

Section 13: Disposal considerations

13.1. Waste treatment methods


- Waste treatment methods : Transfer to a safe disposal area in accordance with federal, state, and local regulations.
- Product/Packaging disposal recommendations : Dispose of contents and container in accordance with all local, regional, national and international regulations. hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Section 14: Transport information


US Transport (DOT) for Bulk Shipments (Non-Bulk Shipments May Differ)

Not regulated by US DOT

Transport by sea (IMDG)

- Transport document description (IMDG) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC SALTS), 9, III, MARINE POLLUTANT
- UN Number : UN3077
- Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- Primary Hazard Class : 9 - Miscellaneous dangerous substances and articles
- Packing Group : PGIII
- Hazard labels (IMDG) : 
- EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
- EmS-No. (Spillage) : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
- Stowage category (IMDG) : A

Air transport (IATA)

- Transport document description (IATA) : UN 3077 Environmentally hazardous substance, solid, n.o.s. (ZINC SALTS), 9, III
- UN Number : UN3077
- Proper Shipping Name : Environmentally hazardous substance, solid, n.o.s.
- Primary Hazard Class : 9 - Miscellaneous Dangerous Substances and Articles
- Packing Group : PGIII
- Hazard labels (IATA) : 

Section 15: Regulatory information

15.1. US Federal regulations

EPA TSCA Status

Dymalink® 4070

Safety Data Sheet

All components of this product are listed or exempt from listing on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) Active inventory. This product has no special requirements under TSCA, such as significant new use rules (SNUR), consent orders, test rules, or sections 4, 5, 6, 8(a), 8(d), 12(b) requirements.

SARA Section 313 Supplier Notification

This product contains the following toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

CAS number	Chemical name	Concentration
Trade secret	Trade secret zinc compound	80 - 100%
13189-00-9	Zinc dimethacrylate	7 - 13%
1314-13-2	Zinc oxide	≤ 4%

Chemical names, CAS numbers, and/or exact concentrations of some components have been withheld as a trade secret

This product contains one or more zinc compounds. Zinc compounds are listed as a category under SARA 313 and include any unique chemical substance that contains zinc as part of that chemical's infrastructure. See 40 CFR 372.65(c).

This information must be included in all Safety Data Sheets that are copied and distributed for this product. For additional information, see 40 CFR §372.45 Notification About Toxic Chemicals.

SARA Section 311/312 Hazard Classes

Health hazard - Acute toxicity (any route of exposure)
Physical hazard - Combustible dust
Health hazard - Serious eye damage or eye irritation
Health hazard - Respiratory or skin sensitization

Export Control Classification Number (ECCN): EAR99 (No License Required)

15.2. International regulations

CANADA

No additional information available

National inventories

Dymalink® 4070 (Trade secret)

Listed on the Canadian Non-Domestic Substances List (NDSL)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ISHL (Industrial Safety and Health Law)

15.3. US State regulations

California Proposition 65 - To the best of our knowledge, there are no Proposition 65 chemicals present in this product at levels that would require warning under the California Safe Drinking Water and Toxic Enforcement Act.

Section 16: Other information

Other information

: This material contains an inhibitor (HQ, MEHQ, etc.) at < 0.1%. The type and amount meet product specifications. Contact a company representative for exact concentrations and details on inhibitor level maintenance.

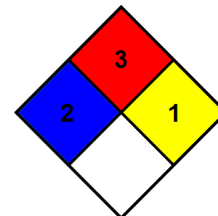
Unless agreed to in a separate written agreement with the Customer, Resin Solutions, LLC makes no representations and disclaims all warranties, express or implied, with respect to biocompatibility and/or the suitability of this product for medical device applications including : (i) implantable devices intended for human or animal body, (ii) devices intended to be used in contact with internal body fluids, and (iii) devices intended to be used in contact with internal body tissues. If the Customer intends to use this product for any such application, it must first contact Resin Solutions, LLC and establish agreed terms and conditions for such use.

NFPA (National Fire Protection Association)

NFPA health hazard : 2

NFPA fire hazard : 3

NFPA reactivity : 1



Dymalink® 4070

Safety Data Sheet

Hazard System Rating

Health	: 2
Flammability	: 3
Physical Hazard	: 1
Personal protection	: See section 8 of SDS

US OSHA LABEL as specified under 29 CFR §1910.1200 (f). The label shown may include supplemental information in addition to required elements.

Dymalink® 4070

Resin Solutions, LLC
665 Stockton Drive, Suite 100
Exton, PA 19341 USA
Tel. +1-484-284-8989



Warning

May cause an allergic skin reaction

Causes serious eye irritation

May form combustible dust concentrations in air

Avoid breathing dust.

Wash hands, forearms and face thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Wear face protection, eye protection, protective gloves.

If on skin: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see Section 4.1 of SDS or information on this label).

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Wash contaminated clothing before reuse.

US SDS Version: 3.1

Issue date: November 10, 2023

SDS ID: DYMALINK_4070

SDS REFERENCE NUMBER: FP00200

SDS Template - Resin Solutions LLC US Version 1.0

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