Ricobond® 1756HS

Safety Data Sheet

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Section 1: Identification

1.1. Product identifier

Product form : Mixture

Product Identifier(s) : Ricobond® 1756HS

1.2. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Elastomers

1.3. Details of the supplier of the safety data sheet

TotalEnergies Petrochemicals & Refining USA, Inc.
Cray Valley Division
PO Box 674411
Houston,TX 77267-4411

For non-emergency product information:
Phone: 713-483-5000 or 1-877-871-2729
Email: product.stewardship@totalenergies.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (Toll Free USA & Canada) / 703-527-3887 (Multiple languages)
TotalEnergies Petrochemicals & Refining USA, Inc.: 1-800-322-3462 (Language: English only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Self-heating substances and mixtures Category 1

Skin sensitization, Category 1

Combustible Dust

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS-US) :

Signal word (GHS US) : Danger

Hazard statements (GHS-US) : **May form combustible dust concentrations in air**
Self-heating; may catch fire
May cause an allergic skin reaction

Precautionary statements (GHS-US) : Keep cool. Protect from sunlight.
Avoid breathing dust.
Contaminated work clothing must not be allowed out of the workplace.
Wear eye protection, face protection, protective clothing, protective gloves.
If on skin: Wash with plenty of water.
Specific treatment (see Section 4.1 of SDS or information on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Maintain air gap between stacks/pallets.
Store bulk masses greater than 400 kg / 881 lbs. at temperatures not exceeding 32 ºC / 90 ºF.
Store away from other materials.
Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Hazards not otherwise classified

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

2.5. Additional information

Based on conditions common to industrial workplace use of this product : Contact with skin or eyes with hot material may cause serious thermal burns.

Vapors formed when material is processed at high temperatures may be irritating to the eyes and upper respiratory tract.

Dust or particulates may cause mild respiratory tract and eye irritation

Based on professional judgment, inconclusive testing, or sensitive individuals : Repeated or prolonged contact may cause slight irritation to the skin

Section 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

The concentrations of 1,3-butadiene, homopolymer, maleated and amorphous silica in this product are given in ranges because the exact percentages are being withheld as trade secrets. The concentration of maleic anhydride in this product is displayed as a range due to batch-to-batch variability.

Name	CAS-No.	% (Weight Percent)
1,3-Butadiene, homopolymer, maleated (Component)	179005-14-2	65 - 70
Amorphous silica (Component)	7631-86-9	30 – 35
Maleic anhydride (Impurity)	108-31-6	0.0005 - 0.5

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 skin irritation or rash occurs: Get medical advice/attention. Heated Material: For serious burns from heated material, get medical attention. In case of skin contact, immediately immerse in or flush with clean, cold water. Do not remove clothing adhering to the skin.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking, tears or redness persist. Heated Material: For serious burns from heated material, get medical attention. In case of contact with the eyes : Rinse immediately with plenty of water for 15 minutes.

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 inhalation : Dust from this product may cause respiratory irritation.

Symptoms/effects after skin contact : May cause an allergic skin reaction. Contact with hot material - prevent serious burns. May cause slight irritation to the skin.

Symptoms/effects after eye contact : Contact with hot material - prevent serious burns. Dust from this product may cause minor 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 : Self-heating; may catch fire. When mixed with air and exposed to an ignition source, dust may burn in the open air.

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.
Hazardous decomposition products in case of fire	:	Carbon oxides (CO, CO2). Toxic fumes. 1,3-butadiene. Maleic anhydride. Hydrocarbons.

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.
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	:	Remove ignition sources. Ensure adequate ventilation. 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.
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	:	Ensure good ventilation of the work station. Wear personal protective equipment. 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. The plastic packaging film used to secure bags of material on pallets can also develop static electricity -- remove packaging film in an area free from ignitable vapors/dust. 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. Material creates a slipping hazard on hard surfaces. Clean up spills from walking surfaces immediately.
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. Store in a dry place. Keep cool. Protect from sunlight. Store away from other materials. Maintain air gap between stacks and pallets. Keep away from combustible materials. Keep away from sources of ignition.
Incompatible materials	:	Strong acids. Strong oxidizing agents. Strong reducing agents.
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.

Ricobond® 1756HS		
USA ACGIH	ACGIH OEL TWA	10 mg/m³ (inhalable dust) 3 mg/m³ (respirable dust)
USA ACGIH	Remark (ACGIH)	Particulates, not otherwise classified
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m³ (total dust) 5 mg/m³ (respirable dust)

USA OSHA	Remark (OSHA)	Particulates, not otherwise classified

Amorphous silica (7631-86-9)		
USA OSHA	OSHA PEL (TWA) [1]	0.8 mg/m³ This exposure limit is calculated from the equation, 80/(%SiO2), using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.
USA OSHA	Remark (OSHA)	See 21 CFR 1910.1000 Table Z-1-A
IDLH	IDLH	3000 mg/m³

Maleic anhydride (108-31-6)		
USA ACGIH	ACGIH OEL TWA	0.01 mg/m³
USA ACGIH	Remark (ACGIH)	TLV® Basis: Resp sens. Notations: DSEN; RSEN; A4 (Not classifiable as a Human Carcinogen)
USA OSHA	OSHA PEL (TWA) [1]	1 mg/m³
USA OSHA	OSHA PEL (TWA) [2]	0.25 ppm
IDLH	IDLH	10 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Provide readily accessible eye wash stations and safety showers. Ensure good ventilation of the work station.

Hand protection : Impermeable protective 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 : Safety glasses.

Skin and body protection : Wear fire/flame resistant/retardant clothing. Wear suitable protective clothing.

Respiratory protection : In case of inadequate ventilation wear respiratory protection.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Powder.

Color : Light gray.

Odor : Hydrocarbon. Mild.

Odor threshold : No data available

pH : Not applicable

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : Not applicable

Boiling point : Not applicable

Flash point : > 121 °C Cleveland open cup (COC)

Auto-ignition temperature : Not applicable

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : Not applicable

Relative vapor density at 20 °C : Not applicable

Relative density : 1.3

Solubility : Water: practically insoluble

Partition coefficient n-octanol/water (Log Kow) : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : Not applicable

Explosion limits : No data available

9.2. Other information

Explosive properties : Dust may form explosive mixture in air.

Section 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Self-heating; may catch fire.

10.3. Possibility of hazardous reactions

May polymerize on exposure to temperature rise. Once initiated, the reaction generates enough heat to continue spontaneously. Dust may form explosive mixture in air.

10.4. Conditions to avoid

Avoid the build-up of electrostatic charge. High temperature. Avoid dust formation. Direct sunlight. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong oxidizing agents. Strong reducing agents.

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

1,3-Butadiene, homopolymer, maleated (179005-14-2)	
LD50 oral rat	> 2000 mg/kg

Amorphous silica (7631-86-9)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 2.2 mg/l (Exposure time: 1 h)

Maleic anhydride (108-31-6)	
LD50 oral rat	1090 mg/kg body weight
LD50 dermal rabbit	2620 mg/kg

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified. May cause an allergic skin reaction.

This product may contain maleic anhydride (MA) at > 0.1% (1000 ppm). A sample of this or a similar product containing > 0.1% MA was tested in vitro by DPRA and h-CLAT methods, and the weight of evidence resulted in a positive classification for skin sensitization.

This product is not classified for respiratory sensitization because relevant exposure is not expected due to its physical state.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Amorphous silica (7631-86-9)	
IARC group	3 - Not classifiable
National Toxicology Program (NTP) Status	Not listed

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Not applicable

Potential Adverse human health effects and symptoms : Dust from this product may cause respiratory irritation.

Section 12: Ecological information

12.1. Toxicity

Amorphous silica (7631-86-9)	
LC50 - Fish [1]	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 - Crustacea [1]	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)
EC50 - Other aquatic organisms [1]	440 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)

Maleic anhydride (108-31-6)	
LC50 - Fish [1]	75 mg/l/96h (Lepomis macrochirus)
EC50 - Crustacea [1]	42.81 mg/l 48h - Daphnia magna (OECD 202 method) (Read-across (Analogy))
ErC50 algae	74.35 mg/l (72 Hours) (Pseudokirchneriella subcapitata) (OECD 201 method) (Read-across (Analogy))

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Amorphous silica (7631-86-9)	
BCF - Fish [1]	No bioaccumulation expected

1,3-Butadiene, homopolymer, maleated (179005-14-2)	
Partition coefficient n-octanol/water (Log Pow)	3.9

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.

Section 14: Transport information

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

Transport document description (DOT) : UN3088, Self-heating solid, organic, n.o.s. (polybutadiene resin), 4.2 , PGII

UN or NA Number : UN3088

Proper Shipping Name : Self-heating solid, organic, n.o.s.

Primary Hazard Class : 4.2 - Spontaneously combustible material

Packing Group : PGII

Hazard labels :

Emergency Response Guide (ERG) Number : 135

Transport by sea (IMDG)

Transport document description (IMDG) : UN 3088 SELF-HEATING SOLID, ORGANIC, N.O.S. (POLYBUTADIENE RESIN), 4.2, II

UN Number : UN3088

Proper Shipping Name : SELF-HEATING SOLID, ORGANIC, N.O.S.

Primary Hazard Class : 4.2 - Substances liable to spontaneous combustion

Packing Group : PGII

Hazard labels (IMDG) :

EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE

EmS-No. (Spillage)	:	S-J - SPILLAGE SCHEDULE Juliet - WETTED EXPLOSIVES AND CERTAIN SELF-HEATING SUBSTANCES
Stowage category (IMDG)	:	C

Air transport (IATA)

Transport document description (IATA)	:	UN 3088 Self-heating solid, organic, n.o.s. (polybutadiene resin), 4.2, II
UN Number	:	UN3088
Proper Shipping Name	:	Self-heating solid, organic, n.o.s.
Primary Hazard Class	:	4.2 - Substances Liable to Spontaneous Combustion
Packing Group	:	PGII
Hazard labels (IATA)	:	

Section 15: Regulatory information

15.1. US Federal regulations

EPA TSCA Status

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 no toxic chemicals in excess of the applicable de minimis concentration that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA Section 311/312 Hazard Classes	Physical hazard - Combustible dust Physical hazard - Self-heating 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

DSL (Canadian Domestic Sustances List)	All components are listed or exempted
IECSC (China Inventory of Existing Chemical Substances)	All components are listed or exempted
ENCS (Japanese Existing & New Chemical Substances inventory)	All components are listed or exempted

15.3. US State regulations

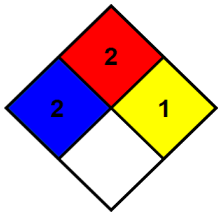
This product may contain California Proposition 65 substances at concentration levels below those required to be classified as hazardous by OSHA's Hazard Communication Standard (29 CFR 1910.1200). Contact TotalEnergies Petrochemicals & Refining USA, Inc. if you need specific information regarding status of this product with regard to California Proposition 65.

Section 16: Other information

Other information	:	Unless agreed to in a separate written agreement with the Customer, TotalEnergies Petrochemicals & Refining USA, Inc. 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 TotalEnergies Petrochemicals & Refining USA, Inc. and establish agreed terms and conditions for such use.

NFPA (National Fire Protection Association)

NFPA health hazard	: 2
NFPA fire hazard	: 2
NFPA reactivity	: 1



Hazard System Rating

Health	: 2
Flammability	: 2
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.

Ricobond® 1756HS

TotalEnergies Petrochemicals & Refining USA, Inc., Cray Valley Division
PO Box 674411
Houston, TX 77267-4411 USA
Tel. 713-483-5000 or 1-877-871-2729

Danger

May form combustible dust concentrations in air
Self-heating; may catch fire
May cause an allergic skin reaction

Keep cool. Protect from sunlight.
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If on skin: Wash with plenty of water.
Specific treatment (see Section 4.1 of SDS or information on this label).
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