SAFETY DATA SHEET



1. Identification

Product identifier MEKP HARDENER PART B

Other means of identification None.

Recommended use Coating / Polymerization Catalyst

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc.

Address 2829 Lakeland Drive Jackson, MS 39232

USA

After hours telephone

number

1-800-222-7122

Normal work hours

telephone number

1-877-982-7667

Website www.ergonarmor.com E-mail sds@ergon.com

Emergency 24-hour telephone number

CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887

Information on operation

hours

8:00 a.m. to 5:00 p.m.

2. Hazard(s) identification

Physical hazards Organic peroxides Type D

> Corrosive to metals Category 1 Acute toxicity, oral Category 5

> Acute toxicity, dermal Category 4 Acute toxicity, inhalation Category 3 Skin corrosion/irritation Category 1 Serious eye damage/eye irritation Category 1 Specific target organ toxicity, repeated Category 2

exposure

Environmental hazards Hazardous to the aquatic environment, acute Category 2

hazard

OSHA defined hazards Not classified.

Label elements

Health hazards



Signal word Danger

Hazard statement Heating may cause a fire. May be corrosive to metals. Harmful in contact with skin. May be

harmful if swallowed. Causes severe skin burns and eye damage. Toxic if inhaled. May cause

damage to organs through prolonged or repeated exposure. Toxic to aquatic life.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep/store away from clothing/combustible materials. Keep only in original container. Avoid breathing

dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective

clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER/doctor if you feel unwell. Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Specific treatment see Section 4 of this SDS. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Absorb spillage to prevent material damage. Wash hands after handling. Wash contaminated clothing before reuse.

Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with a resistant inner liner. Protect from sunlight. Store away from other materials. Store away from incompatible materials. Store at temperatures not exceeding 38°C / 100°F. Keep cool.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

Supplemental information

None known.

None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
DIMETHYL PHTHALATE		131-11-3	35 - 60
2-BUTANONE PEROXIDE		1338-23-4	28 - 38
2-BUTANONE		78-93-3	1 - 3
HYDROGEN PEROXIDE		7722-84-1	<1
Other components below reportable	le levels		16.5

^{*}Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Remove victim to fresh air and keep at rest in a position comfortable for

breathing. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist.

Skin contact Take off immediately all contaminated clothing. Wash off with soap and plenty of water. Wash

contaminated clothing before reuse. Get medical attention if irritation develops and persists.

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open Eye contact

> eyelids widely. If irritation persists: Continue flushing during transport to hospital. Take along these instructions. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical

attention immediately.

Ingestion Rinse mouth. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious

or is having convulsions. If vomiting occurs, keep head low so that stomach content doesn't get

into the lungs. Get medical attention if symptoms occur.

Most important

symptoms/effects, acute and

delayed

Skin irritation. Nausea, vomiting. Diarrhea. May cause respiratory tract irritation, headache, dizziness, fatigue, confusion, visual disturbance, drowsiness, and weakness. Dizziness. May cause respiratory irritation. Causes serious eye irritation. Irritation of nose and throat. Contact may cause redness, burning, drying, and cracking of the skin, and skin damage. May cause temporary

blindness and severe eye damage.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to

protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from

During fire, gases hazardous to health may be formed.

the chemical

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Contact with incompatible materials or exposure to temperatures above the Self-Accelerating Decomposition Temperature (SADT) may result in self-accelerating decomposition reaction with release of flammable vapours which may auto-ignite. After a fire, wait until the material has cooled to room temperature before initiating clean-up activities.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray.

Specific methods General fire hazards Use standard firefighting procedures and consider the hazards of other involved materials.

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Avoid inhalation of vapor, fumes, dust and/or mist from the spilled material. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. For personal protection, see section 8 of the

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment, Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from sources of ignition - No smoking. Contact with incompatible materials or exposure to temperatures exceeding the Self-Accelerating Decomposition Temperature (SADT) of 100°F (38°C) may result in a self-accelerating decomposition reaction with release of flammable vapours which may auto-ignite. Avoid contact with eyes. Avoid contact with skin. Provide adequate ventilation. Wash thoroughly after handling. Wear personal protective equipment. Observe good industrial hygiene practices. Ground/bond container and receiving equipment. Avoid release to the environment. Avoid prolonged exposure. Do not eat, drink or smoke when using the product.

Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep cool. Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). DO NOT store at temperatures exceeding 100°F (38°C) as this is the Self-Accelerating Decomposition Temperature (SADT).

8. Exposure controls/personal protection

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.

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

Components	Туре	Value	
2-BUTANONE (CAS 78-93-3)	PEL	590 mg/m3	
		200 ppm	
DIMETHYL PHTHALATE (CAS 131-11-3)	PEL	5 mg/m3	
HYDROGEN PEROXIDE (CAS 7722-84-1)	PEL	1.4 mg/m3	
		1 ppm	
US. ACGIH Threshold Limit Values	5		
Components	Туре	Value	
2-BUTANONE (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
2-BUTANONE PEROXIDE (CAS 1338-23-4)	Ceiling	0.2 ppm	

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US. ACGIH Threshold Limit Value Components	es Type	Value	
DIMETHYL PHTHALATE (CAS 131-11-3)	TWA	5 mg/m3	
HYDROGEN PEROXIDE (CAS 7722-84-1)	TWA	1 ppm	
US. NIOSH: Pocket Guide to Che	mical Hazards		
Components	Туре	Value	
2-BUTANONE (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	
2-BUTANONE PEROXIDE (CAS 1338-23-4)	Ceiling	1.5 mg/m3	
		0.2 ppm	
DIMETHYL PHTHALATE (CAS 131-11-3)	TWA	5 mg/m3	
HYDROGEN PEROXIDE (CAS 7722-84-1)	TWA	1.4 mg/m3	
		1 ppm	

Biological limit values

ACGIH Biological Exposure Indices					
Components	Value	Determinant	Specimen	Sampling Time	
2-BUTANONE (CAS 7	8-93-3)2 mg/l	MEK	Urine	*	

^{* -} For sampling details, please see the source document.

Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined

occupational exposure limit is not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical goggles are recommended. Eve wash fountain is recommended.

Skin protection

Hand protection Chemical resistant gloves. Nitrile, butyl rubber or neoprene gloves are recommended.

Normal work clothing (long sleeved shirts and long pants) is recommended. Other

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate

certified respirators.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Do not get in eyes, on skin, on clothing.

9. Physical and chemical properties

Appearance Various colored liquid

Physical state Liquid. **Form** Liquid. Color Various. Odor Sweet. **Odor threshold** Not available. Not available. Not available. Melting point/freezing point Initial boiling point and Not available.

boiling range

203.0 °F (95.0 °C) Flash point

Evaporation rate Not available. Flammability (solid, gas) Not applicable. Upper/lower flammability or explosive limits

Explosive limit - lower

(%)

Not available.

Explosive limit - upper

(%)

Not available.

Vapor pressure 5.2 mm Hg @66°F(19°C)

Vapor density Not available.

Relative density 1.01 g/cm3 (8.42 lb/gal) @68°F(20°C)

Solubility(ies)

Solubility (water) Slightly soluble
Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperature 167 °F (75 °C) (Self-Accelerating Decomposition Temperature (SADT)

Decomposition temperature Not available.

Viscosity 17.3 mPa·s @68°F(20°C)

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

Hazardous polymerization does not occur, however this material does decompose and may release flammable vapors when in contact with heat above the published Self Accelerating Decomposition

Temperature (SADT).

Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with

incompatible materials. Temperatures above the published SADT of 167°F (75°C) .

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents. Accelerators. Reducing agents. Friedel-Crafts

reaction catalyst. Transition metal salts/ions. Metal ions. Copper. Brass.

Hazardous decomposition

products

Hazardous organic compounds. Carbon dioxide. Carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation Toxic if inhaled.

Skin contact Causes severe skin burns and eye damage.

Eye contact Causes serious eye damage.

Ingestion Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Contact may cause redness, burning, drying, and cracking of the skin, and skin damage. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system.

cal characteristics Headache. Nausea, vomiting. Dizziness. Inhalation.

Information on toxicological effects

Acute toxicity

Components Species		Test Results		
2-BUTANONE (CAS 78-93-3)				
<u>Acute</u>				
Dermal				
LD50	Rabbit	> 8000 mg/kg		

2-BUTANONE PEROXIDE (CAS 1338-23-4)

Acute Inhalation

LC50 Rat 200 mg/l, 4 Hours

Test Results Components **Species**

DIMETHYL PHTHALATE (CAS 131-11-3)

Acute **Dermal**

LD50 Rat 38000 mg/kg

Oral

LD50 Rat 2400 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye

Causes serious eye damage.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

HYDROGEN PEROXIDE (CAS 7722-84-1) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects

Specific target organ toxicity Not classified.

- single exposure

May cause damage to organs through prolonged or repeated exposure. Ingestion. Inhalation. Skin.

Specific target organ toxicity - repeated exposure

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life.

Product		Species	Test Results
MEKP HARDENER PAR	T B		
Aquatic			
Crustacea	EC50	Daphnia	96.5852 mg/l, 48 hours estimated
Fish	LC50	Fish	137.8866 mg/l, 96 hours estimated
Components		Species	Test Results
2-BUTANONE (CAS 78	-93-3)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	4025 - 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 400 mg/l, 96 hours
DIMETHYL PHTHALAT	E (CAS 131-11-3)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	45.9 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	29 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-BUTANONE 0.29 Partition coefficient n-octanol / water (log Kow)

DIMETHYL PHTHALATE

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation

1.6

potential.

13. Disposal considerations

Disposal instructionsCollect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the

material under controlled conditions in an approved incinerator. Do not incinerate sealed

containers. Do not discharge into drains, water courses or onto the ground.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product

residues. This material and its container must be disposed of in a safe manner (see: Disposal

instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

lisposal.

14. Transport information

DOT

UN number UN3105

UN proper shipping name Organic peroxide type D, liquid (Methyl ethyl ketone peroxide)

Transport hazard class(es)

Class 5.2
Subsidiary risk Label(s) 5.2
Packing group II

Special precautions for

user

Read safety instructions, SDS and emergency procedures before handling.

Packaging exceptions 152
Packaging non bulk 225
Packaging bulk None

IATA

UN number UN3105

UN proper shipping name Organic peroxide type D, liquid (Methyl ethyl ketone peroxide)

Transport hazard class(es)

Class 5.2 Subsidiary risk -

Packing group Not available.

Environmental hazards No. **ERG Code** 5L

Special precautions for Read safety instructions, SDS and emergency procedures before handling.

user

Other information

Passenger and cargo Allowed with restrictions.

aircraft

Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN3105

UN proper shipping name ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE)

Transport hazard class(es)

Class 5.2 Subsidiary risk -

Packing group Not available.

Environmental hazards

Marine pollutant No. **EmS** F-J, S-R

Special precautions for

Read safety instructions, SDS and emergency procedures before handling.

user

Transport in bulk according to Not established. Annex II of MARPOL 73/78 and the IBC Code

DOT



IATA



IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

TSCA Chemical Action Plans, Chemicals of Concern

DIMETHYL PHTHALATE (CAS 131-11-3) Phthalates Action Plan

CERCLA Hazardous Substance List (40 CFR 302.4)

2-BUTANONE (CAS 78-93-3) Listed. 2-BUTANONE PEROXIDE (CAS 1338-23-4) Listed. DIMETHYL PHTHALATE (CAS 131-11-3) Listed.

SARA 304 Emergency release notification

HYDROGEN PEROXIDE (CAS 7722-84-1) 1000 LBS OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Yes

SARA 302 Extremely hazardous substance

Chemical name **CAS** number Reportable Threshold Threshold **Threshold** planning quantity planning quantity planning (pounds) (pounds) quantity, lower quantity, upper value (pounds) value (pounds) 7722-84-1 1000 **HYDROGEN** 1000

PEROXIDE

EROXIDE

Hazardous chemical

SARA 311/312

Classified hazard Organic peroxide **categories** Corrosive to metal

Acute toxicity (any route of exposure)

Skin corrosion or irritation

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical nameCAS number% by wt.DIMETHYL PHTHALATE131-11-335 - 60

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

DIMETHYL PHTHALATE (CAS 131-11-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated. (SDWA)

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

2-BUTANONE (CAS 78-93-3) 6714

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

2-BUTANONE (CAS 78-93-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number

2-BUTANONE (CAS 78-93-3) 671²

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

2-BUTANONE (CAS 78-93-3) Low priority

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-BUTANONE (CAS 78-93-3)

DIMETHYL PHTHALATE (CAS 131-11-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes

Material name: MEKP HARDENER PART B

Country(s) or region Inventory name On inventory (yes/no)*

New ZealandNew Zealand InventoryYesPhilippinesPhilippine Inventory of Chemicals and Chemical SubstancesYes

(PICCS)

Taiwan Chemical Substance Inventory (TCSI)

United States & Puerto Rico

Toxic Substances Control Act (TSCA) Inventory

Yes

16. Other information, including date of preparation or last revision

Issue date 08-24-2021

Version # 01

NFPA ratings Health: 3

Flammability: 1 Instability: 3

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge

information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

materials or in any process, unless specified in the text.

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).