

1. Identification

Product identifier	PENNCOAT 401 RESIN (All Colors)		
Other means of identification	Not available.		
Recommended use	Not available.		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/Distributor information			
Manufacturer			
Company Name	Ergon Armor		
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	Flammable liquids	Category 4
Health hazards	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness or dizziness. Causes serious eye irritation.
Prevention	Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection.
Response	Get medical advice/attention if you feel unwell. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: 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.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/information on ingredients
Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-BUTANONE		78-93-3	20 - < 30

Chemical name	Common name and synonyms	CAS number	%
TITANIUM DIOXIDE		13463-67-7	5 - < 10
METHYL ISOBUTYL KETONE		108-10-1	1 - < 3

*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. Call a physician if symptoms develop or persist. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not use mouth-to-mouth method if victim inhaled the substance. Oxygen or artificial respiration if needed.
Skin contact	Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse. Wash off immediately with soap and plenty of water.
Eye contact	Get medical attention if irritation develops and persists. Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing.
Ingestion	Get medical attention if symptoms occur. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting without advice from poison control center. Rinse mouth thoroughly.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
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	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
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. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. 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. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value	Form
2-BUTANONE (CAS 78-93-3)	PEL	590 mg/m ³ 200 ppm	
METHYL ISOBUTYL KETONE (CAS 108-10-1)	PEL	410 mg/m ³ 100 ppm	
TITANIUM DIOXIDE (CAS 13463-67-7)	PEL	15 mg/m ³	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value
2-BUTANONE (CAS 78-93-3)	STEL TWA	300 ppm 200 ppm
METHYL ISOBUTYL KETONE (CAS 108-10-1)	STEL TWA	75 ppm 20 ppm
TITANIUM DIOXIDE (CAS 13463-67-7)	TWA	10 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-BUTANONE (CAS 78-93-3)	STEL TWA	885 mg/m ³ 300 ppm 590 mg/m ³ 200 ppm
METHYL ISOBUTYL KETONE (CAS 108-10-1)	STEL TWA	300 mg/m ³ 75 ppm 205 mg/m ³ 50 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-BUTANONE (CAS 78-93-3)	2 mg/l	MEK	Urine	*
METHYL ISOBUTYL KETONE (CAS 108-10-1)	1 mg/l	Methyl isobutyl ketone	Urine	*

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

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear protective gloves.

Skin protection

Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

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.

9. Physical and chemical properties

Appearance	Viscous liquid
Physical state	Liquid.
Form	Liquid.
Color	Varies Pigmented. Opaque.
Odor	Mild, sweet odor

Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-123.95 °F (-86.64 °C) estimated
Initial boiling point and boiling range	500 °F (260 °C) (decomposes)
Flash point	152.0 °F (66.7 °C) Tag Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available. estimated
Flammability limit - upper (%)	Not available. estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	759.2 °F (404 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	1.56
VOC (Weight %)	6 - 7 %

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.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
PENNCOAT 401 RESIN (All Colors) (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	30188.6797 mg/kg estimated
<i>Inhalation</i>		
LC50	Mouse	44000 ppm, 45 Minutes estimated
	Rat	46800 ppm, 4 Hours estimated
		273.3333 mg/l, 4 Hours estimated
<i>Oral</i>		
LD50	Mouse	2680 mg/kg estimated
	Rat	8122.2412 mg/kg estimated
<i>Other</i>		
LD50	Guinea pig	30.6333 ml/kg estimated
	Mouse	19666.666 mg/kg estimated
		6640 g/kg, 24 Hours estimated
	Rat	49160 mg/kg, 24 Hours estimated
		38 ml/kg estimated

Components	Species	Test Results
2-BUTANONE (CAS 78-93-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 8000 mg/kg
<i>Inhalation</i>		
LC50	Mouse	11000 ppm, 45 Minutes
	Rat	11700 ppm, 4 Hours
<i>Oral</i>		
LD50	Mouse	670 mg/kg
	Rat	2300 - 3500 mg/kg
<i>Other</i>		
LD50	Mouse	1660 g/kg, 24 Hours
	Rat	12290 mg/kg, 24 Hours

METHYL ISOBUTYL KETONE (CAS 108-10-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 16000 mg/kg
<i>Inhalation</i>		
LC50	Rat	8.2 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	2080 mg/kg
<i>Other</i>		
LD50	Guinea pig	0.919 ml/kg
	Mouse	590 mg/kg
	Rat	1.14 ml/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Not classified.

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

METHYL ISOBUTYL KETONE (CAS 108-10-1) 2B Possibly carcinogenic to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

Specific target organ toxicity - single exposure Causes central nervous system effects.

Specific target organ toxicity - repeated exposure Respiratory system.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results	
PENNCOAT 401 RESIN (All Colors) (CAS Mixture)			
Crustacea	EC50	Daphnia	6168.5825 mg/l, 48 hours estimated
Fish	LC50	Fish	4134.4854 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
METHYL ISOBUTYL KETONE (CAS 108-10-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	492 - 593 mg/l, 96 hours
TITANIUM DIOXIDE (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2-BUTANONE	0.29
METHYL ISOBUTYL KETONE	1.31

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Not available.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code Not applicable.

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 Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-BUTANONE (CAS 78-93-3) Listed.

METHYL ISOBUTYL KETONE (CAS 108-10-1) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 No

Hazardous chemical

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
METHYL ISOBUTYL KETONE	108-10-1	1 - < 3

Other federal regulations

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

METHYL ISOBUTYL KETONE (CAS 108-10-1)

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

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

2-BUTANONE (CAS 78-93-3)

DEA Essential Chemical Code Number

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

METHYL ISOBUTYL KETONE (CAS 108-10-1) 6715

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

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

METHYL ISOBUTYL KETONE (CAS 108-10-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

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

METHYL ISOBUTYL KETONE (CAS 108-10-1) 6715

US state regulations

US. Massachusetts RTK - Substance List

2-BUTANONE (CAS 78-93-3)

METHYL ISOBUTYL KETONE (CAS 108-10-1)

TITANIUM DIOXIDE (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act

METHYL ISOBUTYL KETONE (CAS 108-10-1) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

2-BUTANONE (CAS 78-93-3)
 METHYL ISOBUTYL KETONE (CAS 108-10-1)
 TITANIUM DIOXIDE (CAS 13463-67-7)

US. Rhode Island RTK

2-BUTANONE (CAS 78-93-3)
 METHYL ISOBUTYL KETONE (CAS 108-10-1)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

METHYL ISOBUTYL KETONE (CAS 108-10-1)	Listed: November 4, 2011
TITANIUM DIOXIDE (CAS 13463-67-7)	Listed: September 2, 2011

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
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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).

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

Issue date 10-30-2015

Version # 01

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