

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

*** Section 1 - Chemical Product and Company Identification ***

Product Trade Name PENNCOAT 601 Primer

Manufacturer Information

Ergon Armor (601) 933-3540
Corrosion Engineering
P.O. Box 1639 (800) 424-9300
Jackson, MS 39215-1639

*** Section 2 - Composition / Information on Ingredients ***

CAS #	Component	Percent
108-88-3	Toluene	76

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Glycidol derivatives.

*** Section 3 - Hazards Identification ***

Emergency Overview:

WARNING!
MAY CAUSE EYE AND SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
PROLONGED EXPOSURE TO HIGH VAPOR CONCENTRATIONS CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION INCLUDING HEADACHE, DIZZINESS, WEAKNESS, CONFUSION, NAUSEA, AND LOSS OF CONSCIOUSNESS.

Potential Health Effects:

Toluene

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. This material is rapidly absorbed after inhalation exposure and skin contact. It is irritating to the eyes and respiratory tract and may produce eye damage if not removed promptly. Repeated or prolonged exposure of this material to human skin may produce drying, cracking and irritation due to the removal of skin oils. Overexposure to vapors may cause central nervous system (CNS) effects with possible effects such as headaches, fatigue, loss of coordination, decreases in visual accuracy, dizziness, and nausea. Extreme exposures may produce nausea, vomiting, irregular heartbeat, extreme weakness, tremors, impaired speech, hearing and vision, as well as pronounced loss of coordination and impairment of reaction time. Long-term, repeated exposures to this material may produce nervousness, muscular fatigue and persistent sleeplessness. Although this solvent has a low level of lethality, intentional exposures to this material by repeated inhalation ("glue sniffing") have resulted in brain damage. Recent studies with pregnant women addicted to this material ("glue sniffing") suggest an increased risk for fetal injury, although the significance of this gross exposure (>10,000 ppm) may have little relevance to ambient concentrations in the industrial setting.

While swallowing of toluene is unlikely, if swallowed this material may cause mouth and throat irritation, nausea, vomiting and CNS effects as noted above. If this material is drawn into the lungs (aspirated) during swallowing, or during

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

spontaneous or induced vomiting following swallowing, it may cause mild to severe injury to the lungs; symptoms of injury include increased breathing and heart rates, coughing and related signs of respiratory distress.

*** Section 4 - First Aid Measures ***

Eye Contact:

Immediately flush with plenty of water. Get medical attention if irritation persists.

If On Skin

Immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Ingestion:

Induce vomiting as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

*** Section 5 - Fire Fighting Measures ***

Flash Point: 40 deg F

Method Used: TCC

Flammability Classification: Flammable

Upper Flammable Limit (UFL): 7.0%

Lower Flammable Limit (LFL): 1.2%

Fire & Explosion Hazards:

Closed containers of this material may explode when subjected to heat from surrounding fire. Cool exposed containers with water. Avoid breathing fumes from fire exposed material.

Extinguishing Media:

Use water spray, carbon dioxide, foam or dry chemical.

Fire-Fighting Instructions:

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). Fire fighting equipment should be thoroughly decontaminated after use.

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

*** Section 6 - Accidental Release Measures ***

Spill or Leak

Isolate hazard area and deny entry to unnecessary or unprotected personnel. Contain spilled liquid with sand or earth. Clean up spill immediately, observing precautions in the Personal Protection section of MSDS. Avoid runoff into storm sewers and ditches which lead to waterways.

*** Section 7 - Handling and Storage ***

Handling Procedures:

Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Empty container may contain hazardous residues.

Storage Procedures:

Avoid excessive heat. Store out of direct sunlight in a cool, well-ventilated place.

*** Section 8 - Exposure Controls / Personal Protection ***

Component Exposure Limits

Toluene

ACGIH (TLV-TWA): 50 ppm; 188 mg/m³

ACGIH SKIN DESIGNATOR: Y

OSHA (PEL-TWA): 200 ppm

OSHA (PEL-CEILING): 300 ppm

-Only those components with exposure limits are printed in this section.

-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure.

Measures to prevent significant cutaneous absorption may be required.

-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

Engineering Controls:

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to control exposure levels. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

PERSONAL PROTECTIVE EQUIPMENT

As prescribed in the OSHA Standard for Personal Protective Equipment (29 CFR 1910.132), employers must perform a Hazard Assessment of all workplaces to determine the need for, and selection of, proper protective equipment for each task performed.

Eyes/Face Protective Equipment:

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

Skin Protection:

Neoprene or Polyvinyl chloride gloves should be worn when handling this material. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Wash contaminated clothing and clean protective equipment before reuse. Rinse contaminated skin promptly. Wash skin thoroughly after handling.

Respiratory Protection:

Avoid breathing vapor or mist. Use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure may be significant, 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.

* * * Section 9 - Physical & Chemical Properties * * *

Physical State:	Liquid	Appearance:	Black liquid
Odor:	Solvent	Vapor Pressure:	22 mm Hg @ 20C
Vapor Density:	3.1	Boiling Point:	109 - 111 deg C
Melting Point:	N/A	Specific Gravity:	0.905 @ 25/25 Deg C
pH:	N/A	Viscosity:	NE
VOC:	57%/wt.	Solubility Water:	Insoluble

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability:

This material is chemically stable under normal and anticipated storage and handling conditions.

Incompatibility:

Avoid contact with strong acids, strong oxidizers and alkalis which may cause a violent reaction. Contact with amine compounds in uncontrolled conditions results in an exothermic reaction.

Decomposition Products:

Oxides of carbon

Hazardous Polymerization:

Hazardous polymerization is not known to occur.

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

*** Section 11 - Toxicological Information ***

Acute Toxicity:

A: General Product Information

No information available for the product.

B: Component Analysis - LD50/LC50

TOLUENE

This material has been administered to several animal species by various routes of exposure to investigate its potential toxicity. Repeated oral administration produced liver and kidney changes, digestive tract irritation and blood changes (rat). Repeated skin application produced lung irritation and damage (rat), blood changes (rat, mouse), minor liver changes (mouse, rat, rabbit), decreased resistance to lung infection (mouse), and various brain effects including subtle behavioral changes and hearing loss (mouse, rat). In long-term inhalation studies with rats and mice, no evidence for carcinogenic effects were reported. In rats, toxic effects were limited to the nasal cavity. Mice receiving skin applications showed no treatment related tumor growth or significant tumor promoting activity.

Birth defects were reported in rats exposed to this material by oral administration at levels which produced no adverse effects in the mother. Birth defects were reported in rats exposed by prolonged inhalation, but only at levels which produced adverse effects on the mothers. However, a similar study reported no birth defects in rats and mice exposed by inhalation at levels which produced adverse effects and mortality in the mothers and toxic effects in the offspring. No treatment related effects on survival or reproductive parameters were observed when two generations of mice were exposed by inhalation. The weight of the evidence suggests that this material does not produce genetic changes in standard tests using bacteria, animal cells or animals, although several questionable studies using animals have produced both positive and negative results.

Single exposure (acute) studies indicate:

Oral - Slightly Toxic to Practically Non-toxic to Rats (LD50 2,600-7,530 mg/kg)
Dermal - Practically Non-toxic to Rabbits (LD50 14,000 mg/kg)
Inhalation - Practically Non-toxic to Rats (4-hr LC50 8,000 ppm)
Eye Irritation - Moderately Irritating to Rabbits
Skin Irritation - Moderately to Slightly Irritating to Rabbits

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Chronic Toxicity

No information available for the product.

Epidemiology:

No information available for the product.

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

Neurotoxicity:

No information available for the product.

Mutagenicity:

No information available for the product.

Teratogenicity:

No information available for the product.

*** Section 12 - Ecological Information ***
--

Ecotoxicity:

A: General Product Information

No information available for the product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Toluene

This material is moderately to slightly toxic to fathead minnow (96-hr LC50 26-63 mg/l), sheep's head minnow (96-hour LC50 13 mg/l), bluegill (96-hour LC50 24 mg/l), guppies (96-hour LC50 59 mg/l) and bay shrimp (96-hour LC50 3.7 mg/l). It is practically non-toxic to algae (96-hour EC50 >433 mg/l). The 28-day no effect level for sheep's head minnow was 3.2-7.7 mg/l, while the 32-day no effect level for fathead minnow was 4-6 mg/l.

Environmental Fate:

Toluene

This material is readily degraded by activated sludge and by bacteria in estuarine and marine environments. It is biodegraded by a variety of soil microorganisms using this material (up to 0.1%) as the sole carbon source. Biodegradability ranged from 63% to 86% after up to 20 days using domestic filtered waste water effluent. This material is not expected to bioconcentrate in fish or other aquatic organisms. The log octanol/water partition coefficient (log KOW) is 2.79.

*** Section 13 - Disposal Considerations ***

US EPA Waste Numbers & Descriptions:

A: General Product Information

Recover, reclaim or recycle when practical.

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

Disposal via incineration is recommended. Appropriate pretreatment and disposal in an authorized landfill is acceptable. In all cases, dispose of material in accordance with all applicable federal, state, and local laws and regulations. Consult appropriate regulatory officials or your attorney for information on such disposal.

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.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

*** Section 14 - Transportation Information ***

US DOT Information

DOT Name: Resin Solution
DOT Technical Name:
DOT Hazard Class: 3
UN Number: UN1866
DOT Packing Group: PGII

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

B: Component Analysis

SARA TITLE III, SECTION 313

-This product does contain chemical(s) which are defined as toxic chemicals under and 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. See Section 2

TOLUENE

SARA 311/312: Acute: Y Chronic: N Fire: Y Pressure: N Reactive: N

SARA REPORTABLE QUANTITIES

Toluene

CERCLA RQ

1000 LB

SARA TPQ

State Regulations

A: General Product Information

No additional information available.

Material Safety Data Sheet

Material Name: PENNCOAT® 601 Primer

ID:

B: Component Analysis – State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA M	N NJ	PA
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes

California Prop 65 - Developmental Toxin

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins.

TOLUENE

Other Regulations

A: General Product Information

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

B: Component Analysis – Inventory Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Toluene	108-88-3	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Disclosure / Classifications
Toluene	108-88-3	0.1% / B2, D2A, D2B

*** Section 16 - Other Information ***

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Ergon Armor bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.