

SAFETY DATA SHEET

Flexabar Corporation

Date of issue: 01/24/2013 Date of revisions: Initial version

1. Identification of the substance/preparation and of the company/undertaking

Product name: ARMOR
Product codes: BG4119-6120

Company: Flexabar Corporation
Address: 1969 Rutgers University Blvd.
Lakewood, NJ 08701
USA
Phone: 1-732-901-6500
Fax phone: 1-732-901-6504
Emergency phone: 1-800-424-9300
Chemtrec phone: 1-800-424-9300

Product use: Bottom Paint for pleasure Boats

2. Hazards identification

Emergency Overview

Appearance and Odor : Black viscous liquid, aromatic.

Health Hazards : Ingestion may cause death. Irritating to respiratory system. Vapors may cause drowsiness and dizziness. Harmful: may cause lung damage if swallowed.

Safety Hazards : Combustible liquid. Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Environmental Hazards : Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Health Hazards

ROUTES OF ENTRY : skin contact from liquid, Inhalation. **Ingestion unlikely**
POTENTIAL HEALTH EFFECTS:

Eyes:

Acute eye contact liquid or vapors are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and is slow to heal. However damage is usually reversible. See first aid measures for treatment.

Chronic eye contact None Found

Skin: May be absorbed through the skin in harmful amounts. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash) Prolonged or repeated skin contact may cause irritation.

Ingestion: Irritating to mouth, throat, and stomach. May produce central nervous system effects, which may include dizziness, loss of balance and coordination, unconsciousness, coma and even death? Product may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion may enter lungs and produce damage.

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Inhalation: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, loss of consciousness and even death). Repeated overexposure can cause a hearing loss in laboratory animals. Repeated overexposure has produced toxic effects in developing and young laboratory animals. Solvent “huffing/snuffing” (abuse) or intentional prolonged overexposure to high levels of vapors can produce abnormal behavior, convulsions, hallucinations, delirium, nervous system damage, serious disturbances of heart rhythm and sudden death. Prolonged or repeated exposure may cause liver and kidney damage.

Other information: Possibility of organ or organ system damage from prolonged exposure; see chapter 11 for details. Target organ(s): Auditory system.

Signs and Symptoms: Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death. If material enters lungs signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and/or a dried/ cracked appearance. Auditory effects may include temporary hearing loss and/or ringing in ears.

Aggravated Medical Conditions Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin; Respiratory system; Central nervous system (CNS)

SECTION 3 NOTES:

Xylene and all components thereof are listed on ACGIH
Benzene is listed on the OSHA List of Regulated Carcinogens and The OSHA List of Select Carcinogens also on the NTP List and the IARC Group 1 list.
Ethyl Benzene is listed on The IARC Group 3 list

3. Composition/information on ingredients

Chemical name:	CAS no.	Weight%	Symbol
Tralopyril	122454-29-9	4.0-8.0	NA
Zinc Pyritione	13463-41-7	3.0-6.0	NA
Zinc Oxide	0001314-13-2	3.0-6.0	NA
Carbon Black	1333-86-4	1.0-3.0	NA
Solvent Naptha	64742-95-6	1.0-3.0	NA
Light Aromatic			
Solvent Naptha	64742-88-7	24.00 – 27.00	NA
Medium Aromatic			
Xylene, Mixed Isomers	13030-20-7	6.0-8.0	NA
Toluene	108-88-3	<0.4	NA
Benzene	71-43-2	<0.2	NA

Contains Xylene (Mixed Isomers) CAS# 1330-20-7
Contains 1,2,4 Tri-methyl-benzene CAS# 95-63-6
Contains 1,3,5 Tri-methyl-benzene CAS# 108-67-8

4. First aid measure.

General: If in doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin contact: Remove contaminated clothing. Wash affected area thoroughly with soap and water. If irritation persists, see a physician.

Eye contact: Flush immediately with large quantities of water. If persistent irritation occurs see a physician.

Ingestion: Do not induce vomiting; transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next six hours, transport to nearest medical facility:

Advice to Physician: Potential for chemical Pneumonitis. Consider: gastric lavage with a protected airway, administration of activated charcoal. Call a doctor or poison control center for guidance. Causes central nervous system depression. Dermatitis may result from prolonged or repeated exposure.

5. Fire Fighting measures.

Clear fire area of all non-emergency personnel

Extinguishing media: Dry chemical, Foam, CO2. Do not use direct water jet.

Special fire fighting procedures: Fire fighters should wear full protective clothing and self-contained breathing apparatus. Persons not wearing suitable breathing protection should leave the area to prevent significant exposure to toxic combustion gasses. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Keep adjacent containers cool by spraying with water.

Hazardous combustion products: Toxic gas generation (CO2, CO)

Environment: Do not emit to sewers, waterways or soil. Advise the environmental Authorities if substance has entered a watercourse or sewers.

6. Accidental release measures.

Personal protection: Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see section 8 of this MSDS. Stop all leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent spreading or entering drains, ditches or rivers by using sand, earth or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using sprays. Take precautionary measures against static discharges. Ensure electrical continuity by bonding and grounding all equipment. Monitor area with combustible gas indicator.

Clean up methods: for small liquid spills (< 50 US gal.), transfer by mechanical means to salvage container for safe disposal. Allow residues to evaporate or soak up with a non-flammable absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional advice: See chapter 13 for information on disposal. Do not emit to sewers, waterways or soil. Advise the environmental authorities if liquid product enters a waterways or sewer.

7. Handling and Storage.

General Precautions	Avoid breathing vapors or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. On guidance for selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Handling	Extinguish any open flames. Do not smoke. Remove ignition sources. Avoid contact with skin, eyes and clothing. Electrostatic charges may be generated during pumping, Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding all equipment and containers during transfer.
Storage	Store away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable materials that are not toxic or harmful to man.
Product transfer	Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.
Recommended materials	For containers or container linings use mild steel or stainless steel.
Unsuitable materials	Avoid prolonged contact with natural, butyl or nitrile rubbers.
Container advice	Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

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8. Exposure controls/personal protection.

Occupational exposure limits

In the absence occupational exposure standards for this product, it is recommended that the following are adopted.

Material	Source	Type	ppm	mg/m3	notation
1,2,4-trimethyl benzene	ACGIH	TWA	25 ppm		
	OSHA Z1A	TWA	25 ppm	125 mg/n3	
1,3,5 trimethyl benzene	ACGIH	TWA	25 ppm		
1,2,3 Trimethyl benzene	ACGIH	TWA	25 ppm		
	OSHA Z1A	TWA	NA	NA	
Tralopryril	NO ESTABLISHED LIMIT				
Zinc Pyrithione	NO ESTABLISHED LIMIT				
Toluene	ACGIH	TWA	20 ppm		
	OSHA Z1A	TWA	100 ppm	375mg/m3	
	OSHA Z1A	STEL	150 ppm	560 mg/m3	
	OSHA Z2	TWA	200 ppm		
	OSHA Z2	Ceiling	300 ppm		
	OSHA Z2	MAX. CONC	500 ppm		
	OSHA Z2				
Benzene	ACGIH	TWA	0.5 ppm		
	ACGIH	STEL	2.5 ppm		
	ACGIH	SKIN_DES			Can be absorbed through skin
	OSHA	TWA	1ppm		
	OSHA	STEL	5 ppm		
	OSHA	ACTION	0.5 ppm		
	OSHA Z1A	TWA	1 ppm		
	OSHA Z1A	STEL	5 ppm		
Zinc Oxide	OSHA	5 ng/m3 TWA (fume); 15 mg/m3 TWA (total dust); 5mg/m3 TWA (respirable fraction) 10 mg/n3 STEL (fume)			
	ACGIH	2mg/m3 TWA (respirable fraction) 10 mg/m3 STEL(respirable fraction)			
	NIOSH	5 mg/m3 TWA (dust and fume) 10 mg/m3 STEL (fume) 15 mg/m3 Ceiling (dust) 500 mg/m3 IDLH			

NA = Not Available

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Additional Information	The ACGIH-values are adopted by the local authorities and have to be adhered to. Wash hands before eating, drinking, smoking and using the toilet.
Exposure Controls	The level of protection and types of controls necessary will vary depending on potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion proof ventilation to control airborne concentrations below the airborne concentrations/ limits. Eyewashes and showers for emergency use,
Personal Protective	Personal protective equipment (PPE) should meet national safety Equipment standards. Check with PPE suppliers.
Respiratory protection	Wear approved respiratory protection. Type of respirator depends on the airborne concentrations from other chemical substances in the work area.
Eye protection:	Wear splash proof goggles.
Hand protection:	Wear chemical resistant gloves (Latex, Rubber). Gloves should be selected in consultation with the glove supplier, with information on effects from other chemical substances in the work place. Wash well after contact with this product.
Skin protection:	Wear protective clothing (apron, long sleeve shirt).
Environment:	Do not emit to sewers, waterways or soil. Advise the environmental authorities if substance has entered a watercourse or sewer.

9. Physical and chemical properties.

Appearance	:	Black viscous liquid
Odor:	:	Aromatic
pH (as delivered)	:	NA
Boiling point	:	302-325°F (mixed aromatics)
Flash Point	:	84.2 °F
Vapour pressure	:	NE
Vapour density	:	NE
Specific gravity	:	1.1489@ 20°C (water=1)
Bac (=1)	:	<1
Solubility in water	:	Insoluble

10. Stability and reactivity

Stability:	The product is stable at normal handling and storage conditions.
Conditions to avoid:	Avoid heat, sparks, open flame and other sources of ignition
Materials to avoid:	Strong oxidizing agents, (Hydrogen Peroxide / Permanganates / Perchlorates)
Hazard Decomposition Products:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gasses, including carbon dioxide, carbon monoxide and other organic compounds will be develop when this material undergoes combustion, thermal or oxidative degradation.

11. Toxicological information.

Basis for Assessment: Information given is based on similar products and/or components.

Acute Oral Toxicity: Low toxicity: LD50>2000mg/kg, Rat
Aspiration into the lungs may cause chemical pneumonitis which can be fatal.

Acute Dermal Toxicity: Low toxicity: LD50>2000mg/kg, Rat

Acute Inhalation Toxicity: Low toxicity: LC50 greater than near-saturated vapour concentration./ 1 hours, Rat
High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Skin Irritation: May cause mild skin irritation (but insufficient to classify).
Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Eye Irritation: Essentially non irritating to eyes

Respiratory Irritation: Repeated inhalation and mists is expected to cause irritation to the respiratory track.

Sensitisation: Not a skin sensitizer.

Repeated Dose Toxicity: Auditory system: prolonged and repeated exposures to high concentrations have resulted in hearing loss in rats. Solvent abuse and noise interaction in the Environment may cause hearing loss. (Xylene)
Kidney: caused kidney effects in rats which are not considered relevant to humans.

Carcinogenicity: An increased tumor incidence has been observed in experimental animals:
The significance of this finding to humans is unknown. (Cumene)

Material	:	Carcinogenicity Classification
Xylene, Mixed Isomers	:	ACGIH Group A4: Not classified as a human carcinogen
Xylene, Mixed Isomers	:	IARC 3: Not classified as to carcinogenicity to humans

12. Ecological information.

Acute Toxicity

Fish : Toxic: 1< LC/EC/IC50 <= 10mg/l

Aquatic Invertebrates : Toxic: 1< LC/EC/IC50 <= 10mg/l

Algae : Toxic: 1< LC/EC/IC50 <= 10mg/l

Mobility : Adsorbs to soil and has low mobility
Floats on water

Persistence/degradability : Expected to be moderately biodegradable

Bioaccumulation : Has the potential to bio-accumulate

13. Disposal considerations.

Material Disposal : Recover or recycle if possible. It is the responsibility of the waste Generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with local regulations. Do not dispose of into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

Container Disposal : Drain container thoroughly. After draining, vent in a safe place away from sparks, fire and other ignition sources. Residues may cause an explosion hazard. Render containers unusable and offer for reclaiming or recycling.

14. Transport information.

US DOT HAZARD CLASS:.....PAINT FLAMMABLE LIQUID

UN-number: 1139

Proper shipping name: Paint

Sea (IMDG):

Class: 3
PG: III
MP: Yes
EmS: F-E, S-E
MFAG: 1

Inland waterways: to be handled locally

Air (ICAO/IATA):

Class: 3
PG: III

Land (RID/ADR):

Class: 3
PG: III
Primary Risk label: 3

15. Regulatory information

Federal Regulatory Status

TSCA Components listed on the TSCA

Components of this product are listed as follows:

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)

Cumene (98-82-8)	Reportable quantity 5000 lbs
Xylene Mixed Isomers (1330-20-7)	Reportable quantity 100 lbs
Toluene (108-88-3)	Reportable quantity 1000 lbs

Clean Water Act (CWA) Section 311

Xylene Mixed Isomers (1330-20-7)	Reportable quantity 100 lbs.
Toluene (108-88-3)	Reportable quantity 1000 lbs.
Benzene (71-43-2)	reportable quantity 10 lbs.

SARA Hazard Categories (311/312)

Immediate (Acute) Health Hazard. Fire Hazard

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (proposition 65)

Component(s) of this material are known to the State of California to cause birth defects or other reproductive harm.

Component(s) of this material are known to the State of California to cause cancer.

Toluene	(108-88-3)
Benzene	(71-43-2)

16. Other information

The content and format of this MSDS is in accordance with the OSHA Hazard communication standard, 29CFR 1910.1200

Use restrictions: As stated on label

MSDS distribution: The information in this document should be made available all who may handle the product.

VOC = .88 lb./ gal.
400g / l

HMIS Classification		NFPA Hazard Ratings		
Health	3	Health	3	0 Least
Flammability	3	Flammability	3	1 Slight
Physical	0	Reactivity	0	2 Moderate
Personal Protection	G			3 High

The information contained herein relates only to the specific material identified. Flexabar Corporation believes that the information is accurate and reliable as of the preparation date of this material safety data sheet, but no representation, guarantee or warranty expressed or implied is made as to the accuracy, reliability or completeness of the information. Flexabar Corporation urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.