MATERIAL SAFETY DATA SHEET

FILE NO.: MSDS 180 SOLVENT WASH

NAME OF PRODUCT 180 SOLVENT WASH

MSDS DATE: 4/4/2006

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 180 SOLVENT WASH
SYNONYMS:
PRODUCT CODES: AG 180

MANUFACTURER: Flexabar Corporation
DIVISION:
ADDRESS: 1969 Rutgers University Blvd.
Lakewood, NJ 08701 USA

EMERGENCY PHONE: 1-800-424-9300
CHEMTREC PHONE: 1-800-424-9300
OTHER CALLS: 1-732-901-6500
FAX PHONE: 1-732-901-6504

CHEMICAL NAME: NA
CHEMICAL FAMILY: NA
CHEMICAL FORMULA: NA

PRODUCT USE: Wash for Fiberglass Boat Hulls
PREPARED BY: Hamdi Latif

SECTION 1 NOTES:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: METHYLENE CHLORIDE

CAS NO.	% WT	% VOL	SARA 313 REPORTABLE
75-09-2	45.00 – 65.00		YES
	ppm	mg/m3	
OSHA PEL-TWA:	25		
OSHA PEL STEL :	125		
OSHA PEL CEILING:			
ACGIH TLV-TWA:	50		
ACGIH TLV STEL:			
ACGIH TLV CEILING:			

INGREDIENT: XYLENE

CAS NO.	% WT	% VOL	SARA 313 REPORTABLE
1330-20-7	15.00 – 25.00		YES
	ppm	mg/m3	
OSHA PEL-TWA:			
OSHA PEL STEL :	100		
OSHA PEL CEILING:			
ACGIH TLV-TWA:			
ACGIH TLV STEL:			
ACGIH TLV CEILING:			

INGREDIENT: METHYL ISOBUTYL KETONE

CAS NO.	% WT	% VOL	SARA 313 REPORTABLE
108-10-1	15.00 – 25.00		YES
	ppm	mg/m3	
OSHA PEL-TWA:	50	205	
OSHA PEL STEL :	75	300	
OSHA PEL CEILING:			
ACGIH TLV-TWA:	50	205	
ACGIH TLV STEL:	75	307	
ACGIH TLV CEILING:			

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Warning! Flammable liquid and vapor.
Color: Clear/ Colorless Form: Liquid Odor: Mildly Sweet

Overexposure may cause nervous system effects. May cause serious disturbances of heart rhythm. May cause skin irritation. Causes eye irritation. Causes respiratory tract irritation. Harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage POSSIBLE CANCER HAZARD. May cause cancer based on animal data.

ROUTES OF ENTRY:……: Inhalation, skin contact from liquid and aerosols (spray application).

POTENTIAL HEALTH EFFECTS:

EYES:
ACUTE EYE CONTACT…Liquid, aerosols 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.
May be absorbed through the skin and cause adverse health effects as described in the INHALATION section.

INGESTION: Single dose ingestion low to moderately toxic. 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. Ingestion may cause adverse health effects as described in the INHALATION section.

INHALATION: Inhalation is the major potential route of exposure. 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.

INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY
Consumption of alcoholic beverages may increase potential for development of toxic effects resulting from exposure to this product.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
The following diseases or disorders may be aggravated by exposure to this product: skin, eye, liver, kidney, nervous system, respiratory system, lung (asthma-like conditions)

CARCINOGENICITY

OSHA:	ACGIH:	NTP:	IARC:
Not Listed	Not Listed	Not Listed	Not Listed

OTHER:

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

The International Agency for Research on Cancer (IARC) has concluded that, with respect to METHYLENE CHLORIDE, there is

sufficient evidence of the carcinogenicity to experimental animals and inadequate evidence for carcinogenicity to humans, resulting in a classification as a 2B animal carcinogen. The NTP has identified methylene chloride as an animal carcinogen. The ACHIH classifies methylene chloride as an A3 – Animal Carcinogen

Epidemiology studies of 751 humans chronically exposed to methylene chloride in the workplace of which 252 were exposed for a minimum of 20 years did not demonstrate any increase in deaths caused by cancer or cardiac problems. A second study of 2,227 workers confirmed these results.

SECTION 4: FIRST AID MEASURES

EYES: Flush with copious amounts of water (warm if possible) for at least 15 minutes, holding eyelids open at all times. Refer to a physician or ophthalmologist for immediate follow-up.

SKIN: Remove all contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly with soap and water before reuse. See physician if irritation develops or persists after washing.

INGESTION: DO NOT INDUCE VOMITING. Do not give liquids. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

INHALATION: Move to an area free from further exposure. If not breathing administer artificial respiration as needed. If breathing is difficult give oxygen and monitor. Seek immediate medical attention. Asthmatic – type symptoms may develop and may be immediate or delayed for several hours. Consult a physician should this occur.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Chlorinated hydrocarbons (Methylene Chloride) may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: NE (blend)
(% BY VOLUME) LOWER: NE (blend)

FLASH POINT:
F: 60.8 (MIBK)
C: 16.0 (MIBK)
METHOD USED:
TCC
AUTOIGNITION TEMPERATURE:
F:
C: NE (blend)

NFPA HAZARD CLASSIFICATION
HEALTH: FLAMMABILITY: REACTIVITY:
OTHER:

HMIS HAZARD CLASSIFICATION
HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 1
PROTECTION: X

EXTINGUISHING MEDIA: Dry chemical, Foam, Carbon dioxide or Water spray

SPECIAL FIRE FIGHTING PROCEDURES: Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by firefighters. Explosive rupture is possible. Therefore use cold water spray to cool storage containers

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may cause a flash fire or ignite explosively. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Vapors may travel considerable distance to a source of ignition and flash back. Prevent build up of vapors or gasses to explosive concentrations.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide, Hydrogen chloride , Phosgene and Chlorine.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Evacuate and ventilate the spill area; dike spill to prevent entry into water system; wear full protective equipment. Prevent ignition, remove all ignition sources, stop leak and ventilate the area. Contain spilled liquid with sand or earth DO NOT use combustible materials such as saw dust. Vapor can be controlled using a water fog. Water sprays should not be directed to the liquid as this will cause the liquid to boil and generate more vapor. Keep personnel upwind from leak. Use appropriate protection equipment as stated in section 8 of this MSDS. Advise EPA and appropriate state agencies if required. Absorb spill wit inert material (dry sand or earth) and place in a chemical waste container for disposal.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Use only in a well ventilated area. Ground and bond containers when transferring material. Avoid breathing (dust, vapor, mist gas). Avoid prolonged or repeated contact with skin. Avoid contact with eyes, wash thoroughly after handling. Never siphon by mouth. Avoid breathing aerosol or vapors.

Store in tightly closed containers. Store away from heat, sparks, and flame. Store in a cool dry place Do not reseal if contamination is suspected.

OTHER PRECAUTIONS:

SHELF LIFE……. Indefinite in tightly closed full containers @ 77° F (25° C)

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION : Use with adequate ventilation. local exhaust may be necessary to control any contaminants to within their TLV's during the use of this product. Use explosion proof ventilation equipment. Standard reference sources regarding industrial ventilation (ie.,ACGIH Indusrtial Ventilation) should be consulted for guidance about adequate ventilation.

RESPIRATORY PROTECTION: Concentrations greater than the TLV can occur when used in a poorly ventilated area. In such cases or whenever concentrations exceed the TLV or are not known respiratory protection must be worn. A supplied air respirator (either positive pressure or continuous flow type) is required. In an emergency situation, a self- contained breathing apparatus can be used.

EYE PROTECTION: Liquid chemical goggles. If contact lenses are worn vapor resistant goggles should be worn. If a splash hazard exists chemical goggles should used in conjunction with a full face shield.

SKIN PROTECTION: Chemical/solvent resistant gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Where splashing is possible full chemical protective clothing should be worn.

WORK HYGIENIC PRACTICES: Safety showers and eyewash stations should be available. Wash promptly after working with this product. Remove and wash or dispose of all contaminated clothing and or equipment. Follow all label directions and precautions.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear Liquid

ODOR: Sweet

PHYSICAL STATE: Liquid

pH AS SUPPLIED: NA
pH (Other): NA
BOILING POINT:
F: NE (blend0
C:
MELTING POINT:
F: NE (blend)
C:
FREEZING POINT:
F: NE (blend)
C:
VAPOR PRESSURE (mmHg): NE
@
F:
C:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (cont.)

VAPOR DENSITY (AIR = 1): NE
@
F:
C:
SPECIFIC GRAVITY (H2O = 1):
@ 1.0432
F: 77
C:
EVAPORATION RATE: NE (blend)

BASIS (=1):

SOLUBILITY IN WATER: Insoluble

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABLE **UNSTABLE**

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): STABLE

INCOMPATIBILITY (MATERIAL TO AVOID): Amines, strong oxidizing agents, alcohols, bases, halogenated materials and reactive metals.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen, Hydrogen chloride, Phosgene and Chlorine.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with open flame, electric arcs or other hot surfaces which can cause combustion or thermal decomposition.

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Not established blended product.

COMPONENT TOXIOLOGICAL INFORMATION:

Methyl Ethyl Isobutyl Ketone;
Based on animal data and structure-activity relationships MIBK is not expected to cause nervous system damage.

Toxicity Data

Oral LD-50(rat)	**1,600 – 3,200 mg/kg**
Oral LD-50 Mouse	**2,850 mg/kg**
Inhalation LC-50	**> 10mg/kg**
Skin Irritation (rabbit)	**slight to moderate**
Skin irritation (guinea pig)	**slight**
Eye irritation (rabbit)	**slight to moderate**

Methylene Chloride;

ACUTE TOXICITY

INHALATION

Methylene Chloride depresses the central nervous system. Concentrations between 900- 1,000 ppm may cause dizziness. Nausea, headache and vomiting can occur at concentrations above 2,00 ppm. At 7,000 ppm, numbness and tingling in arms and legs and rapid heartbeat have occurred. Loss of consciousness and death has occurred at levels above 9,000 ppm, if exposure is prolonged.

SECTION 11: TOXICOLOGICAL INFORMATION-(continued)

Carboxyhemoglobin levels can be elevated in persons exposed to Methylene chloride and can cause a substantial stress on the cardiovascular system. This elevation can be additive to the increase caused by smoking and other carbon monoxide sources.

ANIMAL TOXICITY

Inhalation LC-50	**14,4000 ppm – 7 hours (mouse)**
Dermal LD-50	**Not Determined**
Oral LD-50	**1600 mg/kg (rats)**

CHRONIC TOXICITY

Adverse effects on the liver and kidneys have been reported in laboratory animal studies. The finding of chronic toxic effects in laboratory animals may indicate toxicity to humans. Overexposure should be avoided, failure to do so could result in injury, illness or even death, depending on the level and duration of exposure.

CARCINOGENICITY

Methylene chloride has been evaluated for possible cancer causing effects in laboratory animals. Inhalation studies at concentrations of 2,000 and 4,000 ppm increase the incidence of malignant liver and lung tumors in mice. Three inhalation studies of rats have shown increased incidence of benign mammary gland tumors in female rats at concentrations of 500 ppm and above, and increases in benign mammary gland tumors in males at concentrations of 1,500 ppm and above, rats exposed to 50 and 200 ppm via inhalation showed no increased incidence of tumors. Mice and rats exposed by ingestion at levels up to 250 mg/kg/day lifetime and hamsters exposed via inhalation to concentrations up to 3,500 ppm lifetime did not show an increased incidence of tumors.

The International Agency for Research on Cancer (IARC) has concluded that, with respect to methylene chloride, there is sufficient evidence of the carcinogenicity to experimental animals and inadequate evidence for carcinogenicity to humans, resulting in a classification as a 2B animal carcinogen. The NTP has identified methylene chloride as an animal carcinogen. ACGIH classifies methylene chloride as an A3 – Animal carcinogen.

Epidemiology studies of 751 humans chronically exposed to methylene chloride in the workplace of which 252 were exposed for a minimum of 20 years did not demonstrate any increase in deaths caused by cancer or cardiac problems. A second study of 2,227 workers confirmed these results.

MUTAGENICITY

Methylene chloride has been evaluated for it's potential to induce genotoxic effects in both *in vivo* and *in vitro* systems, with mixed results. Based on this evidence, methylene chloride may be considered to be a weak mutagen in mammalian systems.

REPRODUCTIVE TOXICITY

Laboratory animal studies on mice, rats and rabbits have been conducted to evaluate the potential reproductive and developmental effects of methylene chloride exposures. Methylene chloride exposure has not been shown to cause teratogenic effects(birth defects) in experimental animals.

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Data Available

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Empty containers must be handled with care due to product residue. Empty containers should be crushed in order to prevent reuse.

RCRA HAZARD CLASS:

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME: PAINT
HAZARD CLASS: 3
ID NUMBER: UN 1263
PACKING GROUP: II
LABEL STATEMENT: Flammable Liquid

WATER TRANSPORTATION
PROPER SHIPPING NAME: PAINT
HAZARD CLASS: 3
ID NUMBER: UN 1263
PACKING GROUP: III
LABEL STATEMENTS: Flammable Liquid

AIR TRANSPORTATION
PROPER SHIPPING NAME: PAINT
HAZARD CLASS: 3
ID NUMBER: UN 1263
PACKING GROUP: II
LABEL STATEMENTS: Flammable Liquid

OTHER AGENCIES:

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
TSCA (TOXIC SUBSTANCE CONTROL ACT): Not Listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not Listed

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not Listed

311/312 HAZARD CATEGORIES: FLAMMABLE LIQUID

313 REPORTABLE INGREDIENTS: **METHYLENE CHLORIDE**
XYLENE
METHYL ISOBUTYL KETONE

STATE REGULATIONS:

INTERNATIONAL REGULATIONS:

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

ABREVIATIONS: **ACGIH = American Conference of Governmental Industrial Hygienists**
OSHA = Occupational Safety and Health Administration
TLV = Threshold Limit Value
TWA = Time Weighted Average
PEL = Permissible Exposure Limit
STEL = Short Term Exposure Limit
NA = Not Applicable

PREPARATION INFORMATION: **HMIS Hazard Ratings Scale 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Extreme**

Check with supervisor for appropriate personal protection in accordance with rating.

DISCLAIMER:

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.