



MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION		
PRODUCT NAME: Zippo Blend C DATE: February 17, 2010		
TRADE NAME: Zippo Blend C GENERAL USE: Lighter Fluid CHEMICAL FAMILY: Hydrotreated Petroleum Distillates PRODUCT DESCRIPTION: Clear Water White, Light Hydrocarbon Liquid With a Solvent Petroleum Naphtha Odor.		
MANUFACTURED FOR: Zippo Manufacturing Company	DATE PREPARED: February 17, 2010 SUPERSEDES: February 19, 2009	
ADDRESS (NUMBER, STREET, P.O. BOX) 33 Barbour Street	TELEPHONE NUMBER FOR INFORMATION / Customer Service 814-368-2700	
(CITY, STATE AND ZIP CODE) Bradford, PA 16701	COUNTRY USA	CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER  1-800-255-3924 01-813-248-0585 North America Toll Free International
SECTION 2 - HAZARDOUS INGREDIENTS		
Hazardous Components	% (by Weight)	CAS #
Light Hydrotreated Distillate	70	68410-97-9
Hydrotreated Light Naphtha	30	64742-49-0
Notes: This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard. Benzene content is not detectable, below 0. 1% by weight.		
SECTION 3 - HAZARDS IDENTIFICATION		
EMERGENCY OVERVIEW * WARNING: Flammable Liquid and Vapor. The Flash Point is <100 degrees F. * When burned the product produces carbon monoxide and other asphyxiants during combustion. * Harmful if inhaled and may cause delayed lung injury. * Aspiration hazard if swallowed - can enter lungs and cause damage. * Keep away from heat, sparks, and flame. * Avoid breathing vapor. Use ventilation to keep vapor below exposure limits. * Unprotected exposure to this product will cause skin dryness. * Remove product soaked clothing and wash with mild soap. * This product is not listed on the NTP, IARC, OSHA, or ACGIH lists of suspected/confirmed carcinogens. * This product's components are listed as having category 2 carcinogenic potential by ESIS, the European Chemicals Hazards Database. * This product may be toxic to fish, birds and wildlife. * This product is readily biodegradable in the presence of air and sunlight. * Spilled material is slippery and may cause falls.		
POTENTIAL HEALTH EFFECTS INHALATION: Tests on similar material indicate the possibility of the following symptoms: headache, nasal and respiratory irritation, nausea, drowsiness, breathlessness, fatigue, central nervous system depression, convulsions, and loss of consciousness.		
SKIN: Tests on similar materials indicate acute irritation is expected to occur upon short-term exposure, chronic dermatitis on prolonged contact.		
EYES: Tests on similar materials suggest acute irritation be expected.		
INGESTION: ACUTE ASPIRATION HAZARD. Tests on similar materials indicate possibility of the following symptoms: headache, nausea, drowsiness, fatigue, pneumonitis, pulmonary edema, central nervous system depression, convulsions, and loss of consciousness.		
CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO CALIFORNIA, Prop.65? NO		

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SECTION 4 - FIRST AID MEASURES

INHALATION:

Remove patient to fresh air and consult a physician. If breathing is difficult give oxygen. If not breathing give artificial respiration.

EYES:

Flush eyes immediately with water for at least 15 minutes or until irritation subsides, occasionally lifting lower and upper lids. Get medical attention promptly.

SKIN:

Wash thoroughly with soap and water. Immediately remove contaminated clothing and wash before reuse. If irritation or rash develops, obtain medical assistance. Immediately remove soaked clothing.

INGESTION:

CALL PHYSICIAN IMMEDIATELY. Do not induce vomiting except at the instruction of a physician. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:

FLASH POINT: <73°F(<23°C) Tag Closed Cup. FLAMMABILITY CLASS: IB,LOWER EXPLOSIVE LIMIT (%): 0.85, UPPER EXPLOSIVE LIMIT (%): 7.8

EXTINGUISHING MEDIA:

Dry Chemical, carbon dioxide, and foam. NOTE: Water, fog and foam may cause frothing and spattering. Water stream may spread fire.

FIRE FIGHTING PROCEDURES:

Use water to cool containers exposed to flames. Do not enter enclosed or a confined work space without proper protective equipment. Fire fighting personnel should wear respiratory protection(positive pressure if available). If leak or spill has not ignited, use water spray to disperse the vapors.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Can form flammable mixtures with air and flash at room temperature or upon slight heat application. Vapors are heavier than air and may travel considerable distance. Explosion hazard in confined spaces if exposed to ignition source. Mists or sprays may be flammable below oil's normal flash point. Keep away from heat or open flame.

HAZARDOUS COMBUSTION PRODUCTS:

Fumes, smoke and carbon monoxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Evacuate area and shut off ignition source. Contain spill and keep from entering waterways or sewers. Use personal protective equipment. Advise EPA; state agency if required. Trained personnel should absorb with inert material. Use safe, non-sparking equipment to remove waste and prepare for disposal.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Keep product away from high energy ignition sources, heat, sparks, pilot lights, static electricity and open flames. Avoid contact with skin. Avoid inhalation of vapors or mists. Use in well ventilated area away from all ignition sources. See Section 8 for additional personal protection advice when handling this product.

STORAGE: Store in a cool area. Store as OSHA Class 1B flammable liquid.

SPECIAL PRECAUTIONS:To prevent and minimize fire or explosion risk from static accumulation and discharge, effectively bond and/or ground product transfer system. Electrical equipment and fittings must comply with local fire prevention regulations for this class of product. Use the correct grounding procedures. Refer to national or local regulations covering safety of petroleum handling and storage areas for this product.

EMPTY CONTAINER WARNING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

WORK/HYGIENIC PRACTICES: Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS	NIOSH				ACGIH		OSHA	
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TLV/TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
Light Hydrotreated Distillate	NE				NE		NE	
Hydrotreated Light Naphtha	NE				NE		NE	

This product contains:
 Pentane, CAS# 109-66-0, NIOSH TWA 120ppm, ACGIH TWA 600ppm.
 Heptane, CAS# 142-82-5, OSHA TWA: 500ppm, ACGIH TWA 400ppm.
 Octane, CAS# 111-65-9, OSHA TWA: 500ppm, ACGIH TWA 375ppm.
 Nonane, CAS# 111-84-2, ACGIH-200ppm

PERSONAL PROTECTION

RESPIRATORY PROTECTION:
 Up to 1000 ppm, half mask organic vapor respirator approved by NIOSH or European Standard EN-149. Up to 5000 ppm, full face organic vapor respirator or full face supplied air respirator. Greater than 5000 ppm, fire fighting, or unknown concentration, self contained breathing apparatus with positive pressure should be used. Respirator protection programs must additionally be in compliance with published standards in 29 CFR 1910.134.

PROTECTIVE GLOVES:
 Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious gloves and clothing. Acceptable materials for gloves are neoprene, nitrile, or viton.

EYE PROTECTION:
 Safety glasses, splash goggles, or face shield as appropriate. Have suitable eye wash water available.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
 If there is a likelihood of splashing, oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard). Maintain local or dilution ventilation to keep air concentration below 100ppm. Loading, unloading, tank gauging, etc., remain upwind. Request assistance of safety and industrial hygiene personnel to determine air concentrations.

WORK / HYGIENIC PRACTICES:
 Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Clear Water White, Light Hydrocarbon Liquid With a Solvent Petroleum Naphtha Odor.	VAPOR PRESSURE 6.9 psi
pH NA	SPECIFIC GRAVITY (WATER = 1 @ 60°F {15°C}). 0.706
BOILING POINT / BOILING RANGE IBP>90°F IBP>32°C	SOLUBILITY IN WATER Negligible in water.
FLASH POINT <73°F (<23°C) Tag Closed Cup	VISCOSITY Negligible in water.
FLAMMABLE LIMITS LEL: 0.85% UEL: 7.80%	VAPOR DENSITY (AIR = 1) NE
AUTOIGNITION TEMPERATURE NE	EVAPORATION RATE (WATER = 1) >1

SECTION 10 - STABILITY AND REACTIVITY

STABILITY	STABLE X	CONDITIONS TO AVOID: Sources of ignition , Oxidizers.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers.		
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Smoke, hydrocarbons fumes, carbon monoxide.		
HAZARDOUS POLYMERIZATION: Will not occur.	CONDITIONS TO AVOID: None related to polymerization.	

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SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Light Hydrotreated Distillate	68410-97-9 270-093-2	NE	NE
Hydrotreated Light Naphtha	64742-49-0 265-151-9	Oral, rat: LD50 = 25 gm/kg	Inhalation, rat: LC50 = 48000 ppm/4H;

SECTION 12 - ECOLOGICAL INFORMATION

If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Product as supplied does not meet the characteristics of a hazardous waste as defined in 40CFR 261.21-24. If mixed with other products, waste mixture must be characterized. DO NOT dispose of this product in drains or storm sewers. DO NOT dispose of this product in a landfill without prior solidification. Waste product should be recycled. Consider waste brokering.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Petroleum Distillates, n.o.s., Class 3, UN 1268, PG II	
DOT HAZARD CLASS / Pack Group: Class 3, PG II	IATA HAZARD CLASS / Pack Group: Petroleum Distillates, n.o.s., Class 3, Flammable Liquid UN 1268, PG II
REFERENCE: 49CFR	IMDG HAZARD CLASS: Petroleum Distillates, n.o.s., Class 3, UN 1268, PG II
UN / NA IDENTIFICATION NUMBER: UN 1268	RID/ADR Dangerous Goods Code: NA-Blend.
LABEL: Flammable Liquid	UN TDG Class / Pack Group: UN1268,3, PG II
HAZARD SYMBOLS:	Hazard Identification Number (HIN): 30



Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act):	Ingredients are listed.
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):	
Acute Health:	Yes
Chronic Health:	No
Fire:	Yes
Sudden Release of Pressure:	No
Reactive:	No
313 REPORTABLE INGREDIENTS:	None reportable
CERCLA (USA - Comprehensive Response Compensation and Liability Act):	No RQ's applicable.
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:	None Listed
CPR (Canadian Controlled Products Regulations):	Listed
IDL (Canadian Ingredient Disclosure List):	Listed
DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List):	Listed on DSL
EINECS (European Inventory of Existing Commercial Chemical Substances):	Ingredients Referenced.
WGK Water Quality Index:	1

SECTION 16 - OTHER INFORMATION

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PRODUCT NAME: Zippo Blend C			
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Legend: NA= Not applicable, NE= Not established			
HMIS HAZARD RATINGS	HEALTH: FLAMMABILITY: PHYSICAL HAZARD: PERSONAL PROTECTIVE EQUIPMENT:	1 3 0 C	0 = INSIGNIFICANT 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME
REVISION SUMMARY:			
MSDS Prepared by: Zippo Manufacturing Company 33 Barbour Street Bradford, PA USA 16701 1-814-368-2700 Website: www.zippo.com			
The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.			