



# Safety Data Sheet

First Zinc FZ-200

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

- 1.1 Product Identifier**  
**Trade Name** First Zinc  
**Product Number** FZ-200
- 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**  
**Product Use:** Welding Process Aid
- 1.3 Details of the Supplier of the Safety Data Sheet**  
**Manufacturer:** Weld-Aid Products  
 14650 Dequindre  
 Detroit , Michigan  
**Information Phone Number:** +1 (313) 883-6977  
 +1 (313) 883-4930  
**E-mail** info@weldaid.com
- 1.4 Emergency Telephone Number**  
**Emergency Spill Information** +1 (800) 255-3924

SDS Date of Preparation: December 30, 2011

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

#### CLP/GHS Classification (1272/2008):

Physical:	Health:	Environmental
Flammable Liquid Category 2	Aspiration Toxicity Category 1 Skin Irritation Category 2 Carcinogen Category 2	Aquatic Acute Category 1 Aquatic Chronic Category 1

**EU Classification (67/548/EEC):** Highly Flammable (F), Harmful (Xn), Irritant (Xi), Dangerous for the Environment (N) R11, R20/21, R38, R50/53

### 2.2 Label Elements

DANGER! Contains ethylbenzene



#### Hazard Phrases

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H351	Very toxic to aquatic life with long lasting effects.

#### Precautionary Phrases

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.

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P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P370 + P378	In case of fire: Use carbon dioxide, alcohol foam or dry chemical for extinction.
P391	Collect spillage.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local and national regulations.

**2.3 Other Hazards:** None

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances:

Chemical Name	CAS# /	EINECS#	EU Classification (67/548/EEC)	GHS Classification Regulation (EC) No 1272/2008	%
Zinc	7440-66-6	231-175-3	N R50/53	Aquatic Acute Category 1 (H400) Aquatic Chronic Category 1 (H410)	30-40
Xylene	1330-20-7	215-535-7	Xn, Xi R10, R20/21, R38	Flammable Liquid Category 3 (H226), Skin Irritation Category 2 (H315), Acute Toxicity Category 4 (H332), Acute Toxicity Category 4 (H312)	30-40
Ethylbenzene	100-41-4	202-849-4	F, Xn, R11, R20	Flammable Liquid Category 2 (H225) Acute Toxicity Category 4 (H332) Carcinogen Category 2 (H351) Aspiration Hazard Category 1 (H304)	<5
Aliphatic Petroleum Distillates	64742-89-8	265-192-2	F, Xn R11, R65	Aspiration Toxicity Category 1 (H304) Flammable Liquid 3 (H226)	<5
Stoddard Solvent	8052-41-3	232-489-3	Xn R10, R65	Aspiration Toxicity Category 1 (H304) Flammable Liquid 3 (H226)	<5
VM&P Naphtha	64742-95-6	265-199-0	Xn R10, R65	Flammable Liquid 3 (H226)	<5

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				Aspiration Toxicity Category 1 (H304)	
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See Section 16 for further information on EU and GHS Classification.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid Measures

**Eyes:** Flush eyes immediately with water for at least 15 minutes, holding the eyelids apart. If irritation persists, call a physician.

**Skin:** Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if irritation persists.

**Inhalation:** Remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get immediate medical attention.

**Ingestion:** Rinse mouth with a small amount of water. Aspiration hazard – DO NOT Induce Vomiting. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

**Notes to Physicians:** Treat symptomatically.

**4.2 Most Important symptoms and effects, both acute and delayed:** May causes eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects such as headache, dizziness, drowsiness, nausea and unconsciousness. Harmful or fatal if swallowed. Overexposure may cause liver, kidney, blood system and nervous system damage.

**4.3 Indication of any immediate medical attention and special treatment needed:** Immediate medical treatment is required ingestion

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 Extinguishing Media:

Use carbon dioxide, alcohol foam or dry chemical. Do not use water to extinguish fire. Water spray can be used to cool exposed containers and structures.

### 5.2 Special Hazards Arising from the Substance or Mixture

**Unusual Fire and Explosion Hazards:** Flammable liquid and vapor. Vapors are heavier than air and may and accumulate in low lying area.

**Hazardous Decomposition Products:** Combustion may produce carbon monoxide, carbon dioxide and zinc oxide.

### 5.3 Advice for Fire-Fighters:

Firefighters should always wear self-contained breathing apparatus and full protective clothing for fires involving chemicals or in confined spaces.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Evacuate spill area and keep unprotected personnel away. Eliminate all ignition sources. Ventilate area. Wear appropriate protective clothing as described in Section 8.

### 6.2 Environmental Precautions:

Avoid contamination of soil, surface water and ground water. Do not flush to sewer! Report releases as required by local, state and federal authorities.

### 6.3 Methods and Material for Containment and Cleaning Up:

Contain and collect using an absorbent material and place in an appropriate container for disposal.

### 6.4 Reference to Other Sections:

Refer to Section 8 for protective equipment and Section 15 for disposal considerations.

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## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling:

Avoid contact with the eyes, skin and clothing. Avoid breathing vapors. Do not swallow. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Do not use in poorly ventilated or confined spaces. Vapors are heavier than air and will collect in low areas. Wash thoroughly with soap and water after handling and before eating, drinking or using restroom. Do not eat, drink or smoke in work areas.

Do not cut, drill, grind or weld on or near containers, even empty containers. Follow all MSDS precautions when handling empty containers.

### 7.2 Conditions for Safe Storage, Including any Incompatibilities

Store in a cool, dry, well ventilated area away oxidizing agents and other incompatible materials. Keep containers tightly closed when not in use. Keep away from heat, sparks and flames.

### 7.3 Specific end use(s):

Welding product

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters:

Chemical Name	Exposure Limits
Zinc (as metal)	0.1 mg/m <sup>3</sup> TWA DFG MAK; 0.4 mg/m <sup>3</sup> STEL (respirable) 2 mg/m <sup>3</sup> TWA DFG MAK
Xylene	100 ppm TWA ACGIH TLV; 150 ppm STEL 100 ppm OSHA PEL 50 ppm TWA EU IOEL; 100 ppm STEL 100 ppm TWA DFG MAK; 200 ppm STEL 50 ppm TWA UK OEL; 100 ppm STEL
Ethylbenzene	20 ppm TWA ACGIH TLV; 125 ppm STEL 100 ppm OSHA PEL 100 ppm TWA EU IOEL; 200 ppm STEL 20 ppm TWA DFG MAK; 40 ppm STEL 100 ppm TWA UK OEL; 125 ppm STEL
Aliphatic Petroleum Distillates	5 mg/m <sup>3</sup> TWA ACGIH TLV (inhalable) (as mineral oil) 5 mg/m <sup>3</sup> TWA OSHA PEL (as oil mist) 10 mg/m <sup>3</sup> STEL UK OEL
Stoddard Solvent	100 ppm TWA ACGIH TLV 500 ppm TWA OSHA PEL
VM&P Naphtha	5 mg/m <sup>3</sup> TWA ACGIH TLV (inhalable) (as mineral oil) 5 mg/m <sup>3</sup> TWA OSHA PEL (as oil mist) 10 mg/m <sup>3</sup> STEL UK OEL

### 8.2 Exposure Controls:

**Engineering Controls:** Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required.

**Respiratory Protection:** If the exposure limits are exceeded an approved organic vapor respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

**Skin Protection:** Wear impervious gloves such as viton or Teflon.

**Eye Protection:** Chemical safety goggles should be worn to where splashing is possible.

**Other:** Impervious clothing as needed to prevent contact. A safety shower and eye wash should be available in the immediate work area.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic Physical and Chemical Properties:

<b>Appearance</b> Silver liquid	<b>Vapor Density:</b> >1
<b>Odor:</b> Sweet	<b>Specific Gravity:</b> 1.42
<b>Odor Threshold:</b> 0.85 ppm (xylene)	<b>Water Solubility:</b> Not available
<b>pH:</b> Not available	<b>Octanol/Water Partition Coefficient:</b> Not available
<b>Melting Point/Freezing Point:</b> Not available	<b>Autoignition Temperature:</b> Not applicable
<b>Boiling Point:</b> 210°F (98.9°C)	<b>Decomposition Temperature:</b> Not applicable
<b>Flash Point:</b> 45°F (7.2°C)	<b>Viscosity:</b> Not applicable
<b>Evaporation Rate:</b> >1 (butyl acetate = 1)	<b>Explosion Properties:</b> Vapors may be explosive in confined areas.
<b>Flammable Limits:</b> LEL: 0.9% (ethylbenzene ) UEL: 8.0 VM&P Naphtha	<b>Oxidizing Properties:</b> No data available
<b>Vapor Pressure:</b> Not available	

### 9.2 Other Information:

None

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity:

Not reactive under normal conditions of use.

### 10.2 Chemical Stability:

Stable under normal storage and handling conditions.

### 10.3 Possibility of Hazardous Reactions:

None known

### 10.4 Conditions to Avoid:

Keep away from heat, sparks and open flames.

### 10.5 Incompatible Materials:

Avoid alkalies, acids and oxidizing agents.

### 10.6 Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide and zinc oxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects:

May cause irritation with redness, tearing and swelling.

**Skin:** Causes irritation. Repeated exposure may cause dermatitis. May be harmful if absorbed through the skin with symptoms similar to inhalation.

**Ingestion:** Swallowing may cause gastrointestinal effects, and central nervous system effects including nausea, vomiting, diarrhea, dizziness, drowsiness, and unconsciousness. Aspiration during swallowing or vomiting may cause chemical pneumonia or lung damage.

**Inhalation:** May cause respiratory tract irritation and central nervous system effects such as dizziness, drowsiness, nausea, headache lightheadedness, stupor, and unconsciousness.

### Acute Toxicity Values:

Zinc: Oral rat LD50 630 mg/kg

Xylene: LD50 Oral Rat 3523 mg/kg; LD50 Skin Rabbit 4400 mg/kg; LC50 Inhalation Rat 27.6 -47.7 mg/L/4 hr

Ethylbenzene: Oral rat LD50 3500 mg/kg; Inhalation rat LC50 17.4 mg/L; Skin rabbit LD50 15.4 g/kg

VM&P Naphtha: Oral rat LD50 >8000 mg/kg, Inhalation rat LC50 3400 ppm/4 hr; Skin rat LC50 >4,000 mg/kg

VM&P Naphtha: Oral rat LD50 >3000 mg/kg Skin rabbit LD50 3160 mg/kg

Stoddard Solvent: Oral rat LD50 >5000 mg/kg, Skin rabbit LD50 >2000 mg/kg

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**Irritation:** This product is expected to cause eye and skin irritation. Prolonged skin contact with petroleum solvent may cause defatting of the skin and dermatitis.

**Corrosivity:** This is not a corrosive product.

**Sensitization:** This product is not expected to cause sensitization.

**Repeat Dose Toxicity:** In repeated dose studies, the principle effects of xylenes were adaptive changes in the liver, body weight changes, organ weight changes and altered motor coordination. Available case reports, occupational studies, and studies on human volunteers suggest that both short- and long-term exposures result in a variety of adverse nervous system effects that include headache, mental confusion, narcosis, equilibrium, impaired short-term memory, dizziness and tremors. Reports have associated repeated and prolonged overexposure to petroleum distillates with adverse liver, kidney and bone marrow effects and with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the product may be harmful or fatal. Stoddard solvent and VM&P Naphtha have been shown to cause kidney and liver damage in repeat dose animal studies.

**Carcinogen Status:** Ethylbenzene is listed by IARC as "Possibly Carcinogenic to Humans (Group 2B) and as a "Confirmed Animal Carcinogen with Unknown Relevance to Humans (A3) by ACGIH. NTP conducted a two year carcinogenicity study with Stoddard solvent in rats and mice. The studies indicated there was some evidence of carcinogenic activity in male rats but none in female rats. In mice there is equivocal evidence in female mice for carcinogenic activity but no evidence in male mice. IARC has classified petroleum solvents "not classifiable as to their carcinogenicity to humans.

**Germ Cell Mutagenicity:** Ethylbenzene was negative in the AMES test, chromosome aberration assay, sister chromatid exchange and in vivo micronucleus assay. It was positive in a mouse lymphoma assay. Available data from both in vitro and in vivo studies suggest that xylenes are not genotoxic. Stoddard solvent was negative in the AMES test, n a mouse lymphoma assay and in an in vivo bone marrow assay.

**Toxicity for Reproduction:** Ethylbenzene: In a developmental study, rats were exposed to 100 to 1000 ppm for 1-19 days after gestation. At 1000 ppm maternal toxicity and limited developmental toxicity was observed. NOEL (maternal and developmental) was considered to be 100 ppm. Xylene: Inhalation exposure of rats from gestation day 6-20 for 6h/day produced maternal toxicity at 100 ppm and fetal toxicity effects at 500 ppm. NOEL for maternal toxicity was considered to be 500 ppm and developmental toxicity was 100 ppm.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity:

Xylene: 96 hr EC50 rainbow trout 12.4 mg/L; 24 hr LC50; daphnia magna 150 mg/L.  
Ethylbenzene: LC50 Pimephales promelas (fathead minnow) 42.3 mg/L/ 96 hr  
VM&P Naphtha: 96 hr Oncorhynchus mykiss 9.22 mg/L, 48 hr daphnia magna 6.14 mg/L  
Stoddard Solvent: 72 hr EC50 Selenastrum capricornutum (algae) 4700 mg/L

### 12.2 Persistence and Degradability:

Xylene, ethylbenzene, stoddard solvent, VM&P naphtha and VM&P Naphtha are readily biodegradable.

### 12.3 Bioaccumulative Potential:

Ethylbenzene has a BCF of 15 and xylene has a BCF of 6 to 24.6 which suggests the potential for bioaccumulation in aquatic animals is low for these chemicals. Stoddard solvent, Aliphatic Petroleum Distillates and VM&P naphtha have a calculated BFC of >3 which indicates there is a potential for bioaccumulation.

### 12.4 Mobility in Soil:

Xylene is expected to have a high to moderate mobility in soil. Ethylbenzene is expected to have a low mobility in soil.

### 12.5 Results of PBT and vPvB Assessment:

Not required.

### 12.6 Other Adverse Effects:

This product is classified as very toxic to aquatic organisms based on zinc content.

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## SECTION 13: DISPOSAL INFORMATION

### 13.1 Waste Treatment Methods

Dispose in accordance with local and national environmental regulations.

## SECTION 14: TRANSPORT INFORMATION

	41.1 UN Number	41.2 UN Proper Shipping Name	14.3 Transport Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	UN1263	Paint Related Material	3	PGII	No
EU ADR/RID	UN1263	Paint Related Material	3	PGII	Yes
IMDG	UN1263	Paint Related Material	3	PGII	Yes

### 14.6 Special Precautions for User:

None

### 14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:

Not applicable

## SECTION 15: REGULATORY INFORMATION

### 15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

#### International Inventories:

**US EPA TSCA Inventory:** All of the components are listed on the TSCA inventory.

**Canadian Environmental Protection Act:** All of the ingredients are listed on the Canadian Domestic Substances List.

**European Union:** All of the components of this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS) inventory.

**Australia:** All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).

**China:** All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).

**Korea:** All of the components of this product are listed on the Korean Existing Chemical List (KECL).

**New Zealand:** All of the components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC).

**Philippines:** All of the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).

#### U.S. REGULATIONS

**OSHA Hazard Classification:** Carcinogen, Target organ effects, Irritant Flammable liquid

**CERCLA:** This product has a Reportable Quantity (RQ) of 307 lbs. based on the RQ for xylene of 100 lbs. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**EPA SARA 302:** This product does not contain chemicals regulated under SARA Section 302.

**EPA SARA 311 Hazard Classification:** Acute Health, Chronic Health, Fire Hazard

**EPA SARA 313:** This product contains the following chemicals that are regulated under SARA Title III, section 313:

Xylene	1330-20-7	32.6%
Ethylbenzene	100-41-1	4.3%
Zinc	7440-66-6	39.5%

**California Proposition 65:** This product contains the following chemicals which are known to the State of California to cause cancer, reproductive toxicity or birth defects: Ethylbenzene 4.3% (cancer)

#### INTERNATIONAL REGULATIONS

**WHMIS Classification:** Class B Division 2 (Flammable liquid), Class D Division 2 Subdivision A (Very toxic material causing other toxic effects)

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**15.2 Chemical Safety Assessment:**  
Not required

<b>SECTION 16: OTHER INFORMATION</b>
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**SDS Revision History:**

12/06/11: Converted US SDS to EU REACH SDS

**GHS Phrases for Reference (See Section 2 and 3):**

H225 Highly flammable liquid and vapor  
H226 Flammable liquid and vapor  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H312 Harmful in contact with skin.  
H332 Harmful if inhaled.  
H351 Suspected of causing cancer.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**EU Classes and Risk Phrases for Reference (See Sections 2 and 3):**

F Highly Flammable  
N Dangerous for the Environment  
Xi Irritant  
Xn Harmful  
R10 Flammable  
R11 Highly flammable  
R20 Harmful by inhalation.  
R20/21 Harmful by inhalation and in contact with skin.  
R38 Irritating to skin.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 Harmful: may cause lung damage if swallowed.

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