

# Safety Data Sheet



**CJ CHEMICALS**  
SETTING THE INDUSTRY STANDARD FOR CUSTOMER SERVICE

## SECTION 1: Identification of the substance/mixture and the company/undertaking

### 1.1 Production identifiers

Product name : ETHANOL SDA 408 190 PROOF  
Brand : CJ Chemicals LLC

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, synthesis of substances

### 1.3 Details of the supplier of the safety data sheet

Company : CJ Chemicals LLC  
3469 E Grand River Rd #112  
Howell, MI 48843  
United States

Telephone : +1 (888) 274-1044

### 1.4 Emergency Telephone

Emergency Phone # : 1-800-424-9300 CHEMTREC (USA)  
1-703-527-3887 CHEMTREC (international) 24 hours/day; 7 days/week

## SECTION 2. HAZARDS IDENTIFICATION

**DANGER!!**



### 2.1 HAZARD STATEMENTS: (CAT = Hazard Category)

(H200s) PHYSICAL: FLAMMABLE LIQUIDS:

H225 Highly flammable liquid and vapor.

(CAT:2) (H300s) HEALTH: ASPIRATION HAZARD:

H304 May be fatal if swallowed and enters airways. (CAT:1)

(H300s) HEALTH: SKIN CORROSION/IRRITATION:

H315 Causes skin irritation. (CAT:2)

(H300s) HEALTH: SERIOUS EYE DAMAGE/EYE IRRITATION:

H320 Causes eye irritation. (CAT:2)

(H300s) HEALTH: ACUTE TOXICITY, INHALATION:

H332 Harmful if inhaled. (CAT:4)

(H300s) HEALTH: TARGET ORGAN TOXICITY, SINGLE EXPOSURE:

H335 May cause respiratory irritation. (CAT:3)

(H300s) HEALTH: TARGET ORGAN TOXICITY, SINGLE EXPOSURE:

H336 May cause drowsiness or dizziness. (CAT:3)

(H400s) ENVIRONMENT: HAZARDOUS TO AQUATIC ENVIRONMENT, ACUTE:

H402 Harmful to aquatic life. (CAT:3)

### 2.2 PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

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.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash with soap & water thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+352 IF ON SKIN: Wash with soap & water.

P304+340 IF INHALED: Remove victim to fresh air & keep at rest in a position comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do - Continue rinsing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P332+313 If skin irritation occurs: Get medical advice/attention.

P337+313 If eye irritation persists, get medical advice/attention.

P361 Remove/Take off immediately all contaminated clothing.

P363 Wash contaminated clothing before reuse.

**SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.**

COMPANY IDENTITY: CJ Chemicals  
 PRODUCT IDENTITY: ETHANOL SDA 408 190 PROOF  
 SDS NUMBER: 40B-190

SDS DATE: 04/29/2016  
 REPLACES: 03/02/2016

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Ethanol	64-17-5	200-578-6	92.3
Water	7732-18-5	231-791-2	7.6
t- Butanol	75-65-0	200-889-7	0.1
Denatonium Benzoate	3734-33-6		0.001

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets. This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (1) (1).

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Material Identification System Standard (CPR 4).

### SECTION 4. FIRST AID MEASURES

- 4.1 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & CHRONIC:  
 See Section 11 for Symptoms/Effects (acute & chronic).
- 4.2 EYE CONTACT:  
 For eyes, flush with plenty of water for 15 minutes & get medical attention.
- 4.3 SKIN CONTACT:  
 In case of contact with skin immediately remove contaminated clothing.  
 Wash thoroughly with soap & water. Wash contaminated clothing before reuse.
- 4.4 INHALATION:  
 After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR).
- 4.5 SWALLOWING:  
 Rinse mouth. Give plenty of water to drink. Do not induce vomiting without medical advice. GET MEDICAL ATTENTION IMMEDIATELY. Do NOT give liquids to an unconscious or convulsing person.

### SECTION 5. FIRE FIGHTING MEASURES

- 5.1 FIRE & EXPLOSION PREVENTIVE MEASURES:  
 NO open flames, NO sparks, & NO smoking. NO contact with oxidants. Use a closed system, ventilation, explosion-proof electrical equipment, lighting. Do NOT use compressed air for filling, discharging, or handling.
- 5.2 SUITABLE (& UNSUITABLE) EXTINGUISHING MEDIA:  
 Use dry powder, alcohol-resistant foam, water in large amounts, carbon dioxide.
- 5.3 SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS FOR FIRE FIGHTERS:  
 Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots).
- 5.4 SPECIFIC HAZARDS OF CHEMICAL & HAZARDOUS COMBUSTION PRODUCTS:  
 HIGHLY FLAMMABLE!! VAPORS CAN CAUSE FLASH FIRE  
 Isolate from oxidizers, heat, sparks, electric equipment & open flame. Closed containers may explode if exposed to extreme heat. Applying to hot surfaces requires special precautions. Empty container very hazardous! Continue all label precautions!

COMPANY IDENTITY: CJ Chemicals  
 PRODUCT IDENTITY: ETHANOL SDA 408190 PROOF  
 SDS NUMBER: 40B-190

SDS DATE: 04/29/2016  
 REPLACES: 03/02/2016

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES:  
 Vapors may ignite explosively & spread long distances. Prevent vapor buildup.  
 Keep unprotected personnel away. Ventilate spill area. Remove all ignition sources.  
 Filter respirator for organic vapors.
- 6.2 ENVIRONMENTAL PRECAUTIONS:  
 Keep from entering storm sewers and ditches which lead to waterways.
- 6.3 METHODS & MATERIAL FOR CONTAINMENT & CLEAN-UP:  
 Stop spill at source. Dike and contain.  
 Absorb remaining liquid in sand or inert absorbent and dispose of as hazardous waste.

### SECTION 7. HANDLING AND STORAGE

- 7.1 PRECAUTIONS FOR SAFE HANDLING:  
 Isolate from oxidizers, heat, sparks, electric equipment & open flame. Use explosion-proof equipment. Use only with adequate ventilation. Avoid breathing of vapor or spray mist. Avoid contact with skin & eyes. Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.  
 Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, saw, drill, braze, or weld. Empty container very hazardous! Continue all label precautions!
- 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:  
 Keep in fireproof surroundings. Keep separated from strong oxidants.  
 Keep cool. Do not store above 49C/120 F. Keep container tightly closed & upright when not in use to prevent leakage.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 EXPOSURE LIMITS:

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Ethanol	64-17-5	200-578-6	1000 ppm	1000 ppm A4
Water	7732-18-5	231-791-2	None Known	None Known
t-Butanol	75-65-0	200-889-7	100 ppm	100 ppm
Denatonium Benzoate	3734-33-6		None Known	None Known

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

#### 8.2 APPROPRIATE ENGINEERING CONTROLS:

##### RESPIRATORY EXPOSURE CONTROLS

A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI 286.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

##### VENTILATION

LOCAL EXHAUST: Necessary                      MECHANICAL (GENERAL): Acceptable  
 SPECIAL: None                                      OTHER: None  
 Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

#### 8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

##### PERSONAL PROTECTIONS:

Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.

##### WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers.  
 Wash at end of each work shift & before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

COMPANY IDENTITY: CJ Chemicals  
 PRODUCT IDENTITY: ETHANOL SDA 40B 190 PROOF  
 SDS NUMBER: 40B-190

SDS DATE: 04/29/2016  
 REPLACES: 03/02/2016

### SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Water-White
ODOR:	Alcohol
ODOR THRESHOLD:	Not Available
pH (Neutrality):	Not Available
MELTING POINT/FREEZING POINT:	-114 C / -173 F
BOILING RANGE (IBP, 50%, Dry Point):	74 76 80 C / 165 170 176 F
FLASH POINT (TEST METHOD):	16 C / 62 F (CC)
EVAPORATION RATE (n-Butyl Acetate=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Class IB
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	4
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	20
VAPOR PRESSURE (mm of Hg) @20 C	40.2
VAPOR DENSITY (air=1):	1.4
GRAVITY @ 68/68 F I 20/20 C:	
DENSITY:	0.809
SPECIFIC GRAVITY (Water=1):	0.810
POUNDS/GALLON:	6.747
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	371 C / 700 F
DECOMPOSITION TEMPERATURE:	Not Available
REFRACTIVE INDEX:	1.362
VOCs (> 0.044 Lbs./Sq In):	95.1 Vol% / 756.2 g/L / 6.2 Lbs./Gal
TOTAL VOC'S (TVOC)*:	95.1 Vol% / 756.2 g/L / 6.2 Lbs./Gal
NONEXEMPT VOC'S (CVOC)*:	95.1 Vol% / 756.2 g/L / 6.2 Lbs./Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% / 0.0 g/L / 0.000 Lbs./Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.0
VISCOSITY @ 20 C (ASTM D445):	Not Available
Using CARS (California Air Resources Board Rules).	

### SECTION 10. STABILITY & REACTIVITY

- 10.1 REACTIVITY & CHEMICAL STABILITY:  
 Stable under normal conditions.
- 10.2 POSSIBILITY OF HAZARDOUS REACTIONS & CONDITIONS TO AVOID:  
 Isolate from oxidizers, heat, sparks, electric equipment & open flame.
- 10.3 INCOMPATIBLE MATERIALS:  
 Reacts with strong oxidants, causing fire & explosion hazard.
- 10.4 HAZARDOUS DECOMPOSITION PRODUCTS:  
 Carbon Monoxide, Carbon Dioxide from burning.
- 10.5 HAZARDOUS POLYMERIZATION:  
 Will not occur.

COMPANY IDENTITY: CJ Chemicals  
 PRODUCT IDENTITY: ETHANOL SDA 408190 PROOF  
 SDS NUMBER: 40B-190

SDS DATE: 04/29/2016  
 REPLACES: 03/02/2016

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 ACUTE HAZARDS

#### 11.11 EYE & SKIN CONTACT:

Primary irritation to skin, defatting, dermatitis.  
 Primary irritation to eyes, redness, tearing, blurred vision.  
 Liquid can cause eye irritation. Wash thoroughly after handling.

#### 11.12 INHALATION:

Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful. Breathing vapor can cause irritation. Acute overexposure can cause harm to affected organs by routes of entry.

#### 11.13 SWALLOWING:

Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

### 11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing disorders of any target organs mentioned in this SDS can be aggravated by over-exposure to components of this product. Persons with these disorders should avoid use of this product.

### 11.3 CHRONIC HAZARDS

#### 11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%. Absorption thru skin may be harmful. Studies with laboratory animals indicate this product can cause damage to fetus.

11.32 IRRITANCY OF PRODUCT: This product is irritating to contaminated tissue.

11.33 SENSITIZATION TO THE PRODUCT: No component of this product is known as a sensitizer.

11.34 MUTAGENICITY: No known reports of mutagenic effects in humans.

11.35 EMBRYOTOXICITY: No known reports of embryotoxic effects in humans.

11.36 TERATOGENICITY: No known reports of teratogenic effects in humans.

11.37 REPRODUCTIVE TOXICITY: No known reports of reproductive effects in humans.

11.38 TARGET ORGANS: Contains material that may cause damage, based on animal data.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (such as: within the eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

### 11.4 MAMMALIAN TOXICITY INFORMATION

MATERIAL	CAS#	EIN	ECS#	LOW EST KNOWN L	ETHAL DOSE DATA
Ethanol (Denatured)	64-17-5	200-578-6		LOWEST KNOWN LD50 (ORAL)	
				7060 mg/kg (Rats)	
Ethanol (Denatured)	64-17-5	200-578-6		LOWEST KNOWN LC50 (VAPORS)	
				66,000 mg/L (Rats, 4 hours)	

COMPANY IDENTITY: CJ Chemicals  
PRODUCT IDENTITY: ETHANOL SDA 408 190 PROOF  
SDS NUMBER: 40B-190

SOS DATE: 04/29/2016  
REPLACES: 03/02/2016

**SECTION 12. ECOLOGICAL INFORMATION**

12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

No aquatic environmental information is available on this product.

12.4 MOBILITY IN SOIL

This material is a mobile liquid.

12.5 DEGRADABILITY

This product is partially biodegradable.

12.6 ACCUMULATION

Bioaccumulation of this product has not been determined.

**SECTION 13. DISPOSAL CONSIDERATIONS**

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers and liners may retain some product residue. Vapor from some product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES. EPA CHARACTERISTIC: D001

**SECTION 14. TRANSPORT INFORMATION**

MARINE POLLUTANT: No  
DOT/TDG SHIP NAME: UN1987, Alcohols, n.o.s.  
(contains: Ethanol, t-Butanol), 3, PG-II  
DRUM LABEL: (FLAMMABLE LIQUID)  
IATA / CAO: UN1987, Alcohols, n.o.s.  
(contains: Ethanol, t-Butanol), 3, PG-II  
DRUM LABEL: (FLAMMABLE LIQUID)  
IMO / IMDG: UN1987, Alcohols, n.o.s.  
(contains: Ethanol, t-Butanol), 3, PG-II  
DRUM LABEL: (FLAMMABLE LIQUID)  
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 127

**SECTION 15. REGULATORY INFORMATION**

15.1 EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health, Fire

All components of this product are on the TSCA list.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG. SECTION)	RQ (LBS)
*t-Butanol	75-65-0	200-889-7	0.1	(311, 312, 313, RCRA)	None

COMPANY IDENTITY: CJ Chemicals  
 PRODUCT IDENTITY: ETHANOL SDA 40B 190 PROOF  
 SDS NUMBER: 40B-190

SDS DATE: 04/29/2016  
 REPLACES: 03/02/2016

### SECTION 15. REGULATORY INFORMATION (CONTINUED)

#### 15.2 STATE REGULATIONS:

THIS PRODUCT MEETS REQUIREMENTS OF SOUTHERN CALIFORNIA AQMD  
 RULE 443.1 & SIMILAR REGULATIONS

#### CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):

This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

#### 15.3 INTERNATIONAL REGULATIONS

The identified components of this product are listed on the chemical inventories of the following countries:

Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

#### 15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) B2: Flammable Liquid.

D2B: Irritating to skin/eyes.

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all information required by the CPR.

### SECTION 16. OTHER INFORMATION

#### 16.1 HAZARD RATINGS:

HEALTH (NFPA): 0, HEALTH (HMIS): 1, FLAMMABILITY: 3, PHYSICAL HAZARD: 0  
 (Personal Protection Rating to be supplied by user based on use conditions.)

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

#### 16.2 EMPLOYEE TRAINING

See Section 2 for Risk & Safety Statements. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

#### 16.3 SDS DATE: 04/29/2016

### NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a Specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

Unless updated, the Safety Data Sheet is valid until 04/29/2019.

Safety Data Sheet was prepared by: Chemical Data Services, e-mail: chemdatstv@aol.com.