21 Hubble
Irvine, CA 92618
Tel: 949-679-7968

Material Safety Date Sheet (MSDS)

MSDS# CC-HER868281
Date issued: 02/21/2011

Section 1 - Product Chemical and Company Identification

Product name	Consus Glyphosate 41% Plus
Product Use	Herbicide
EPA Reg. No.	86828-1
Company	Consus Chemicals, LLC 21 Hubble, Irvine, CA 92618
Emergency phone	Chemtrec 1-800-424-9300 NPIC 1-800-858-7378 (6:30 am to 4:30 pm) Consus 949-679-7968

Section 2 - Composition /Information on Ingredients

Component	Cas no.	By weight %
Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt	38641-94-0	41.0 min
Other Ingredients Including:		59.0 max

Section 3 - Hazards Identification

Emergency overview

CAUTION:

Appearance and Odor: Clear, viscous greenish/yellow solution with little odor.

Warning Statements: Keep out of reach of children. Causes moderate eye irritation. Harmful if swallowed or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist.

Potential Health Effects:

Likely Routes of Exposure: Skin contact and inhalation.

Eye Contact: The undiluted product may cause pain, redness and tearing based on toxicity studies.

Skin Contact: Prolonged contact may cause skin irritation.

Ingestion: No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Oral ingestion of large quantities of concentrated product has been reported to result in hypotension and pulmonary edmea.

Inhalation: Low inhalation toxicity.

Medical Conditions Aggravated by Exposure: None known.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

Potential Environmental Effects:

Available data on similar formulations suggest that this product would be slightly to moderately toxic to aquatic organisms and practically non-toxic to avian species, honeybees.

See Section 12: ECOLOGICAL INFORMATION for more information.

Section 4 - First Aid Measures

If in Eyes:
Hold eye open and immediately flush the eyes with gently flowing lukewarm water or saline solution for 15-20 minutes until no evidence of chemical remains.
Remove contact lenses, if present, after the first 5 minutes, then continue flushing.
Call a poison control center or doctor for treatment advice.
If inhaled:
If inhaled, remove the person to fresh air and keep warm and at rest.
If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
Call a poison control center or doctor for further treatment advice.
If swallowed:
Call a poison control center or doctor immediately for treatment advice.
Have person sip a glass of water if able to swallow.
Do not induce vomiting unless told to do so by the poison control center or doctor.
Do not give anything by mouth to an unconscious or semi conscious person.
If on skin or clothing:
Remove contaminated clothing, shoes and leather goods.
Wash skin gently and thoroughly with plenty of water or shower.
Seek medical attention if necessary.
Notes to physician

This product is not an inhibitor of cholinesterase, treatment with atropine and oximes is not indicated. No specific antidote is available. Probable mucosal damage may contraindicate the use of gastric lavage. If poisoning is suspected apply symptomatic therapy.

Section 5 - Fire Fighting Measures

Flash Point: Not applicable due to aqueous formulation

Autoignition Temperature: Not determined

Flammability Limits: Not determined

Extinguishing Media: In case of fire, use water (flood with water), dry chemical, CO2, or alcohol foam.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: Containers will burst from internal pressure under extreme fire conditions. If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways.

Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as oxides of carbon, nitrogen, and phosphorous.

National Fire Protection Association (NFPA) Hazard Rating: Rating for this product: Health: 1 Flammability: 1 Reactivity: 0 Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6 - Accidental Release Measures

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways.Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Cleanup and Disposal: Pump any free liquid into an appropriate closed container. Thoroughly scrub floor or other impervious surface with a strong industrial detergent and rinse with water. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information. **Other Information:** For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222. You may also contact CHEMTREC at 1-800-424-9300 for the emergency medical treatment information.

Section 7- Handling and Storage

Handling:

Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined containers. DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Storage:

STORE ABOVE 10ºF (-12ºC) TO KEEP PRODUCT FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68ºF (20ºC) for several days to redissolve and shake, roll or agitate to mix well before using. Do not contaminate water, foodstuff, feed or seed by storage or disposal.

Section 8 - Exposure Controls/Personal Protection

Engineering Controls:
Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:
Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

	OSHA		**ACGIH**		
Component	TWA	STEL	TWA	STEL	Unit
Isopropylamine Salt of Glyphosate	NE	NE	NE	NE	
Ethoxylated Tallowamines	NE	NE	NE	NE	

NE = Not Established

Section 9 - Physical and Chemical Properties

Appearance and Odor: Clear, viscous slight yellow solution with little odor.
Boiling Point: Not determined
Solubility in Water: Soluble
Specific Gravity: 1.15-1.17 @ 20ºC
Evaporation Rate: Not determined
Vapor Density: Not determined
Vapor Pressure: Not determined
pH: 4.0-6.0

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

Section 10 - Stability and Reactivity

Chemical Stability: This material is stable under normal handling and storage conditions.
Conditions to Avoid: Excessive heat. Do not store near heat or flame.
Incompatible Materials: Strong oxidizing agents: bases and acids. This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.
Hazardous Decomposition Products: Under fire conditions may produce gases such as oxides of carbon, nitrogen, and phosphorous.
Hazardous Reactions: Hazardous polymerization will not occur

Section 11 - Toxicological Information (Based on the active Ingredient)

Toxicological Data:
For Glyphosate
Oral: LD50: Rat 5,600 mg/kg; mice 11,300
Dermal: LD50 Rat: >5,010 mg/kg; Rabbit >5,000 mg/kg
Eye Irritation: Rabbit: Irritant
Skin Irritation: Rabbit: Non- irritating
Skin Sensitization: Not a contact sensitizer in guinea pigs

Subchronic (Target Organ) Effects: Repeated overexposure to glyphosate may decrease body weight gains and effects to liver. The surfactant component of this product is reported to cause irritation to the eyes and skin and may contribute to the irritation potential reported for this herbicide. Ingestion may produce gastrointestinal irritation, nausea, vomiting and diarrhea.
Carcinogenicity / Chronic Health Effects: Prolonged overexposure to glyphosate may cause effects to the liver. There was no evidence of carcinogenicity in animal studies using glyphosate. EPA has given glyphosate a Group E classification (evidence of non-carcinogenicity in humans).
Reproductive Toxicity: In laboratory animal studies with glyphosate, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Developmental Toxicity: In animal studies, glyphosate did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.
Genotoxicity: Glyphosate has produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells.
Assessment Carcinogenicity: None listed with ACGIH, IARC, NTP or OSHA.
See Section 2: HAZARDS IDENTIFICATION for more information

Section 12 - Ecological Information (Based on the active Ingredient)

Aquatic toxicity, fish
Rainbow trout *(Oncorhynchus mykiss)*:
Acute toxicity, 96 hours, static, LC_{50}: 86 mg/L

Bluegill sunfish *(Lepomis macrochirus)*:
Acute toxicity, 96 hours, static, LC_{50}: 120 mg/L
Aquatic toxicity, invertebrates
Water flea (Daphnia magna):
Acute toxicity, 48 hours, static, LC_{50}: 780 mg/L
Avian toxicity
Mallard duck (A*nas platyrhynchos)*:
Dietary toxicity, 8 days, LC_{50}: > 4,640 mg/kg diet
Bobwhite quail *(Colinus virginianus)*:
Acute oral LD_{50}: > 3,851 mg/kg
Arthropod toxicity
Honey bee *(Apis mellifera)*: Oral/contact, 48 hours, LD_{50}: > 100 µg/bee
Dissipation
Soil, field:
Half life: 3 - 174 days Koc: 884 - 60,000 L/kg
Water, aerobic:
Half life: ≤ 28 days

Section 13 - Disposal Considerations

Pesticide disposal: Wastes of this product may be dangerous. Improper disposal of excess pesticide or rinse is a violation of Federal Law. If these wastes cannot be disposed of according to the label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container disposal:
[Nonrefillable containers]: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.
(**Nonrefillable ≤ 5 gallons):** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
(Nonrefillable > 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[Refillable containers]: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Section 14 - Transport Information

DOT proper shipping name: Not regulated by DOT.
DOT hazard class or division: N/A
DOT UN/NA No.: N/A
DOT packing group: N/A
Reportable quantity: None
Marine pollutant: Not listed
DOT emergency response guide: N/A

Section 15 - Regulatory Information

U.S. Federal Regulations:

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:
Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370): Immediate

Section 313 Toxic Chemical(s): None

Reportable Quantity (RQ) under U.S. CERCLA: None

RCRA Waste Code: None

MATERIAL SAFETY DATA SHEET Credit Systemic Herbicide
State Information: Other state regulations may apply. Check individual state requirements.
California Proposition 65: Not listed

Section 16 - Other Information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Consus Chemical , LLC assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data.