



SAFETY DATA SHEET

Product: **MARC 45 JUDGEMENT DAY
NON-SELECTIVE WEED KILLER SUPER CONCENTRATE**

Form R04132

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER AND NAME: **MARC 45 JUDGEMENT DAY NON-SELECTIVE WEED KILLER
SUPER CONCENTRATE**

SDS DATE: 01/11/2019

SUPPLIER: Mid-American Research Chemical Corp. ADDRESS: P. O. Box 927 Columbus, NE 68602-0927
PHONE: 402-564-7104 FAX: 402-563-1290
EMERGENCY PHONE: InfoTrac 1-800-535-5053
E-MAIL: marc@marc1.com WEBSITE: www.marc1.com

RECOMMENDED USE: Non-selective weed killer.

PREPARED BY: MARC

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION: Eye irritation category 2A.

SIGNAL WORD AND HAZARD AND PRECAUTIONARY STATEMENTS: **DANGER:** Causes serious eye irritation. Toxic to aquatic life with long lasting effects. Avoid release to the environment. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists: Get medical attention.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% BY WEIGHT</u>
Glyphosate, Isopropylamine salt	38641-94-0	42.3% - 45.0%
Imazapyr, Isopropylamine salt	81510-83-0	0.70% - 0.86%
Other Ingredients	Trade Secret	Trade Secret

Synonyms: Glyphosate IPA; N-(phosphonomethyl) glycine, in the form of its isopropylamine salt; Imazapyr IPA, isopropylamine salt of imazapyr

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

SECTION 4: FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call poison control center or doctor for treatment advice. Have product container or label with you when calling a poison control center or doctor or going for treatment.

SKIN: Remove contaminated clothing. Launder before reuse. Wash skin with soap and water for at 15-20 minutes. If irritation develops and persists, call poison control center or doctor for treatment advice.

INGESTION: Call 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION: Remove person to fresh air. If symptoms develop, get medical advice.

MOST IMPORTANT SYMPTOMS/EFFECTS

ACUTE AND DELAYED: Causes severe eye irritation and possible damage. May cause respiratory irritation.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED:

For eye exposure, seek immediate medical attention. For ingestion there is no specific antidote available. Treat symptomatically.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: **LARGE FIRES:** foam or water spray. **SMALL FIRES:** dry chemical or carbon dioxide.



SAFETY DATA SHEET

Product: MARC 45 JUDGEMENT DAY
NON-SELECTIVE WEED KILLER SUPER CONCENTRATE

Form R04132

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear NIOSH 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: If water is used to fight fire, contain runoff water using dikes to prevent contamination of water supplies. Dispose of fire control water later.

HAZARDOUS DECOMPOSITION PRODUCTS (Under Fire conditions): May produce gases such as hydrogen chloride and oxides of carbon, nitrogen and phosphorous.

SECTION 6: ACCIDENTAL RELEASE MEASURES

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal. Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

PERSONAL PRECAUTIONS: Wear appropriate protective gear for the situation. See Section 8: PERSONAL PROTECTION INFORMATION for more information.

EMERGENCY PROCEDURES: Same as METHODS AND MATERIALS above.

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.

OTHER INFORMATION: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

SECTION 7: HANDLING AND STORAGE

HANDLING: Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. 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. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

OTHER PRECAUTIONS: **KEEP OUT OF REACH OF CHILDREN!! CAREFULLY READ ENTIRE LABEL BEFORE USE!**

STORAGE: Store in original container in a safe place and protect from freezing. Do not contaminate water, food or feed by storage or disposal.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS/
VENTILATION:** When engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

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

EYE/FACE PROTECTION: To avoid contact with eyes, wear chemical goggles.

SKIN PROTECTION/PROTECTIVE GLOVES: Chemical resistant: butyl rubber, natural rubber, neoprene, nitrile.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Eyewash station & safety shower. Long-sleeved shirt, long pants, socks and shoes. Clothing as needed to minimize contact. Washing facilities should be readily accessible to the work area.

WORK HYGIENIC PRACTICES: 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.



SAFETY DATA SHEET

Product: MARC 45 JUDGEMENT DAY
NON-SELECTIVE WEED KILLER SUPER CONCENTRATE

Form R04132

COMPONENT	OSHA		ACGIH		UNIT
	TWA	STEL	TWA	STEL	
Glyphosate	NE	NE	NE	NE	
Imazapyr	NE	NE	NE	NE	
Other Ingredients	NE	NE	NE	NE	

NE – Not Established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE-

PHYSICAL STATE:	Liquid
COLOR:	Clear yellow liquid
ODOR:	Slight odor
ODOR THRESHOLD:	No Data Available
pH:	4.22
MELTING POINT/FREEZING POINT:	No Data Available
INITIAL BOILING POINT & RANGE:	200°F
FLASH POINT/METHOD USED:	>200°F
EVAPORATION RATE:	Not applicable
FLAMMABILITY (solid, gas):	Not applicable
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	Not applicable
VAPOR PRESSURE (mmHg):	Not applicable
VAPOR DENSITY (AIR = 1):	No data available
RELATIVE DENSITY:	1.171 g/mL @ 20°C
SPECIFIC GRAVITY (H2O = 1):	N/A
SOLUBILITY IN WATER:	Soluble
VISCOSITY:	14.7 centipoise at 40°C
PARTITION COEFFICIENT: N-OCTANOL/WATER:	No data available
AUTOIGNITION TEMPERATURE:	Not applicable
DECOMPOSITION TEMPERATURE:	No data available

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

REACTIVITY: Not reactive.

CHEMICAL STABILITY: This material is stable under normal handling and storage conditions.

CONDITIONS TO AVOID: Excessive heat. Do not store near heat or flame.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents; bases and acids.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Under fire conditions may produce gases such as hydrogen chloride and oxides of carbon, nitrogen and phosphorous.

POSSIBILITY OF HAZARDOUS REACTIONS: Will not occur.

HAZARDOUS POLYMERIZATION: No **CONDITIONS TO AVOID (POLYMERIZATION):** Excess heat and open flame.

SECTION 11: TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE: Eye contact. Skin contact.

EYES: Causes severe eye irritation and possible irreversible eye damage.

SKIN: Slightly toxic and non-irritating based on toxicity studies.

INGESTION: Slightly toxic if ingested based on toxicity studies. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed.



SAFETY DATA SHEET

Product: MARC 45 JUDGEMENT DAY
NON-SELECTIVE WEED KILLER SUPER CONCENTRATE

Form R04132

INHALATION: Low inhalation toxicity. Inhalation of mists may cause coughing and sneezing.

TOXICOLOGICAL DATA: Data from laboratory studies on this product are summarized below:
ORAL: Rat LD50: >5,000 mg/kg
DERMAL: Rat LD50: >5,000 mg/kg
INHALATION: Rat 4-hr LC50:>2.06 mg/l (no mortality at highest attainable dose)
EYE IRRITATION: Rabbit: Moderately irritating under test conditions with corneal involvement **persisting for 21 days.**
SKIN IRRITATION: Rabbit: Slightly irritating.
SKIN SENSITIZATION: Not a contact sensitizer in guinea pigs following repeated skin exposure.

SUBCHRONIC (Target Organ) EFFECTS: Repeated overexposure to glyphosate may decrease body weight gains and effects to liver. For imazapyr, no adverse effects at approximately 1,700 mg/kg/day (highest dose tested).

CARCINOGENICITY / CHRONIC HEALTH EFFECTS: Prolonged overexposure to glyphosate may cause effects to the liver. EPA has given glyphosate a Group E classification (evidence of non-carcinogenicity in humans). Canada PMRA has classified glyphosate as non-carcinogenic. In 2015 IARC classified glyphosate as a probable human carcinogen Group 2A based on limited human evidence and some evidence in animals. Imazapyr did not cause cancer in laboratory animals. EPA has classified imazapyr as a Group E (evidence of non-carcinogenicity for humans) carcinogen.

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. The results of animal studies with imazapyr gave no indication of a fertility impairing effect.

GENOTOXICITY: Glyphosate has produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells. For imazapyr, no mutagenic effect was found in various tests with microorganisms and mammals.

ASSESSMENT CARCINOGENICITY:

COMPONENT	REGULATORY AGENCY LISTING AS CARCINOGEN			
	ACGIH	IARC	NTP	OSHA
Glyphosate IPA Salt	No	2A	No	No
Imazapyr	No	No	No	No
Other Ingredients	No	No	No	No

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:

Data on Glyphosate Acid:

96-hour LC50 Bluegill:	120 mg/l	Bobwhite Quail 8-day Dietary LD50: >4,500 ppm
96-hour LC50 Rainbow Trout:	786 mg/l	Mallard Duck 8-day Dietary LC50: >4,500 ppm
48-hour EC50 Daphnia:	780 mg/l	
96-hour EC50 Diatoms:	1.3 mg/l	
14-day EC50 Duckweed:	25.5 mg/l	
72-hour EC50 Algae:	450 mg/l	

Data on Imazapyr:

96-hour LC50 Bluegill:	>100 mg/l	Bobwhite Quail 8-day Dietary LD50: >5,000 ppm
96-hour LC50 Rainbow Trout:	>100 mg/l	Bobwhite Quail Oral LD50: >2,150 ppm
48-hour EC50 Daphnia:	>100 mg/l	Mallard Duck 8-day Dietary LC50: >5,000 ppm
7-day EC50 Green Algae:	71 mg/l	Mallard Duck Oral LD50: >2,150 ppm
Honey Bee LD50:	>100 mg/bee	

ENVIRONMENTAL FATE:

In the environment glyphosate absorbs strongly to soil and is expected to be immobile in soil. Glyphosate is readily degraded by soil microbes to AMPA (aminomethyl phosphonic acid) that is further degraded to carbon dioxide. Glyphosate and AMPA are likely to enter ground water due to their strong absorptive characteristics. Terrestrially-applied glyphosate has the potential to move into surface waters through soil erosion because it may be absorbed to soil particles suspended in the runoff. Aquatic applications registered for certain formulations may also result in glyphosate entering surface waters. Complete degradation is slow, but dissipation in water is rapid because glyphosate is bound in sediments and has low biological availability to aquatic organisms. These characteristics suggest a low potential for bioconcentration in aquatic organisms and this has been verified by laboratory investigations of glyphosate bioconcentration in numerous marine and freshwater organisms with and without soil. The maximum whole body bioconcentration factors for fish were observed to be less than 1X. Bioconcentration factors for sediment dwelling mollusks and crayfish tended to be slightly higher, but were always less than 10X. In addition, any residues accumulated in organisms were rapidly eliminated.



SAFETY DATA SHEET

Product: MARC 45 JUDGEMENT DAY

NON-SELECTIVE WEED KILLER SUPER CONCENTRATE

Form R04132

Imazapyr is degraded by microbial metabolism and can be relatively persistent in soils. It has an average half-life in soils that ranges from 2 weeks to 5 months. Half-lives tend to be shorter in forest litter and soils. Imazapyr is water-soluble and variably binds to organic materials in the soils. Although the potential to leach is high, leaching is limited under typical field conditions. In water, imazapyr can be rapidly degraded by photolysis with a half-life averaging 2 days. Due to its rapid photodegradation by sunlight, water contamination by imazapyr is generally not of concern.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable federal, state or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Pesticide wastes may be acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING AND DISPOSAL:

NONREFILLABLE CONTAINERS 5 GALLONS OR LESS: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying.

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 or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

NONREFILLABLE CONTAINERS LARGER THAN 5 GALLONS: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning is not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

TRIPLE RINSE AS FOLLOWS: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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 in application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

PRESSURE RINSE AS FOLLOWS: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds after the flow begins to drip.

REFILLABLE CONTAINERS LARGER THAN 5 GALLONS: 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (for ground/non-bulk containers)

CONTAINER SIZE(S): All
PROPER SHIPPING NAME: WEED KILLING COMPOUND, LIQUID.
HAZARD CLASS: None
ID NUMBER: None
PACKING GROUP: None
LABEL STATEMENT: None



SAFETY DATA SHEET

Product: MARC 45 JUDGEMENT DAY
NON-SELECTIVE WEED KILLER SUPER CONCENTRATE
Form R04132

SECTION 15: REGULATORY INFORMATION

EPA FIFRA INFORMATION

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

Danger. Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing.

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): 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):** Acute Health.

SECTION 313 TOXIC CHEMICAL(S): None

REPORTABLE QUANTITY (RQ) UNDER U.S. CERCLA: None

RCRA WASTE CODE: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

STATE INFORMATION: Other state regulations may apply. Check individual state requirements.

CALIFORNIA PROPOSITION 65: Not Listed.

SECTION 16: OTHER INFORMATION

HMIS/NFPA Ratings: Health = 3
Flammability = 1
Reactivity = 0
Other = -
Protection = -

01/11/201910/27/15

DISCLAIMER: While the information contained herein is believed to be correct, no warranties are made with respect thereto, and all liability from reliance thereon is disclaimed.