

## MATERIAL SAFETY DATA SHEET

### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**COMPANY ADDRESS:**  
ALBAUGH, INC.  
Ankeny, IA 50021

**EMERGENCY TELEPHONE NUMBERS:**  
(800) 424-9300 (CHEMTREC, transportation and spills)

**PRODUCT NAME** : RANGE STAR  
**CHEMICAL NAME** : Dimethylamine salt of dicamba (3,6-dichloro-*o*-anisic acid)  
 Dimethylamine salt of 2,4-dichlorophenoxyacetic acid  
**CHEMICAL FAMILY** : Substituted benzoic acid (dicamba) and phenoxy (2,4-D) herbicide  
**PRODUCT CODE** : EPA Reg. No. 42750-55

### SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Dicamba DMA Salt	12.4	2300-66-5	Not established	Not established
2,4-D DMA Salt	35.7	2008-39-1	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>

### SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

**HEALTH HAZARDS:** Corrosive and severe eye irritant with permanent eye injury possible including blindness. Harmful if swallowed or absorbed through skin.

**PHYSICAL HAZARDS:** May release toxic fumes if burned.

**ENVIRONMENTAL HAZARDS:** 2,4-D DMA is toxic to some aquatic organisms. Dicamba is phytotoxic to some non-target terrestrial plant species.

### SECTION 4 - FIRST AID MEASURES

**IF IN 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 a poison control center or doctor for 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 person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF INHALED:** Move person to fresh air, 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.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

## **SECTION 5 - FIRE FIGHTING MEASURES**

**FLASH POINT:** Not combustible

**AUTOIGNITION TEMPERATURE:** Not established

**FLAMMABLE LIMITS:** Not established

**EXTINGUISHING MEDIA:** Water spray, Foam

**FIRE FIGHTING INSTRUCTIONS:** Evacuate area and fight fire upwind from a safe distance to avoid possible hazardous fumes and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece and protective clothing.

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrogen chloride, Oxides of nitrogen,

## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**SMALL SPILL:** Absorb small spills on sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

**LARGE SPILL:** Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify, and scrape up for disposal.

## **SECTION 7 - HANDLING AND STORAGE**

KEEP OUT OF REACH OF CHILDREN!

**HANDLING:** Use only in a well-ventilated area. Do not reuse this container. Wear proper safety equipment.

**STORAGE:** Keep container closed when not in use. Keep away from food, feed and drinking water. Store away from heat (> 100 F) and keep from freezing (< 35 F).

## **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

**EXPOSURE LIMITS (8 hour TWA, ppm):** Refer to Section 3.

**ENGINEERING CONTROLS:** Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Local mechanical exhaust ventilation may be required. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### **PERSONAL PROTECTIVE EQUIPMENT:**

**EYE PROTECTION** - Safety goggles or full face respirator if vapors cause eye discomfort.

**CLOTHING** – long-sleeved shirt and long pants, Shoes plus socks. Mixers and loaders who do not use a mechanical system to transfer the contents of this container must wear coveralls or a chemical-resistant apron.

**GLOVES** – Chemical resistant gloves made of any waterproof material.

**RESPIRATOR** - When handling in enclosed areas where exposure limits may be exceeded, use a respirator with either an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS:** 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 PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL DESCRIPTION:** Clear amber to brown liquid.

**ODOR:** Mild amine like

**SPECIFIC GRAVITY:** 1.13 – 1.19 g/mL @ 20 C (9.45 – 9.95 lb/gl)\*

**pH:** 7.5 – 9.0

**VAPOR PRESSURE:** 18 mmHg

**VAPOR DENSITY:** < 1 (water vapor)

**WATER SOLUBILITY:** Soluble.

\*Listed density is an approximate value and does not necessarily represent that of a specific batch.

## SECTION 10 - STABILITY AND REACTIVITY

**STABILITY:** Stable under normal conditions.

**CONDITIONS TO AVOID:** Avoid excessive heat.

**MATERIALS TO AVOID:** Oxidizing agents and acids.

**HAZARDOUS POLYMERIZATION:** Will not occur

**HAZARDOUS DECOMPOSITION:** Thermal decomposition may release toxic gases such as HCl

## SECTION 11 - TOXICOLOGICAL INFORMATION

### **ACUTE TOXICITY:**

Oral LD <sub>50</sub> (rat)	-	> 1,000 mg/Kg
Dermal LD <sub>50</sub> (rat)	-	> 2,000 mg/Kg
Inhalation LC <sub>50</sub> (rat)	-	> 4.0 mg/L
Eye Irritation (rabbit)	-	Severe, corrosive
Skin Irritation (rabbit)	-	Slight
Sensitization (guinea pig)	-	Non-sensitizer

### **CARCINOGEN STATUS:**

OSHA	-	No
NTP	-	No
IARC	-	2B

**MUTAGENIC DATA:** Not known to be mutagenic

## SECTION 12 - ECOLOGICAL INFORMATION

**ENVIRONMENTAL SUMMARY:** This pesticide may be toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. Apply this product only as directed on label.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Refer to container label for complete Environmental Precautions.

### **FISH TOXICITY:** (2,4-D acid)

Bluegill – 524 mg/l (96-hr LC<sub>50</sub>)

Rainbow trout – 250 mg/l (96-hr LC<sub>50</sub>)

### **AVIAN TOXICITY:** (2,4-D acid)

Quail – 500 mg/Kg (Oral LD<sub>50</sub>)

Mallard Duck - > 5,500 ppm (8-day Dietary LC<sub>50</sub>)

### **FISH TOXICITY:** (dicamba acid)

96 hour LC<sub>50</sub>, Rainbow trout - 135 mg/L

96 hour LC<sub>50</sub>, Bluegill - 135 mg/L

### **AVIAN TOXICITY:** (dicamba acid)

Oral LD<sub>50</sub>, Bobwhite quail - unknown

Oral LD<sub>50</sub>, Mallard duck – 2,000 mg/Kg

**BEE TOXICITY:** Non-toxic

### SECTION 13 - DISPOSAL CONSIDERATIONS

Do not contaminate water, food, or feed by storage or disposal.

**WASTE:** Pesticide wastes are toxic. Dispose of in accordance with applicable Federal, state and local laws and regulations at an approved facility.

**CONTAINER: Non-refillable containers:** Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. 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. If the container cannot be refilled, 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.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the re-filler.

Refer to the container label to determine if it is refillable and for complete cleaning and disposal instructions.

### SECTION 14 - TRANSPORT INFORMATION

**DOT SHIPPING DESCRIPTION:**

Containers < 30 gallons -	Not regulated by DOT
Containers ≥ 30 gallons -	UN3082, Environmentally Hazardous Substances, Liquid, N.O.S., 9, PG III, RQ (2,4-D salt)

<b>DOT HAZARD CLASS:</b>	Class 9 (≥ 30 gallons)
<b>IDENTIFICATION NUMBER:</b>	UN3082
<b>DOT PACKING GROUP:</b>	PG III
<b>DOT PRIMARY/SECONDARY LABEL:</b>	Class 9 (≥ 30 gallons)
<b>DOT PRIMARY/SECONDARY PLACARD:</b>	Class 9 (≥ 30 gallons)
<b>DOT EMERGENCY RESPONSE GUIDE #:</b>	171

### SECTION 15 - REGULATORY INFORMATION

<b>CERCLA REPORTABLE QUANTITY:</b>	Dicamba 1,000 lbs. (approximately 1,000 gallons of product) 2,4-D acid 100 lbs. (approximately 30 gallons of product)
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<b>SARA TITLE III STATUS:</b>	
311/312 Hazard Categories –	Immediate health hazard
313 Toxic Chemicals –	Dicamba, 2,4-D acid

<b>CALIFORNIA PROP 65:</b>	Not listed
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### SECTION 16 - OTHER INFORMATION

HMIS HAZARD RATINGS	HEALTH	3
	FLAMMABILITY	0
	PHYSICAL HAZARD	1
	4=Severe    3=Serious    2=Moderate    1=Slight    0=Minimal	

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REVISED DATE:	October, 2012
REVISED FOR:	Revised Section 12 and Section 13 to match EPA approved label.