

Safety Data Sheet **CRUSTBUSTER**

SDS Number: 104 **Revision:** February 28, 2017

Section 1 • IDENTIFICATION

Product Name CRUSTBUSTER
Other Identification Propriety mixture of Alkylaryl/polyoxy Proprietary glycols, isopropanol and Humic Acids
Product Form Mixture
Recommended Use Agricultural Industry – Spray adjuvant
Manufacturer
Company Name Custom Ag Formulators, Inc.
Address 3430 S Willow Ave, Fresno, CA 93725, United States
Telephone (800) 355-4457
Website www.4caf.com
Emergency Contacts Custom Ag Formulators, Inc. (559) 435-1052
 CHEMTREC (800) 424-9300 (Domestic)
 (703) 527-3887 (International)

Section 2 • HAZARD(S) IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Eye Irrit. 2A H319
 Skin Sens. 1 H317
 Carc. 2 H351
 STOT RE 2 H373
 Aquatic Acute 2 H401
 Aquatic Chronic 3 H412
 Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Warning

Hazard Statements (GHS-US)

: H317 - May cause an allergic skin reaction.
 H319 - Causes serious eye irritation. H412 - Harmful to aquatic life with long



Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see section 4 on this SDS).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US)

No data available

Section 3 • COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Proprietary glycol	(CAS No) Proprietary	Proprietary	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Proprietary alcohol	(CAS No) Proprietary	Proprietary	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Proprietary ingredient 3	(CAS No) Proprietary	Proprietary	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412



Proprietary trialkylamine	(CAS No) Proprietary	Proprietary	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Proprietary ingredient 5	(CAS No) Proprietary	Proprietary	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 Aquatic Acute 2, H401

Full text of H-phrases: see section 16

Section 4 • FIRST-AID MEASURES

Inhalation	When symptoms occur: go into open air and ventilate suspected area. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin Contact	Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor/physician.
General Information	Never give anything by mouth to an unconscious person. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

Section 5 • FIRE-FIGHTING MEASURES

Suitable extinguishing	Dry powder, alcohol-resistant foam, water in large amounts, carbon dioxide (CO ₂).
Unsuitable extinguishing	Do not use a heavy water stream. A heavy water stream may spread burning liquid.
Specific hazards arising from the chemical	Not considered flammable but may burn at high temperatures.
Special protective equipment and precautions for firefighters	Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.



Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Carbon dioxide, Carbon Monoxide Silicon oxides. Measurements at temperatures above 150° C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

Section 6 • ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid all eyes and skin contact and do not breathe vapor and mist.

Methods and materials for containment and cleaning up

- Large Spills* Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. If spilled directly onto the ground, remove sufficient soil to ensure material is fully recovered. Contact competent authorities after a spill.
- Small Spills* Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Environmental precautions

Do not allow runoff to sewer, waterway or ground.

Section 7 • HANDLING & STORAGE

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Use appropriate personal protection equipment (PPE). Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist, and spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

Conditions for safe storage, including any incompatibilities

Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers. Acetaldehyde. Chlorine. Ethylene oxide. Isocyanates. Peroxides. Bromine.

Incompatible Materials: Heat sources.

Section 8 • EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH

Proprietary ingredient 6 (Proprietary)

USA ACGIH ACGIH TWA (mg/m³)
USA ACGIH ACGIH chemical category

1 mg/m³ (inhalable fraction and vapor)
Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to
15 mg/m³
3 ppm

USA NIOSH NIOSH REL (TWA) (mg/m³)
USA NIOSH NIOSH REL (TWA) (ppm)

Proprietary glycol (Proprietary)

USA ACGIH ACGIH Ceiling (mg/m³)
USA ACGIH ACGIH chemical category

100 mg/m³ (aerosol only)
Not Classifiable as a Human Carcinogen

Proprietary alcohol (Proprietary)

USA ACGIH ACGIH TWA (ppm)
USA ACGIH ACGIH STEL (ppm)
USA ACGIH ACGIH chemical category
USA NIOSH NIOSH REL (TWA) (mg/m³)
USA NIOSH NIOSH REL (TWA) (ppm)
USA NIOSH NIOSH REL (STEL) (mg/m³)
USA NIOSH NIOSH REL (STEL) (ppm)
USA IDLH US IDLH (ppm)
USA OSHA OSHA PEL (TWA) (mg/m³)
USA OSHA OSHA PEL (TWA) (ppm)

200 ppm
400 ppm
Not Classifiable as a Human Carcinogen
980 mg/m³
400 ppm
1225 mg/m³
500 ppm
2000 ppm (10% LEL)
980 mg/m³
400 ppm

Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment : Protective goggles. Gloves. Protective clothing.
Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing : Chemically resistant
materials and fabrics. **Hand Protection** : Wear chemically
resistant protective gloves. **Eye Protection** : Chemical safety goggles.
Skin and Body Protection : Wear suitable protective clothing.
Respiratory Protection : If exposure limits are exceeded or irritation is experienced,
approved respiratory protection should be worn.
Other Information : When using, do not eat, drink or smoke.

Section 9 · PHYSICAL & CHEMICAL PROPERTIES

Appearance	Black, liquid.
Odor	Surfactant odor
Odor threshold	N/A
pH	6.93
Melting point/freezing point	N/A/< 35 °F (< 1.67 °C)
Initial boiling point and boiling range	> 200 °F (> 93.33 °C)
Flash point	> 200 °F (> 93.33 °C)
Evaporation rate	N/A
Flammability (solid, gas)	N/A
Upper/lower flammability or explosive limits	
<i>Flammability limit - lower (%)</i>	N/A

Flammability limit - upper (%)	N/A
Explosive limit - lower (%)	N/A
Explosive limit - upper (%)	N/A
Vapor density	N/A
Relative density	8.9 lb/gal
Specific Gravity	1.07
Solubility(ies)	
<i>Solubility (water)</i>	100%
Partition coefficient (n-octanol/water)	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A

Section 10 · STABILITY & REACTIVITY

Reactivity	May react with oxidants.
Chemical stability	Material is stable under normal conditions
Possibility of hazardous reactions	Hazardous polymerization will not occur
Conditions to avoid	Direct sunlight. Extremely high or low temperatures. Sources of ignition. Incompatible materials.
Incompatible materials	Strong acids. Strong bases. Strong oxidizers. Acetaldehyde. Chlorine. Ethylene oxide. Isocyanates. Peroxides. Bromine.
Hazardous decomposition products	May release flammable gases. Carbon oxides (CO, CO ₂). Nitrogen oxides. Hydrocarbons. Carbonyl compounds.

Section 11 · TOXICOLOGICAL INFORMATION

Information On Toxicological Effects

Acute Toxicity: Not classified

Crustbuster

LD50 Oral Rat > 5050

LD50 Dermal Rabbit > 2020 mg/kg

Proprietary trialkylamine (Proprietary)

ATE (Oral) 500.00 mg/kg body weight

ATE (Gases) 100.00 ppmV/4h

ATE (Vapors) 0.50 mg/l/4h

ATE (Dust/Mist) 0.05 mg/l/4h

Proprietary ingredient 5 (Proprietary)

LD50 Oral Rat 12400 mg/kg

LD50 Dermal Rabbit > 2000 mg/kg

Proprietary ingredient 6 (Proprietary)

LD50 Oral Rat 1820 mg/kg

Proprietary glycol (Proprietary)

LD50 Oral Rat 4700 mg/kg

LD50 Dermal Rat 10600 mg/kg

ATE (Oral) 500.00 mg/kg body weight

ATE (Dermal) 10,600.00 mg/kg body weight

Proprietary alcohol (Proprietary)

LD50 Oral Rat	4710 mg/kg
LD50 Dermal Rabbit	4059 mg/kg
LC50 Inhalation Rat	72.6 mg/l/4h (Exposure time: 4 h)

Proprietary ingredient 3 (Proprietary)

LD50 Oral Rat	1310 mg/kg
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Skin Corrosion/Irritation: Not classified.

pH: 6.93

Serious Eye Damage/Irritation: Causes serious eye irritation. Derived from a read across of primary eye irritation study in White New Zealand rabbits. Effects were fully reversible within 21 days, but elicited primary irritation in 2 of 3 tested animals (Pesticide Assessment Guidelines, Subdivision F, Hazard Evaluation: Series 81-5, EPA 540/9-84-014).

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Proprietary ingredient 5 (Proprietary)

IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Proprietary ingredient 6 (Proprietary)

IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Proprietary alcohol (Proprietary)

IARC group	3
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Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause irritation to the respiratory tract.

Symptoms/Injuries After Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: Causes serious eye irritation. Redness, pain, swelling, itching, burning, tearing, and blurred vision.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.

Section 12 • ECOLOGICAL INFORMATION

Toxicity

Ecology - General : Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Crustbuster

LC50 Fish 1 9.1 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

NOEC (acute) 3.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

Proprietary trialkylamine (Proprietary)

NOEC chronic fish 0.5 mg/l

Proprietary ingredient 5 (Proprietary)

LC50 Fish 1 3.6 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])

EC50 Daphnia 1 2.15 mg/l (Exposure time: 48 h - Species: Daphnia pulex [Static])

ErC50 (algae) 2.2 mg/l (Exposure time: 72 h - Species: Scenedesmus subspicatus)

Proprietary ingredient 6 (Proprietary)

LC50 Fish 1	4460 (4460 - 4980) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	55 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	1200 (1200 - 1580) mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Other Aquatic Organisms 2	2.1 (2.1 - 2.3) mg/l (Exposure time: 96 h - Species:
ErC50 (algae)	2.2 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [Static])
NOEC chronic crustacea	0.78 mg/l
Proprietary glycol (Proprietary)	
LC50 Fish 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
Proprietary alcohol (Proprietary)	
LC50 Fish 1	9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Other Aquatic Organisms 1	1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
LC 50 Fish 2	11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
Persistence and Degradability	
Crustbuster	
Persistence and Degradability	Not established.
Bioaccumulative Potential	
Crustbuster	
Bioaccumulative Potential	Not established.
Proprietary ingredient 6 (Proprietary)	
BCF fish 1	(no significant bioconcentration)
Log Pow	-2.18 (at 25 °C)
Proprietary glycol (Proprietary)	
Log Pow	-1.93
Proprietary alcohol (Proprietary)	
Log Pow	0.05 (at 25 °C)
Mobility in Soil	No additional information available
Other Adverse Effects	
Other Information	: Avoid release to the environment.

Section 13 • DISPOSAL CONSIDERATION

Disposal instructions	Consult federal, state and local regulations for disposal requirements.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).



Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 • TRANSPORT INFORMATION

General Not DOT regulated in domestic (USA ground) transportation in package sizes less than 3,550 lbs (317 gallons); 1,610 kg (1,200 liters). The DOT transportation information below is for shipments with package sizes equal to or exceeding this value. IMDG Regulated Marine Pollutant.

DOT - Basic shipping requirements:

UN number Not regulated for transport
DOT Label Not regulated for transport
Proper shipping name Not regulated for transport
Hazard class Not regulated for transport
Packing group Not regulated for transport

IMGD - Basic shipping requirements:

UN number Not regulated for transport
IMGD Label Not regulated for transport
Proper shipping name Not regulated for transport
Hazard class Not regulated for transport
Packing group Not regulated for transport
EMS NO Not regulated for transport

IATA - Basic shipping requirements:

UN number Not regulated for transport
Proper shipping name Not regulated for transport
Hazard class Not regulated for transport
Packing group Not regulated for transport
OCAP Not regulated for transport

Environmental hazards

Marine pollutant Yes

Special precautions Read safety instructions, SDS and emergency procedures before handling.

Section 15 • REGULATORY INFORMATION

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Proposition 65 (CA) Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated

CERCLA Hazardous Substance List (40 CFR 302.4)

Reportable Quantity Not applicable

SARA 304 Emergency release notification Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed



Superfund Amendments and Reauthorization Act of 1986 (SARA)

<i>Hazard categories</i>	Immediate Hazard	Yes
	Delayed Hazard	No
	Fire Hazard	No
	Pressure Hazard	No
	Reactivity Hazard	No

SARA 302 Extremely hazardous substance

Not listed

SARA 311/312 Hazardous chemical

No Immediate (acute) health hazard

Delayed (chronic) health hazard

Section 16 • OTHER INFORMATION

Issue date February 28, 2017

Disclaimer The above information is based on data of which the manufacturer is aware and is believed to be correct as of the date hereon. Since the information contained herein may be applied under conditions beyond the manufacturer's control and which may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, the manufacturer does not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

GHS Full Text Phrases:

Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Carc. 2	Carcinogenicity Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation