



Safety Data Sheet

Color Up 2-2-22

OSHA HCS 2024
Canadian Workplace Hazardous Material Information System (WHMIS) 2015 rev 2022
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015
GHS (Globally Harmonized System)

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Revision Number 1.1.1 NA
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Color Up 2-2-22
Pure substance/mixture Mixture

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

Recommended use Soluble Fertilizer.
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company: Miller Chemical and Fertilizer, LLC
120 Radio Rd
Hanover, PA 17331
Tel.: 717-632-8921
Fax.: 717-646-1104

Internet <http://www.millerchemical.com>

E-mail info@millerchemical.com

1.4. Emergency telephone number CHEMTREC: +1 800 424 9300 or International 1+703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Classification Considered a hazardous substance or mixture according to the Globally Harmonized System (GHS)

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Physical Hazards	Not classified.
Health Hazards	Repr. Tox. Cat. 1B; H360 Eye Damage Category 1; H318
Environmental Hazard	Not classified.

2.2. Label elements**Symbols/Pictograms**

Signal Word	Danger
Hazard Statements	H318 - Causes serious eye damage H360 - May damage fertility or the unborn child

Precautionary Statements

Prevention	Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection
Response	IF exposed or concerned: Get medical advice/attention
Storage	Store locked up
Disposal	Dispose of contents/containers in accordance with local regulations

Additional information No PBT, vPvB or endocrine harmful material present at greater than 0.1%.

Hazards not otherwise classified (HNOC) None known

Hazards associated with known or reasonably anticipated uses None known

SECTION 3: Composition/information on ingredients

Pure substance/mixture Mixture

Chemical Name	CAS NUMBER:	Weight-%
Sulfuric acid dipotassium salt	7778-80-5	10 - < 30
Potassium hydrogen sulfate (impurity)	7646-93-7	3 - < 7
Boric acid	10043-35-3	0.1 - < 1

Additional information *The exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First aid measures

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4.1. Description of first aid measures**General Advice**

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

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Get medical attention.

Ingestion

DO NOT INDUCE VOMITING. If vomiting occurs naturally, reduce the risk of aspiration by leaning their body forward. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Inhalation

Remove to fresh air. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Causes serious eye damage. May damage fertility or the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment should be symptomatic and supportive. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable Extinguishing Media**

Alcohol-resistant foam. Carbon dioxide (CO₂). Water spray (fog). Dry chemical. Halon.

Unsuitable Extinguishing Media

None known.

5.2. Special hazards arising from the substance or mixture

Dust in sufficient concentration can result in an explosive mixture in air. Minimize dust and open flame.

5.3. Advice for firefighters**Special protective equipment for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

Fire-fighting measures

Water mist may be used to cool closed containers. No special fire protection measures are necessary. Standard procedure for chemical fires.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

Keep unauthorized personnel away. Avoid dust formation. Ensure adequate ventilation. Use personal protection recommended in Section 8. In case of fire: Stop leak if safe to do so.

For non-emergency personnel

Keep unauthorized personnel away.

For emergency responders

Keep unauthorized personnel away. Use personal protection recommended in Section 8.

6.2. Environmental precautions

Avoid runoff to waterways and sewers.

6.3. Methods and material for containment and cleaning up

Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust

Small Spill: Vacuum or sweep material and place in a disposal container

6.4. Reference to other sections

See Section 8 for exposure controls and personal protection. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust. Ensure adequate ventilation. Wear appropriate personal protective clothing to prevent skin contact.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed and dry. Store away from incompatible materials. Keep out of reach of children.

7.3. Specific end use(s)

See Section 1.2.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits****Boric acid - 10043-35-3**

OSHA	Not established
ACGIH	6 mg/m ³
Canada - British Columbia - OEL- STELs	6 mg/m ³
Canada - Ontario - OEL - STEVs	6 mg/m ³ STEL
Canada - Ontario - OEL - TWA EVs	2 mg/m ³

Biological Limit Values

No information available

8.2. Exposure controls**Engineering Measures**

Provide a good standard of controlled ventilation (5 to 10 air changes per hour). Use exhaust ventilation to keep airborne concentrations below exposure limits. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

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Eye/Face Protection	Chemical goggles or face shield with safety glasses. Always wear eye protection when working with chemicals.
Skin and Body Protection	Clean protective body covering, rubber apron, and rubber boots. Wash contaminated clothing before reuse
Hand Protection	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn. Neoprene gloves
Respiratory Protection	In case of inadequate ventilation wear respiratory protection.
Environmental Exposure Controls	No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:

Physical State	Solid Granules
Color	Blue crystalline
Odor	Slight to Moderate
pH	4.0 - 7.0 @ 20 °C
Melting point / Freezing point	Not applicable
Boiling Point / Boiling Range	Not determined
Freezing Point	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability	Not determined
Vapor Pressure	Not determined
Relative Vapor Density	Not determined
Density	No data available
Bulk Density	Varies with different grades
Water Solubility	Soluble
Partition coefficient	No information available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No information available.
Kinematic viscosity	No data available
Oxidizing Properties	Not applicable
Particle Characteristics	No information available
Percent Volatile	Not determined
VOC Content (%)	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No data available

9.2.2. Other safety characteristics

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

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10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	No specific hazard known
10.4. Conditions to avoid	Extreme temperatures and wet/humid conditions
10.5. Incompatible materials	Reducing agents Strong oxidizing agents Sodium hypochlorite Strong alkalis
10.6. Hazardous decomposition products	None known

SECTION 11: Toxicological information

General Information	Users are advised to consider national Occupational Exposure Limits or other equivalent values.
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Information on Likely Routes of Exposure

Inhalation	May cause respiratory tract irritation Not classifiable
Skin	Avoid contact with skin and clothing
Eyes	Avoid contact with eyes
Ingestion	Ingestion is not a likely route of exposure

11.1. Information on toxicological effects

Sulfuric acid dipotassium salt

Oral LD50	LD50 rat (oral): > 2,000 mg/kg
Dermal LD50	>2000 mg/kg (rat)
Mutagenicity	Negative

Boric acid

LD50s and LC50s	2120 mg/m ³ Inhalation LC50 Rat 4 h 2.12 mg/L Inhalation LC50 Rat 4 h
Oral LD50	LD50 - Route: Oral - Species: Rat (Male) > 2600 mg/kg bw - Notes: OECD 401 (UE B.1 Method)
Dermal LD50	LD50 - Route: Dermal - Species: Rabbit > 2000 mg/kg bw - Notes: FIFRA (40 CFR 163)
Group 2A - Probably Carcinogenic to Humans	Monograph 53 [1991]
NTP (National Toxicology Program)	Male Rat - Not Tested; Female Rat - Not Tested; Male Mice - No Evidence; Female Mice - No Evidence
Serious eye damage/eye irritation	Not classified.
Skin Sensitization	Not classified.
Reproductive Toxicity	Presumed human reproductive toxicant, Category 1B

Reproductive Toxicity:

Test: NOAEL - Route: Oral - Species: Rat (Male) 17.5 mg/kg - Notes: as B
Test: LOAEL - Route: Oral - Species: Rat 58.5 mg/kg bw - Notes: as B

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Specific target organ toxicity - Repeated exposure Test: NOAEL - Route: Oral - Species: Rat 17.5 mg/kg bw/day - Notes: as B
 Test: LOAEL - Route: Oral - Species: Rat 58.5 mg/kg bw/day - Notes: as B

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Acute Toxicity	No data available
Respiratory Sensitization	No data available
Serious eye damage/eye irritation	Potassium sulfate may contain impurity potassium hydrogen sulfate derived from the production process. The classification and labelling described below is applicable for Potassium sulfate containing process impurity potassium hydrogen sulfate in concentrations $\geq 3\%$ and $\leq 15\%$. Therefore the product is classified as "Causes serious eye damage".
Skin Corrosion/Irritation	No skin irritation was shown with potassium sulfate containing 15% of potassium hydrogen sulfate in an in vitro skin irritation study with human skin according to the EU guideline B46. Therefore no classification for skin irritation or skin corrosion is considered to be necessary.
Skin Sensitization	No data available
Mutagenicity	No data available
Reproductive Toxicity	This product contains more than 0.1% of a substance classified as a Reproductive Toxicant (Repr. Tox.). May damage fertility or the unborn child.
Carcinogenicity	No data available
Specific target organ toxicity - Single exposure	No data available
Specific target organ toxicity - Repeated exposure	No data available

Mixture versus substance information Mixture

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties	No endocrine disruptors present in concentrations $\geq 0.1\%$
11.2.2. Other information	Not applicable

SECTION 12: Ecological information

12.1. Toxicity	Not considered to be harmful to aquatic life
<u>Sulfuric acid dipotassium salt</u>	
96-Hour LC50	Pimephales promelas: 680 mg/l
WGK Classification (AwSV)	255 WGK: 1
<u>Potassium hydrogen sulfate (impurity)</u>	
LC50	Lecuciscus idus; 3,500 mg/l

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WGK Classification (AwSV) 343 WGK: 1**Boric acid****Aquatic toxicity**

Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 79.7 mg/l - Duration h: 96 - Notes:

Pimephalespromelas (freshwater fish)

Endpoint: LC50 - Species: Fish 74 mg/l - Duration h: 96 - Notes: Dab L.

limanda(marine fish)

Endpoint: LC50 - Species: Aquatic invertebrates - Duration h: 4d - Notes: 64 - 544 mg/L

Endpoint: LC50 - Species: Aquatic invertebrates - Duration h: 48 - Notes: 91 - 165 mg/L

Endpoint: NOEC - Species: Aquatic invertebrates 103 mg/l - Duration h: 4d

Endpoint: EC50 - Species: Algae - Duration h: 72 - Notes: 40.2 - 66 mg/L

Endpoint: NOEC - Species: Algae - Duration h: 72 - Notes: 17.5 - 27.9 mg/L

Endpoint: EC10 - Species: Algae - Duration h: 72 - Notes: 24.5 - 50.7 mg/L

Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish - Duration h: 32d - Notes: 11.2 - 44.5 mg/L

Endpoint: LOEC - Species: Fish 23 mg/l - Duration h: 32d

Endpoint: NOEC - Species: Fish 6.4 mg/l - Duration h: 34d

Endpoint: NOEC - Species: Aquatic invertebrates - Duration h: 42d - Notes: 6.6 - 25.9mg/L

Endpoint: NOEC - Species: Aquatic invertebrates - Duration h: 28d - Notes: 16.6 - 43.3mg/L

Endpoint: NOEC - Species: Aquatic invertebrates - Duration h: 21d - Notes: 6 - 34.2mg/L

Endpoint: NOEC - Species: Aquatic invertebrates - Duration h: 14d - Notes: 13.8 - 14.3mg/L

Endpoint: NOEC - Species: Aquatic invertebrates 33.1 mg/l - Duration h: 12d

Persistence / Degradability

There is no need to carry out the study if the substance is inorganic.

Bioaccumulative potential:

Not relevant for inorganic substances

Mobility

Soluble in water and permeable through normal soil. - Notes: Log Pow: - 1.09 (22°C)

WGK Classification (AwSV) 315 WGK: 1**12.2. Persistence and degradability**

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting propertiesNo endocrine disruptors present in concentrations $\geq 0.1\%$ **12.7. Other Adverse Effects**

None known

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

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Disposal Methods

If uncontaminated, recover and reuse as product. If contaminated with other materials, the nature and extend of contamination may require use of specialized disposal methods. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Product residue may remain in empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

Mode of Transportation (Road, Water, Air, Rail)

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number or ID number	None
14.2. UN proper shipping name	None
14.3. Transport hazard class(es)	None
14.4. Packing group	None
14.5. Environmental hazards	No
14.6. Special precautions for user	Not applicable

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

Global Inventories

Pure substance/mixture Mixture

Chemical Name	CAS Number	Canada (DSL)	Mexico	TSCA: United States
Sulfuric acid dipotassium salt	7778-80-5	Present (DSL)	Y	Present
Potassium hydrogen sulfate (impurity)	7646-93-7	Present (DSL)	Y	Present
Boric acid	10043-35-3	Y	Y	A

Y: Complies ; A: Active ; - / N: Exempt / Not Listed

EPA**Boric acid****SARA 302**

This material does not contain any components with a section 302 EHS TPQ.

SARA 304

Not Listed

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the

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threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

CWA (Clean Water Act)

Not regulated

CAA (Clean Air Act)

Not regulated

U.S. State Right-to-Know Regulations

Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Sulfuric acid dipotassium salt	7778-80-5	N	N	N	N	N
Potassium hydrogen sulfate (impurity)	7646-93-7	N	N	N	1569	N
Boric acid	10043-35-3	N	N	N	N	N

Y: Listed ; N: Not Listed

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any Proposition 65 chemicals

CANADA**WHMIS**

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

Boric acid

H360

SECTION 16: Other information**Prepared by**Miller Chemical and Fertilizer, A Huber Company, Global Regulatory Affairs
info@millerchemical.com**Printer ID:**

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Reason for Version

OSHA (Occupational Safety and Health Administration of the US Department of Labor).

Abbreviations and acronyms

OSHA (Occupational Safety and Health Administration of the US Department of Labor)
WHMIS (Workplace Hazardous Materials Information System)
GHS (Globally Harmonized System)
IARC (International Agency for Research on Cancer)
PPE (Personal Protection Equipment)
TWA (Time-Weighted Average)
TLV® (Threshold Limit Value)
STEL (Short Term Exposure Limit)
RQ (Reportable Quantity) (RQ/% in mixture)
DOT (Department of Transportation)
TDG (Transport of Dangerous Goods) Canada
IATA (International Air Transport Association)
IMDG (International Maritime Dangerous Goods)
ICAO (International Civil Aviation Organization)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and

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may not be valid for such material used in combination with any other materials or in any process,
unless specified in the text

End of Safety Data Sheet