B20 Electrolyte

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 4/21/2021
Revision date: 5/14/2021
Version: 2.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : B20 Electrolyte

1.2. Recommended use and restrictions on use

Recommended use : Electrolyte solution

1.3. Supplier

Manufacturer
Marking Methods
301 S Raymond Avenue
Alhambra, CA 91803-1531
T (626) 282 8823

1.4. Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Ox. Liq. 2
Acute Tox. 4 (Oral)
Acute Tox. 3 (Dermal)
Acute Tox. 3 (Inhalation:vapour)
Skin Corr. 1B
Eye Dam. 1
Resp. Sens. 1
Skin Sens. 1
Muta. 1B
Carc. 1A
Repr. 2
STOT RE 1
HHNOC 1

2.2. GHS Label elements, including precautionary statements

GHS labelling

Hazard pictograms (GHS) :

Signal word (GHS) : Danger
Hazard statements (GHS) : May intensify fire; oxidiser.
Harmful if swallowed.
Toxic in contact with skin or if inhaled
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

		Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Causes severe damage to the respiratory tract
Precautionary statements (GHS)	:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles... Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. [In case of inadequate ventilation] wear respiratory protection. If swallowed: rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. If exposed or concerned: Get medical advice/attention. Call a poison center or doctor if you feel unwell. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

1.25% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Chromium trioxide	CAS-No.: 1333-82-0	5 – 10
2-Ethylhexyl sodium sulfate	CAS-No.: 126-92-1	1 – 5

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.

First-aid measures after 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.

First-aid measures after ingestion : IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Toxic if inhaled. May cause burns to the respiratory tract. Causes severe damage to the respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Toxic in contact with skin. Causes severe skin burns. Symptoms may include irritation, redness, pain, blisters, serious skin burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/effects after ingestion : Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic symptoms : May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard : May intensify fire; oxidiser. Products of combustion may include, and are not limited to: oxides of carbon. Nitrogen oxides. Sulfur oxides. Metal oxides. May release corrosive or irritating fumes.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire remotely due to the risk of explosion. Move containers away from the fire area if this can be done without risk. Cool closed containers exposed to fire with water spray.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.1.1. For non-emergency personnel

Emergency procedures : Isolate the hazard area. Deny entry to unnecessary and unprotected personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Move containers from spill area. Neutralize with : sodium carbonate. sodium bicarbonate. Sodium hydroxide. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Do not flush into surface water or sewer system. Wear recommended personal protective equipment.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion.

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. When using do not eat, drink or smoke. Do not spray on an open flame or other ignition source. Eliminate sources of ignition. Use only non-sparking tools. Proper grounding procedures to avoid static electricity should be followed. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Anyone with a history of asthma, allergies, chronic or periodic respiratory problems must on no account use these preparations. Avoid exposure during pregnancy. Use only outdoors or in a well-ventilated area. Handle and open container with care.

Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep out of the reach of children. Store locked up. Keep only in the original container. Keep in fireproof place. Store away from direct sunlight or other heat sources. Keep away from clothing and other combustible materials. Keep away from food, drink and animal feedingstuffs. Keep away from reducing agents. Alkalis. Do not store in unlabelled containers. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store tightly closed in a dry, cool and well-ventilated place.

Incompatible materials : Heat sources. combustible materials. Alkalis.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

B20 Electrolyte

No additional information available

Chromium trioxide (1333-82-0)

USA - IDLH - Occupational Exposure Limits

IDLH	15 mg/m³ (Chromic acid and chromates)

USA - NIOSH - Occupational Exposure Limits

NIOSH REL TWA	0.0002 mg/m³ (Chromic acid and Chromates)

2-Ethylhexyl sodium sulfate (126-92-1)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves resistant to chemical penetration

Eye protection:

Wear eye/face protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance	:	yellow to red. Liquid.
Colour	:	yellow to red
Odour	:	No data available
Odour threshold	:	No data available
pH	:	1.6
Melting point	:	0 °C (32 °F)
Freezing point	:	No data available
Boiling point	:	100 °C (212 °F)
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Not flammable.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	> 1 [Air = 1]
Relative density	:	1.06
Solubility	:	completely soluble.
Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	May intensify fire; oxidiser.

9.2. Other information

VOC content	:	2 % (w/w)
Volatility	:	0 % (v/v)

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions. May intensify fire; oxidiser.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Direct sunlight. Sources of ignition. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents. Acids. Organic Substances.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Nitrogen oxides. Sulfur oxides. Metal oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Harmful if swallowed.

Acute toxicity (dermal) : Toxic in contact with skin.
Acute toxicity (inhalation) : Toxic if inhaled.

B20 Electrolyte	
ATE CA (oral)	1242.075 mg/kg bodyweight
ATE CA (Dermal)	912 mg/kg bodyweight
ATE CA (vapours)	3.472 mg/l/4h
Unknown acute toxicity (GHS CA)	1.25% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

Chromium trioxide (1333-82-0)	
LD50 oral rat	80 mg/kg
LD50 dermal rabbit	57 mg/kg
LC50 inhalation rat	217 mg/m³ (Exposure time: 4 h)
ATE CA (oral)	80 mg/kg bodyweight
ATE CA (Dermal)	57 mg/kg bodyweight
ATE CA (Gases (except aerosol dispensers and lighters))	100 ppmv/4h
ATE CA (vapours)	0.217 mg/l/4h
ATE CA (dust,mist)	0.217 mg/l/4h

2-Ethylhexyl sodium sulfate (126-92-1)	
LD50 oral rat	4 g/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
ATE CA (oral)	4000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.
pH: 1.6
Serious eye damage/irritation : Causes serious eye damage.
pH: 1.6
Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity : May cause genetic defects.
Carcinogenicity : May cause cancer.

Chromium trioxide (1333-82-0)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogens
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified.

Chromium trioxide (1333-82-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Chromium trioxide (1333-82-0)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

2-Ethylhexyl sodium sulfate (126-92-1)	
LOAEL (oral, rat, 90 days)	1016 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (oral, rat, 90 days)	488 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified.

Symptoms/effects after inhalation : Toxic if inhaled. May cause burns to the respiratory tract. Causes severe damage to the respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Toxic in contact with skin. Causes severe skin burns. Symptoms may include irritation, redness, pain, blisters, serious skin burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/effects after ingestion : Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic symptoms : May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Chromium trioxide (1333-82-0)	
LC50 - Fish [1]	40 mg/l (Exposure time: 96 h - Species: Colisa fasciatus [static])

2-Ethylhexyl sodium sulfate (126-92-1)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	483 mg/l Test organisms (species): Daphnia magna
LOEC (chronic)	6.86 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	1.4 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	≥ 1.357 mg/l Test organisms (species): Pimephales promelas Duration: '42 d'

12.2. Persistence and degradability

B20 Electrolyte	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

B20 Electrolyte	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. The generation of waste should be avoided or minimized wherever possible. Avoid dispersal or spilled material and runoff and contact with soil, waterways, drains and sewers.

Additional information : Hazardous waste due to potential risk of explosion. Empty containers may contain residues which are hazardous.

SECTION 14: Transport information

14.1. UN number

UN-No.(DOT/TDG) : UN3098

14.2. UN proper shipping name

Proper Shipping Name (DOT/TDG) : Oxidizing liquid, corrosive, n.o.s. (Chromium trioxide ; Potassium nitrate)

14.3. Transport hazard class(es)

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

Class (DOT/TDG) : 5.1 (8)

Hazard labels (DOT/TDG) :

14.4. Packing group

Packing group (DOT/TDG) II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Chromium trioxide (1333-82-0)	
EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Chromium trioxide(1333-82-0)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
Potassium nitrate(7757-79-1)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Massachusetts - Right To Know List

SECTION 16: Other information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Revision date : 05/14/2021

Other information : None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.