



SAFETY DATA SHEET

1. Identification

Product identifier	Champions Choice Trace Mineral with and without EDDI
Other means of identification	
SDS number	NC12
Synonyms	Champions Choice® Trace Mineral with and without EDDI. * Champions Choice® Trace Mineral Salt (Loose, Blocks, Bricks and Spools). * Sodium Chloride (Salt) with Trace Minerals. * Champions Choice® Trace Mineral Salt with EDDI (Loose and Blocks).
Recommended use	Salt may be intended for food or animal feed (agricultural) as well as several industrial applications including deicing and water conditioning.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	Cargill Incorporated
Address	Minneapolis, MN 55440
Telephone	1-888-385-7258
Website	www.cargillsalt.com
Emergency telephone number	CHEMTREC (800) 424-9300

2. Hazard(s) identification

Physical hazards	Not classified.
Health Hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Sodium Chloride	7647-14-5	98.236-98.212
Ferrous Carbonate	563-71-3	0.526
Zinc oxide	1314-13-2	0.486
Manganese oxide	1344-43-0	0.334
Iron oxide	1309-37-1	0.252
Cupric sulfate	7758-98-7	0.12
White mineral oil (petroleum)	8042-47-5	0.02

Ethylenediamine Dihydriodide (EDDI)	5700-49-2	0-0.035
Cobalt carbonate	513-79-1	0.0108
Calcium Iodate	7789-80-2	0-0.0112
Artificial Flavor		0.005

4. First-aid measures

Inhalation	If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Give one or two glasses of water if patient is alert and able to swallow. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	This product is not flammable or combustible.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Avoid inhalation of dust from the spilled material. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Avoid release to the environment. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Avoid discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling	Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with eyes. Avoid contact with water and moisture. Keep away from strong acids. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Becomes hygroscopic at 70-75% relative humidity. Avoid humid or wet conditions as product will cake and become hard.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Iron oxide (CAS 1309-37-1)	PEL	10 mg/m ³	Fume.
Manganese oxide (CAS 1344-43-0)	Ceiling	5 mg/m ³	
White mineral oil (petroleum) (CAS 8042-47-5)	PEL	5 mg/m ³	Mist.
Zinc oxide (CAS 1314-13-2)	PEL	5 mg/m ³	Fume.
		5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Cobalt carbonate (CAS 513-79-1)	TWA	0.02 mg/m ³	
Ferrous Carbonate (CAS 563-71-3)	TWA	1 mg/m ³	
Iron oxide (CAS 1309-37-1)	TWA	5 mg/m ³	Respirable fraction.
Manganese oxide (CAS 1344-43-0)	TWA	0.1 mg/m ³	Inhalable fraction.
		0.02 mg/m ³	Respirable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Respirable fraction.
	TWA	2 mg/m ³	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Cupric sulfate (CAS 7758-98-7)	TWA	1 mg/m ³	Dust and mist.
Ferrous Carbonate (CAS 563-71-3)	TWA	1 mg/m ³	
Iron oxide (CAS 1309-37-1)	TWA	5 mg/m ³	Dust and fume.
Manganese oxide (CAS 1344-43-0)	STEL	3 mg/m ³	Fume.
	TWA	1 mg/m ³	Fume.
White mineral oil (petroleum) (CAS 8042-47-5)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Zinc oxide (CAS 1314-13-2)	Ceiling	15 mg/m ³	Dust.
	STEL	10 mg/m ³	Fume.
	TWA	5 mg/m ³	Fume.
		5 mg/m ³	Dust.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Cobalt carbonate (CAS 513-79-1)	15 µg/l	Cobalt	Urine	*
	1 µg/l	Cobalt	Blood	*

* - For sampling details, please see the source document.

Appropriate engineering controls Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.

Individual protection measures, such as personal protective equipment

Eye/face protection Unvented, tight fitting goggles should be worn in dusty areas.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other	Wear suitable protective clothing.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Reddish-Brown granular solid, compressed 50-pound blocks, 4-pound bricks or 3-ounce spools.
Physical state	Solid.
Form	Colored crystalline solid.
Color	Greenish-brown.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	1473.8 °F (801 °C)
Initial boiling point and boiling range	2669 °F (1465 °C) (760 mmHg) (760 mm Hg)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	2.4 mm Hg (1376.6 °F (747 °C))
Vapor density	Not available.
Relative density	2.16 (H ₂ O = 1)
Solubility(ies)	
Solubility (water)	26.4 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	70 - 83 lb/ft ³
Molecular formula	NaCl and Trace Minerals
Molecular weight	58.44
pH in aqueous solution	6.7 - 10

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Incompatible materials	Avoid contact with strong acids. Becomes corrosive to metals when wet.
Hazardous decomposition products	At high temperatures, decomposition may result in formation of oxides of the trace minerals present in the salt.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Prolonged or repeated skin contact may cause irritation. If applied to damaged skin, absorption can occur with effects similar to those via ingestion.
Eye contact	Dust in the eyes will cause irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Eye and skin contact: Exposure may cause temporary irritation, redness, or discomfort. For ingestion, consuming less than a few grams would not be harmful. The following effects were observed after ingesting an excessive quantity: nausea and vomiting, diarrhea, cramps, restlessness, irritability, dehydration, water retention, nose bleed, gastrointestinal tract damage, fever, sweating, sunken eyes, high blood pressure, muscle weakness, dry mouth and nose, shock, cerebral edema (fluid on brain), pulmonary edema (fluid in lungs), blood cell shrinkage, and brain damage (due to dehydration of brain cells). Death is generally due to cardiovascular collapse or CNS damage.

Information on toxicological effects

Acute toxicity In some cases of confirmed hypertension, ingestion may result in elevated blood pressure.

Components	Species	Test Results
Calcium Iodate (CAS 7789-80-2)		
Acute		
<i>Oral</i>		
LD50	Mouse	358.6667 mg/kg
Cobalt carbonate (CAS 513-79-1)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 5.08 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rabbit	250 mg/kg
	Rat	434 mg/kg
Ferrous Carbonate (CAS 563-71-3)		
Acute		
<i>Oral</i>		
LD50	Mouse	3800 mg/kg
Manganese oxide (CAS 1344-43-0)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 5.35 mg/l, 4 Hours
Sodium Chloride (CAS 7647-14-5)		
Acute		
<i>Oral</i>		
LD50	Mouse	4000 mg/kg
	Rat	3000 mg/kg
<i>Other</i>		
LD50	Mouse	2602 mg/kg
White mineral oil (petroleum) (CAS 8042-47-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours

Components	Species	Test Results
<i>Inhalation</i> LC50	Rat	2.18 mg/l, 4 Hours
Zinc oxide (CAS 1314-13-2)		
Acute <i>Inhalation</i> LC50	Rat	> 5700 mg/m3
<i>Oral</i> LD50	Mouse	2000 - 5000 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Dust in the eyes will cause irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Iron oxide (CAS 1309-37-1)	3 Not classifiable as to carcinogenicity to humans.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.	

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components	Species	Test Results
Cobalt carbonate (CAS 513-79-1)		
Aquatic		
Fish	LC50	Mummichog (<i>Fundulus heteroclitus</i>) > 1000 mg/l, 96 hours
Cupric sulfate (CAS 7758-98-7)		
Aquatic		
Crustacea	EC50	Water flea (<i>Bosmina longirostris</i>) 0.0037 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 0.0089 - 0.0138 mg/l, 96 hours
Sodium Chloride (CAS 7647-14-5)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 340.7 - 469.2 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>) 4747 - 7824 mg/l, 96 hours
Zinc oxide (CAS 1314-13-2)		
Aquatic		
Crustacea	LC50	Water flea (<i>Daphnia magna</i>) 0.098 mg/l, 48 hours
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Other adverse effects	None known.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
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.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations	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.
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TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Cobalt carbonate (CAS 513-79-1)	LISTED
Cupric sulfate (CAS 7758-98-7)	LISTED
Manganese oxide (CAS 1344-43-0)	LISTED
Zinc oxide (CAS 1314-13-2)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	No
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SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Cobalt carbonate (CAS 513-79-1)
Manganese oxide (CAS 1344-43-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
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US state regulations

US. Massachusetts RTK - Substance List

Cupric sulfate (CAS 7758-98-7)
Iron oxide (CAS 1309-37-1)
White mineral oil (petroleum) (CAS 8042-47-5)
Zinc oxide (CAS 1314-13-2)

US. New Jersey Worker and Community Right-to-Know Act

Cobalt carbonate (CAS 513-79-1)
Cupric sulfate (CAS 7758-98-7)
Iron oxide (CAS 1309-37-1)
Manganese oxide (CAS 1344-43-0)
White mineral oil (petroleum) (CAS 8042-47-5)
Zinc oxide (CAS 1314-13-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Cupric sulfate (CAS 7758-98-7)
Ferrous Carbonate (CAS 563-71-3)
Iron oxide (CAS 1309-37-1)
White mineral oil (petroleum) (CAS 8042-47-5)
Zinc oxide (CAS 1314-13-2)

US. Rhode Island RTK

Cobalt carbonate (CAS 513-79-1)
Cupric sulfate (CAS 7758-98-7)
Manganese oxide (CAS 1344-43-0)
Zinc oxide (CAS 1314-13-2)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	14-September-2014
Revision date	-
Version #	01
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0 Personal protection: A

Disclaimer

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It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations. It is also the responsibility of the user to maintain a safe workplace. The user should consider the health hazards and safety information provided herein as a guide and should take the necessary steps to instruct employees and to develop work practice procedures to ensure a safe work environment.

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