



John Deere Cool-Gard™ II Premix

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 11/05/2018 Version: 1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Form : Mixture
Trade name : John Deere Cool-Gard™ II Premix
Product code : TY26575, TY26576, TY26577, TY26578, TY26588, TY27475, TY27530

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

Use of the substance/mixture : Engine Coolant and Anti-freeze

1.3. Details of the supplier of the safety data sheet

MANUFACTURER:

Northland Products
1000 Rainbow Drive
Waterloo, IA 50704

Tel: +1-319-234-5585
+1-800-772-1724

SUPPLIER:

John Deere Canada ULC
295 Hunter Road
Grimsby, ON L3M 4H5

E-mail: ESOC@JohnDeere.com

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300
Chemtrec (Outside USA) +1 703-527-3887 (24 hours)
Supplier: +1 905-945-9281 or 1-800-822-8262 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Acute toxicity (oral), Category 4 H302
Repr. Tox. 1B H360
Specific target organ toxicity (repeated exposure) Category 2 H373
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA) :



Signal word (GHS-CA) :

Danger

Hazard statements (GHS-CA) :

H302 - Harmful if swallowed
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

Precautionary statements (GHS-CA) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust, fume, mist, spray, vapours
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves, eye protection, protective clothing
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P330 - Rinse mouth
P308 + P313 IF exposed or concerned: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell
P405 - Store locked up
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

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2.3. Other hazards

other hazards which do not result in classification : Spills of this product present a serious slipping hazard.

2.4. Unknown acute toxicity (GHS-CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-CA classification
Ethylene glycol	(CAS No) 107-21-1	45 - 50	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
disodium tetraborate pentahydrate, borax pentahydrate	(CAS No) 12179-04-3	0 – 0.5	Repr. Tox. 1B, H360

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Assure fresh air breathing. If breathing is difficult, give oxygen. In all cases of doubt, or when symptoms persist, seek medical advice.
- First-aid measures after skin contact : Rinse and then wash skin thoroughly with water and soap. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment. Get medical advice/attention.
- First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain emergency medical attention.

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

- Symptoms/injuries : Causes damage to organs (kidneys) (Oral).
- Symptoms/injuries after inhalation : Long-term (repeated). Inhalation of mist or aerosol may cause irritation to nose and throat.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation. Swelling and inflammation.
- Symptoms/injuries after ingestion : Harmful if swallowed. Ingestion may cause nausea and vomiting. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. In the case of extreme exposure there is a risk of severe metabolic acidosis and haemorrhagy. Death in extreme cases. Symptoms may be delayed.

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

- Note to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Symptoms may be delayed.

SECTION 5: Firefighting measures

5.1. Suitable extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water fog. Water spray. Sand.

5.2. Unsuitable extinguishing media

- Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.3. Specific hazards arising from the hazardous product

- Fire hazard : When heated above the flash point, releases vapours. Gas/vapours, flammable. Combustion products may include carbon oxides and irritating fumes.
- Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.4. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control. Gases/vapours, toxic.
- Firefighting instructions : Exercise caution when fighting any chemical fire. Do not use direct water stream; may spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Cool closed containers exposed to fire with water spray. Prevent fire-fighting water from entering environment.

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- Protective equipment for firefighters : Wear approved self-contained breathing apparatus (set on positive pressure mode). Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Special danger of slipping by leaking/spilling product. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Spilled material may present a slipping hazard. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ensure adequate ventilation, especially in confined areas.

6.2. Methods and material for containment and cleaning up

- Methods for cleaning up : Approach from upwind. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Gather the product and place it in a spare container that has been suitably labelled. Consult the appropriate authorities about waste disposal. Large spills: Contain large spills to maximize product recovery or disposal. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Shovel into suitable and closed container for disposal. Minimize generation of dust. Store away from other materials. Ensure all national/local regulations are observed.

6.3. Reference to other sections

- Refer to section 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Special danger of slipping by leaking/spilling product.
- Precautions for safe handling : Avoid contact with skin, eyes and clothes. Avoid breathing dust/fume/gas/mist/vapours/spray. Provide good ventilation in process area to prevent formation of vapour. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Empty container retains product residue. Use and store away from all naked flames, heat sources or working electrical appliances. Do not smoke.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Discard contaminated leather articles. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Provide adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.
- Storage conditions : Keep out of reach of children. Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place away from highly flammable substances. Keep away from open flames, hot surfaces and sources of ignition. Keep out of direct sunlight. Protect from moisture. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
- Incompatible materials : Refer to Section 10 on Incompatible Materials.
- Conditions to avoid : Sources of ignition.
- Storage area : Store in dry, cool, well-ventilated area. Keep away from heat and direct sunlight.

7.3. Specific end use(s)

- No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethylene glycol (107-21-1)		
Alberta	OEL Ceiling (mg/m ³)	100 mg/m ³
British Columbia	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol)
British Columbia	OEL Ceiling (ppm)	50 ppm (vapour)
British Columbia	OEL STEL (mg/m ³)	20 mg/m ³ (particulate)
British Columbia	OEL TWA (mg/m ³)	10 mg/m ³ (particulate)
Manitoba	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)

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Ethylene glycol (107-21-1)		
New Brunswick	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol)
New Foundland & Labrador	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
Nova Scotia	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
Nunavut	OEL Ceiling (mg/m ³)	127 mg/m ³ (vapour)
Nunavut	OEL Ceiling (ppm)	50 ppm (vapour)
Nunavut	OEL STEL (mg/m ³)	20 mg/m ³ (particulate)
Nunavut	OEL TWA (mg/m ³)	10 mg/m ³ (particulate)
Northwest Territories	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol)
Ontario	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
Prince Edward Island	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
Québec	PLAFOND (mg/m ³)	127 mg/m ³ (mist and vapour)
Québec	PLAFOND (ppm)	50 ppm (mist and vapour)
Saskatchewan	OEL Ceiling (mg/m ³)	100 mg/m ³ (aerosol)
Yukon	OEL STEL (mg/m ³)	20 mg/m ³ (particulate)
Yukon	OEL STEL (ppm)	10 ppm (particulate)
Yukon	OEL TWA (mg/m ³)	10 mg/m ³ (particulate)
Yukon	OEL TWA (ppm)	100 ppm (vapour)

disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)		
Alberta	OEL STEL (ppm)	3 ppm
Alberta	OEL TWA (mg/m ³)	1 mg/m ³
British Columbia	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable)
British Columbia	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable)
Manitoba	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable fraction)
Manitoba	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable fraction)
New Brunswick	OEL TWA (mg/m ³)	5 mg/m ³
New Foundland & Labrador	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable fraction)
New Foundland & Labrador	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable fraction)
Nova Scotia	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable fraction)
Nova Scotia	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable fraction)
Nunavut	OEL STEL (mg/m ³)	10 mg/m ³
Nunavut	OEL TWA (mg/m ³)	5 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable fraction)
Northwest Territories	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable fraction)
Ontario	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable)
Ontario	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable)
Prince Edward Island	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable fraction)
Prince Edward Island	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable fraction)
Québec	VEMP (mg/m ³)	5 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	6 mg/m ³ (inhalable fraction)
Saskatchewan	OEL TWA (mg/m ³)	2 mg/m ³ (inhalable fraction)

8.2. Exposure controls

Appropriate engineering controls

: A washing facility/water for eye and skin cleaning purposes should be present. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Ensure adequate ventilation.

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Personal protective equipment : Avoid all unnecessary exposure. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. For certain operations, additional Personal Protection Equipment (PPE) may be required. Gloves. Protective clothing. Protective goggles.



Hand protection : Wear protective gloves. Nitrile-rubber protective gloves. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection : Chemical goggles or safety glasses. with side-shields. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Chemical resistant suit. Wear rubber boots. Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Use a properly fitted, air-purifying or air-fed respirator if necessary.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear. viscous liquid.
Colour	: Gold.
odour	: Odourless.
Odour threshold	: 25 ppm
pH	: 7.8 - 8.5
Relative evaporation rate (butyl acetate=1)	: 0.01
Melting point	: -13 °C (9 °F)
Freezing point	: -37 °C (-34 °F)
Boiling point	: 108 °C (227 °F)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: < 0.008 kPa
Relative vapour density at 20 °C	: 2.1
Relative density	: 1.07 - 1.08 g/cm ³
Solubility	: Water: completely soluble
Log Pow	: -1.07
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 21 mPa.s
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : 49.5

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	: Stable at normal conditions.
Chemical stability	: Stable at normal conditions.
Possibility of hazardous reactions	: Hazardous polymerization will not occur.
Conditions to avoid	: Heat sources.
Incompatible materials	: Oxidizing agents. Strong acids. Strong bases. Contact with Aluminium, Zinc and Tin can cause formation of hydrogen that together with air can be a combustible mixture.
Hazardous decomposition products possible	: Unburned hydrocarbons. Fumes. Carbon monoxide. Carbon dioxide.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

John Deere Cool-Gard™ II Premix	
ATE CLP (oral)	500.000 mg/kg bodyweight
Ethylene glycol (107-21-1)	
LD50 oral rat	4000 mg/kg
LD50 dermal rabbit	9530 µl/kg
ATE CLP (oral)	500.000 mg/kg
disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)	
LC50 inhalation rat	2 mg/L
LD50 dermal rabbit	2000 mg/kg
LD50 oral rat	3305 mg/kg

Likely routes of exposure	: Ingestion, Inhalation, Skin and Eye contact
Acute toxicity (oral)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Causes skin irritation. pH: 7.8 - 8.5
Serious eye damage/irritation	: Causes serious eye irritation. pH: 7.8 - 8.5
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: May damage fertility or the unborn child
Specific target organ toxicity (single exposure)	: Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (lungs) through prolonged or repeated exposure (oral).
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

SECTION 12: Ecological information

12.1. Toxicity

Ethylene glycol (107-21-1)	
LC50 fishes 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and degradability

John Deere Cool-Gard™ II Premix	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

John Deere Cool-Gard™ II Premix	
Log Pow	-1.07
Bioaccumulative potential	Not established.

Ethylene glycol (107-21-1)	
Log Pow	-1.93

12.4. Mobility in soil

John Deere Cool-Gard™ II	
Log Pow	-1.07

Ethylene glycol (107-21-1)	
Log Pow	-1.93

12.5. Other adverse effects

GWPmix comment	: No known effects from this product.
Other information	: Avoid release to the environment.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Sewage disposal recommendations : Prevent entry to sewers and public waters. An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.
- Waste disposal recommendations : Dispose of contents/container to comply with applicable local, national and international regulations. Liquid product may not be disposed of with household waste or landfilled. Do not allow to enter into drains/waters or in the soil. Do not re-use empty containers. Since emptied containers retain product residue, follow label warnings even after container is emptied. Dispose in a safe manner in accordance with local/national regulations. Dispose of at an licensed site.
- Additional information : Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Empty container retains product residue.
- Ecology - waste materials : Prevent contamination of soil, drains and surface waters. Avoid release to the environment.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

TDG

Not regulated for transport

14.2. Transport information/DOT

DOT

Not regulated for transport

14.3. Air and sea transport

IMDG

Not regulated for transport

IATA

Not regulated for transport

SECTION 15: Regulatory information

15.1. National regulations

Ethylene glycol (107-21-1)

Listed on the Canadian DSL (Domestic Substances List)

disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Ethylene glycol (107-21-1)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)

disodium tetraborate pentahydrate, borax pentahydrate (12179-04-3)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

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SECTION 16: Other information

Date of issue : 11/05/18
Other information : Updated Classification to Danger (H360)

Full text of H-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Repr. Tox. 1B	Reproductive toxicity Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

SDS Canada (GHS)

The information presented herein has been compiled from sources considered to be dependable and is accurate to the best of Northland Products Company's knowledge; however, Northland Products Company makes no warranty whatsoever, expressed or implied, of merchantability or fitness for the particular purpose, regarding the accuracy of such data or the results to be obtained from the use thereof. Northland Products Company assumes no responsibility for the injury to the recipient or to third party persons or for any damage to any property and recipient assumes all such risks