

PRODUCT: TRIPLE C #570

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: T DONOVAN & SON (1997) LTD.
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PRODUCT NAME: Triple C #570.

CHEMICAL FORMULA: NaNO₂

CHEMICAL FAMILY: Sodium Nitrite.

MOLECULAR WEIGHT: 68.995 g/mol

MATERIAL USE: Corrosion inhibitor for closed systems.

EMERGENCY PHONE NUMBER: (613)-996-6666

SECTION 02: HAZARDS IDENTIFICATION



SIGNAL WORD: DANGER.

HAZARD CLASSIFICATION: Acute Toxicity - Category 3 (Oral).
Eye Irritant - Category 2A.
Skin Irritant - Category 2.
Aquatic Acute - Category 1

HAZARD STATEMENT: **H272:** May intensify fire; oxidizer.
H290: May be corrosive to metals.
H301: Toxic if swallowed.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.
H360: May damage fertility. May damage the unborn child.
H400: Very toxic to aquatic life.

PRECAUTIONARY STATEMENT: **P264:** Wash contaminated skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
P321: Specific treatment (see Section 4 on this SDS).
P330: Rinse mouth.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.
P401: Store in accordance with local, Provincial, Federal, and National Regulations.
P501: Dispose of contents/container in accordance with national regulations.

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SECTION 02: HAZARDS IDENTIFICATION

OTHER HAZARDS: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Ingestion may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and, possibly shock.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS #	WT. %
Sodium Nitrite.	7632-00-0	25-30%
Glycerin	56-81-5	5-10%
Disodium Tetraborate Decahydrate	1303-96-4	1-5%

Definitions:

CAS - Chemical Abstract Service registry number.

WT. % - Percent Weight.

SECTION 04: FIRST AID MEASURES

GENERAL ADVICE: Move affected person to fresh air at once. Get medical attention if any discomfort continues.

IF INHALED: Move affected person to fresh air at once. Get medical attention. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

IN CASE OF SKIN CONTACT: Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

IN CASE OF EYE CONTACT: Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

IF SWALLOWED: Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. Remove affected person from source of contamination. Give plenty of water to drink. Get medical attention immediately. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical.

THE MOST IMPORTANT SYMPTOMS AND EFFECTS, WHETHER ACUTE OR DELAYED:
 Inhalation: No specific symptoms known.
 Ingestion: Ingestion of large amounts may result in severe abdominal pain, vomiting, diarrhoea, convulsions and collapse. In severe cases, methemoglobinemia (greyish-blue discolouration of the skin and mucous membranes) may result.
 Skin contact: Prolonged contact may cause redness, irritation and dry skin.
 Eye contact: May cause severe eye irritation.

NOTES FOR THE DOCTOR: Contact with acids may liberate nitrous acid, nitrogen dioxide, nitric oxide (HNO₂, NO₂, NO) Risk of nitrosamine formation if ingested.

SECTION 05: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Use fire-extinguishing media suitable for the surrounding fire.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Specific hazards: No unusual fire or explosion hazards noted.
 Hazardous Combustion Products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

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SECTION 05: FIRE FIGHTING MEASURES

ADVICE FOR FIREFIGHTERS: Protective actions during firefighting: No specific firefighting precautions known.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: See Section 8: Exposure Controls/Personal Protection for personal protection.

ENVIRONMENTAL PRECAUTIONS: Avoid discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Observe all Federal, Provincial, and local regulations.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP: Absorb in vermiculite, dry sand or earth and place into containers. Avoid the spillage or runoff entering drains, sewers or watercourses. Wash thoroughly after dealing with a spillage. Flush away spillage with plenty of water.

REFERENCE TO OTHER SECTIONS: Collect and dispose of spillage as indicated in Section 13: Disposal Considerations.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Avoid spilling. Avoid contact with skin and eyes. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

CONDITIONS FOR SAFE STORAGE: Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container.
Storage class: Chemical storage.

SPECIFIC END USE(S): The identified uses for this product are detailed in Section 1, above. Use as directed by supplier.

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT(S)	TWA	WEL
Disodium Tetraborate Decahydrate	8 hr (Long-Term Exposure Limit)	5 mg/m ³

Definitions:
WEL - Workplace Exposure Limit.
TWA - Time Weighted Average.

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation.

EYE/FACE PROTECTION: The following protection should be worn: Chemical splash goggles.

HAND PROTECTION: Use protective gloves. Rubber (natural, latex). Neoprene. Nitrile rubber. Polyethylene. Polyvinyl chloride (PVC).

SKIN AND BODY PROTECTION: Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

HYGIENE MEASURES: Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

RESPIRATORY PROTECTION: No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Colourless to pale yellow liquid.

ODOUR: Characteristic.

ODOUR THRESHOLD: No Data Available.

PH: pH (concentrated solution): 11 Approximately.

MELTING POINT/FREEZING POINT: No Data Available.

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SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	No Data Available.
FLASH POINT, METHOD:	No Data Available.
EVAPORATION RATE:	No Data Available.
FLAMMABILITY (SOLIDS AND GASES):	No Data Available.
UPPER FLAMMABLE LIMIT (% BY VOL):	No Data Available.
LOWER FLAMMABLE LIMIT (% BY VOL):	No Data Available.
VAPOUR PRESSURE:	No Data Available.
VAPOUR DENSITY (AIR=1):	No Data Available.
SPECIFIC GRAVITY (WATER=1):	1.14
SOLUBILITY IN WATER (% W/W):	Soluble in Water.
AUTO IGNITION TEMPERATURE:	No Data Available.
PARTITION COEFFICIENT N-OCTANOL/WATER:	No Data Available.
DECOMPOSITION TEMPERATURE:	No Data Available.
VISCOSITY:	No Data Available.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	The following materials may react with the product: Strong oxidising agents, strong reducing agents, and acids.
CHEMICAL STABILITY:	Stable at normal ambient temperatures.
POSSIBILITY OF HAZARDOUS REACTIONS:	Reacts with acids to product toxic nitrogen dioxide gas Reacts with some metals to liberate hydrogen gas. Will not polymerize.
CONDITIONS TO AVOID:	Avoid heat, flames and other sources of ignition. Avoid freezing temperatures
INCOMPATIBLE MATERIALS:	Strong oxidizing agents, strong reducing agents, acids, metals, amines, ammonia, and ammonium compounds.
HAZARDOUS DECOMPOSITION PRODUCTS:	Fire creates: Toxic gases/vapours/fumes of nitrous gases (NO _x).

SECTION 11: TOXICOLOGICAL INFORMATION**TOXICOLOGICAL EFFECTS (PRODUCT):**

ACUTE TOXICITY (ORAL): ATE (Acute Toxicity Estimate) - Oral 839.16083916 mg/kg.
Ingestion - Toxic if swallowed.

ACUTE AND CHRONIC HEALTH HAZARDS:

INHALATION: Inhalation Prolonged inhalation of high concentrations may damage respiratory system.

SKIN CONTACT: Product has a defatting effect on skin. May cause allergic contact eczema. Prolonged or repeated exposure may cause severe irritation.

EYE CONTACT: May cause severe eye irritation.

INGESTION: May cause stomach pain or vomiting. May cause unconsciousness, blindness and possibly death. In severe cases, ingestion may cause methemoglobinemia (identifiable symptoms include blue discolouration of skin).

TOXICOLOGICAL EFFECTS (SODIUM NITRATE):

ACUTE TOXICITY:

ORAL LD50: ATE (Acute Toxicity Estimate) 180.0 mg/kg

INHALATION LC50: 5.5 mg/L (LC50 dust/mist).

DERMAL LD50: No Data Available.

SKIN CORROSION / IRRITATION: No Data Available.

SERIOUS EYE DAMAGE / EYE IRRITATION: Irritating.

RESPIRATORY OR SKIN SENSITIZATION: No Data Available.

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SECTION 11: TOXICOLOGICAL INFORMATION

GERM CELL MUTAGENICITY:	No Data Available.
CARCINOGENICITY:	This product is not classified as carcinogenic. However, if ingested, nitrites may react with secondary or tertiary amines under acidic conditions to form carcinogenic nitrosamines. International Agency for Research on Cancer (IARC) Group 2A Probably carcinogenic to humans.
REPRODUCTIVE TOXICITY:	Animal tests did not show any effects on fertility.
SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE:	No Data Available.
STOT - REPEAT EXPOSURE:	No Data Available.
MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:	No Data Available.
ASPIRATION HAZARD:	No Data Available.
POTENTIAL HEALTH EFFECTS:	No Data Available.
SIGNS AND SYMPTOMS OF EXPOSURE:	Nausea, vomiting. Unconsciousness. In severe cases, ingestion may cause methemoglobinemia (identifiable symptoms include blue discoloration of skin).

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:	The product contains a substance which is very toxic to aquatic organisms. The product may contribute to an excessive enrichment of the aquatic environment with nutrients.
ACUTE AQUATIC TOXICITY:	L(E)C50: 0.1 < L(E)C50 ≤ 1. Acute toxicity - fish: LC50, 96 hours, 96 hours: 0.54-26.3 mg/L, <i>Onchorhynchus mykiss</i> (Rainbow trout). Acute toxicity - aquatic invertebrates: EC50, 48 hours: 15.4 mg/L, <i>Daphnia magna</i> (Water flea). Acute toxicity - aquatic plants: <i>Scenedesmus quadricauda</i> , EC50, 192 hours: 1,845 mg/L.
PERSISTENCE AND DEGRADABILITY:	Expected to degrade in the environment.
BIOACCUMULATIVE POTENTIAL:	The product does not contain any substances expected to be bioaccumulating.
MOBILITY IN SOIL:	The product is soluble in water.
OTHER ADVERSE EFFECTS:	The product contains substances that may be harmful to aquatic life in high concentrations. High concentrations may be damaging to environment due to pH effect. Contains nitrites / nitrates

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:	Contact a licensed waste disposal company. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
PACKAGING:	No Data Available.

SECTION 14: TRANSPORT INFORMATION

Transportation of Dangerous Goods (TDG):	Regulated.
United States (US) Department of Transportation (DOT):	Regulated.
International Maritime Dangerous Goods (IMDG):	Regulated.
International Air Transport Association (IATA):	Regulated.
UNITED NATIONS (UN) NUMBER:	3287.
TRANSPORT HAZARD CLASS:	6.1.
PACKING GROUP:	III.

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SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME: TOXIC LIQUID, INORGANIC, N.O.S. (CONTAINS SODIUM NITRITE, SODIUM NITRATE).

SPECIAL SHIPPING INSTRUCTIONS: None Listed.

ENVIRONMENTALLY HAZARDOUS SUBSTANCE/MARINE POLLUTANT: Yes.

REGULATION SPECIFIC INFORMATION:

In Accordance with US DOT: Emergency Response: ERG Number: 171.

In Accordance with IMDG: Emergency Response: EMS: F-A, S-A.

In Accordance with IATA: Emergency Response: ERG code (IATA): 6L.

SECTION 15: REGULATORY INFORMATION

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) CLASSIFICATION: C, D-1B, D-2A.

HAZARDOUS PRODUCT REGULATIONS (HPR) COMPLIANCE: This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

CANADIAN DOMESTIC SUBSTANCES LIST (DSL): Sodium Nitrite and Sodium Nitrate: This material is listed on the Canadian Domestic Substances List.

CANADIAN NON-DOMESTIC SUBSTANCES LIST (NDSL): Sodium Nitrite and Sodium Nitrate: Not Listed.

UNITED STATES (US) FEDERAL REGULATIONS:

Superfund Amendments and Reauthorization Act (SARA): Sodium Nitrite: SARA 313 - Yes. SARA 302 - No.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): Sodium Nitrite: No.

US Toxic Substances Control Act (TSCA): Sodium Nitrite - Yes.

US STATE OR LOCAL REGULATIONS:

US State Right-to-Know Regulations:

INGREDIENT(S)	New Jersey	Massachusetts	Pennsylvania		
			Environmental Hazard List	Special Hazardous Substances	List
Sodium Nitrite	Yes	Yes	Yes	No	Yes
Sodium Nitrate	No	Yes	No	No	Yes

NATIONAL REGULATIONS: The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

SECTION 16: OTHER INFORMATION

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) Hazard ID:

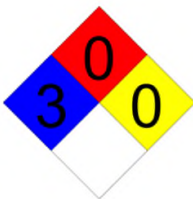
HEALTH	3
FLAMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	X

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *-Chronic health effect

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SECTION 16: OTHER INFORMATION

National Fire Protection Association (NFPA):



See Section 8.0 for Detailed Information on Personal Protective Equipment.

HAZARDOUS

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

PREPARED BY: T Donovan & Son (1997) Ltd.

PREPARATION DATE: May 2018

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. Regulatory requirements are subject to change and may differ between various locations. The information given is designed only as 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 may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.