

Section 11. Données toxicologiques

Ingestion : La surexposition par ingestion est improbable dans des conditions normales de travail. Les symptômes néfastes peuvent éventuellement comprendre ce qui suit:
nausées ou vomissements
douleurs stomacales
diarrhée
Méthémoglobinémie (voir Effets aigus sur la santé)

Effets différés et immédiats ainsi que les effets chroniques causés par une exposition à court et à long terme

Exposition de courte durée

Effets immédiats possibles : Voir ci-dessus.

Effets différés possibles : Voir ci-dessus.

Exposition de longue durée

Effets immédiats possibles : Voir ci-dessus.

Effets différés possibles : Voir dessous.

Effets chroniques potentiels sur la santé

Conclusion/Résumé : Peut interférer avec la capacité de transport d'oxygène du sang, s'il est ingéré en grande quantité ou sur une période de temps prolongée. Les personnes souffrant d'anémie, les maladies intestinales, ou des nourrissons, sont plus susceptibles de développer des effets. Une surexposition par ingestion est improbable dans des conditions normales de travail.

Généralités : Voir ci-dessus.

Cancérogénicité : Potentiel de formation de nitrosamines en cas d'ingestion. Ne pas ingérer.

Mutagénicité : Aucun effet important ou danger critique connu.

Tératogénicité : Aucun effet important ou danger critique connu.

Effets sur le développement : Aucun effet important ou danger critique connu.

Effets sur la fertilité : Aucun effet important ou danger critique connu.

Section 12. Données écologiques

Toxicité

Nom du produit ou de l'ingrédient	Résultat	Espèces	Exposition
Nitrate d'ammonium	Chronique NOEC 6 à 12 mg/l Eau douce	Crustacés - Cladocera	21 jours
-	NOEC >1700 mg/l Eau de mer Aiguë CE50 490 mg/l Eau douce Aiguë CL50 447 mg/l Eau douce	Algues Daphnie Poisson	10 jours 48 heures 48 heures

Conclusion/Résumé : Peut être nocif pour l'environnement si libéré en grandes quantités. Excès de ruissellement des nutriments dans un cours d'eau peut entraîner l'eutrophisation.

Persistance et dégradation

Conclusion/Résumé : Selon les critères de la CEE : Facilement biodégradable

Nom du produit ou de l'ingrédient	Demi-vie aquatique	Photolyse	Biodégradabilité
Nitrate d'ammonium	-	-	Facilement

Potentiel de bioaccumulation

Section 12. Données écologiques

Nom du produit ou de l'ingrédient	LogP _{ow}	BCF	Potentiel
L'eau	-1.38	-	faible

Mobilité dans le sol

Coefficient de répartition sol/eau (K_{oc}) : Non disponible.

Autres effets nocifs : Aucun effet important ou danger critique connu.

Section 13. Données sur l'élimination

Méthodes d'élimination : Il est important de réduire au minimum, voire d'éviter la génération de déchets chaque fois que possible. La mise au rebut de ce produit, des solutions et de tous les co-produits doit obéir en permanence aux dispositions de la législation sur la protection de l'environnement et l'élimination des déchets et demeurer conforme aux exigences des pouvoirs publics locaux. Éliminer le surplus et les produits non recyclables par l'intermédiaire d'une entreprise spécialisée autorisée. Ne pas rejeter les déchets non traités dans les égouts, à moins que ce soit en conformité avec les exigences de toutes les autorités compétentes. Il faut prendre des précautions lors de la manipulation de contenants vides qui n'ont pas été nettoyés ou rincés. Les conteneurs vides ou les doublures peuvent retenir des résidus de produit. Évitez la dispersion des matériaux déversés, ainsi que leur écoulement et tout contact avec le sol, les voies navigables, les drains et les égouts.

Section 14. Informations relatives au transport

	Classification pour le TMD	Classification pour le DOT	Classement mexicain	IMDG	IATA
Numéro ONU	Non réglementé.	Non réglementé.	Non réglementé.	Non réglementé.	Non réglementé.
Désignation officielle de transport de l'ONU	-	-	-	-	-
Classe de danger relative au transport	-	-	-	-	-
Groupe d'emballage	-	-	-	-	-
Dangers environnementaux	Non.	Non.	Non.	Non.	Non.
Autres informations	Classification par la révision en cours, Règlement sur le transport des marchandises dangereuses, Partie 2, Sec 2.3.	-	-	-	-

Section 14. Informations relatives au transport

Protections spéciales pour l'utilisateur : **Transport avec les utilisateurs locaux** : toujours transporter dans des conditionnements qui sont corrects et sécurisés. S'assurer que les personnes transportant le produit connaissent les mesures à prendre en cas d'accident ou de déversement accidentel.

Transport en vrac aux termes de l'annexe II de la Convention MARPOL et du Recueil IBC : Non disponible.

Section 15. Informations sur la réglementation

Listes canadiennes

INRP canadien : Les composants suivants sont répertoriés: Le total d'ammoniac (NH₃ — numéro du CAS 7664-41-7) et de l'ion ammonium (NH₄⁺ — numéro du CAS 14798-03-9) en solution, exprimé sous forme d'ammoniac.

Substances toxiques au sens de la LCPE (Loi canadienne sur la protection de l'environnement) : Aucun des composants n'est répertorié.

Inventaire du Canada : Tous les composants sont répertoriés ou exclus.

Réglementations Internationales

Liste des substances chimiques des tableaux I, II et III de la Convention sur les armes chimiques

Non inscrit.

Protocole de Montréal (Annexes A, B, C, E)

Non inscrit.

Convention de Stockholm relative aux polluants organiques persistants

Non inscrit.

Convention de Rotterdam sur le consentement préalable donné en connaissance de cause (PIC)

Non inscrit.

Protocole d'Aarhus de la CEE-ONU relatif aux POP et aux métaux lourds

Non inscrit.

Liste des stocks

Australie : Tous les composants sont répertoriés ou exclus.

Chine : Tous les composants sont répertoriés ou exclus.

Europe : Tous les composants sont répertoriés ou exclus.

Japon : Tous les composants sont répertoriés ou exclus.

Malaisie : Indéterminé.

Nouvelle-Zélande : Tous les composants sont répertoriés ou exclus.

Philippines : Tous les composants sont répertoriés ou exclus.

République de Corée : Tous les composants sont répertoriés ou exclus.

Taïwan : Tous les composants sont répertoriés ou exclus.

Turquie : Indéterminé.

Réglementations États-Unis : **TSCA 8(a) CDR Exemption / Exemption partielle**: Indéterminé
TSCA 8(b) Inventaire actif: Tous les composants sont répertoriés ou exclus.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Non inscrit

Section 15. Informations sur la réglementation

Clean Air Act Section 602 Class I Substances : Non inscrit

Clean Air Act Section 602 Class II Substances : Non inscrit

DEA List I Chemicals (Precursor Chemicals) : Non inscrit

DEA List II Chemicals (Essential Chemicals) : Non inscrit

SARA 302/304 Composition/information sur les ingrédients

SARA 304 RQ :

SARA 311/312

Classification : Risque immédiat (aigu) pour la santé

Composition/information sur les ingrédients

Nom	%	Risques d'incendie	Décompression soudaine	Réactif	Risque immédiat (aigu) pour la santé	Danger d'intoxication différée (chronique).
Nitrate d'ammonium	57	Non.	Non.	Non.	Oui.	Non.

SARA 313

	Nom du produit	Numéro CAS	%
Feuille R - Exigences en matière de rapport	Nitrate d'ammonium	6484-52-2	57
Avis du fournisseur	Nitrate d'ammonium	6484-52-2	57

Il est impératif que les avis SARA 313 ne soient pas détachés de la FDS, et que les copie et redistribution de la FDS incluent les copie et redistribution des avis joints aux copies de la FDS redistribuée par la suite.

Réglementations d'État

Massachusetts : Les composants suivants sont répertoriés: Nitrate d'ammonium

New York : Aucun des composants n'est répertorié.

New Jersey : Les composants suivants sont répertoriés: Nitrate d'ammonium; Acide nitrique sel d'ammonium.

Pennsylvanie : Les composants suivants sont répertoriés: Acide nitrique sel d'ammonium.

Californie prop. 65 : Ce produit, tel que fabriqué, ne contient AUCUNE substance à des concentrations connues dans l'état de Californie pour provoquer le cancer, des anomalies congénitales ou d'autres problèmes de reproduction. Nutrien ne peut garantir la conformité ultérieure de tout produit une fois que ce dernier n'est plus sous sa garde.

Section 16. Autres informations

Historique

Date d'édition/Date de révision : 9/12/2019

Date de publication précédente : 6/13/2018

Version : 2.5

☑ Indique quels renseignements ont été modifiés depuis la version précédente.

Section 16. Autres informations

- Légende des abréviations** :
- ETA = Estimation de la toxicité aiguë
 - FBC = Facteur de bioconcentration
 - SGH = Système Général Harmonisé de classification et d'étiquetage des produits chimiques
 - IATA = Association international du transport aérien
 - CVI = conteneurs en vrac intermédiaires
 - code IMDG = code maritime international des marchandises dangereuses
 - LogKoe = coefficient de partage octanol/eau
 - MARPOL = Convention internationale pour la prévention de la pollution par les navires de 1973, telle que modifiée par le Protocole de 1978. ("MARPOL" = pollution maritime)
 - NU = Nations Unies
 - RPD = Règlement sur les produits dangereux

Procédure utilisée pour préparer la classification

Classification	Justification
IRRITATION OCULAIRE - Catégorie 2B	Force probante

- Références** :
- Règlement sur le transport des marchandises dangereuses, édition courante au moment de la préparation du F.S., Transports Canada;
 - Loi sur les produits dangereux et du Règlement, la révision courante au moment de la préparation du F.S., Santé Canada;
 - Loi canadienne sur la protection de l'environnement (1999) et du Règlement sur les renseignements concernant les substances nouvelles, La Liste Intérieure des Substances, la révision courante au moment de la préparation du F.S., Environnement Canada;
 - 29 CFR Part 1910, la révision courante au moment de la préparation du F.S., Administration de la Sécurité et de la Santé au Travail;
 - 40 CFR Parties 1 à 799, la révision courante au moment de la préparation du F.S., Agence de Protection de l'Environnement des États Unis;
 - 49 CFR Parties 1 à 199, la révision courante au moment de la préparation du F.S., Département des Transport des États Unis;
 - Norme officielle mexicaine NOM-018-STPS-2015, Système harmonisé pour l'identification et la communication des dangers et des risques par des produits chimiques dangereux en milieu de travail;
 - Norme officielle mexicaine NOM-010-STPS-2014, Agents chimiques contaminants du milieu de travail - Reconnaissance, évaluation et contrôle
 - Norme officielle mexicaine NOM-002-SCT / 2011 Norme Officielle Mexicaine, Liste des plus couramment transportés substances et matières dangereuses;
 - Des valeurs limites d'exposition (TLV) de la Conférence américaine des hygiénistes industriels gouvernementaux (ACGIH), édition courante à la moment de la préparation du F.S. ;
 - NFPA 400, Association nationale de protection contre l'incendie, édition courante à la moment de la préparation du F.S.;
 - NFPA 704, Association nationale de protection contre l'incendie, édition courante à la moment de la préparation du F.S.;
 - Enquête données corrosion, sixième édition, 1985, Association nationale des ingénieurs de corrosion;
 - ERG 2016, Guide des Mesures D'urgence, Département des Transport des États Unis, Transport Canada, et le Secrétariat des Transports et des Communications du Mexique
 - Banque de données sur les Substances Dangereuses, la révision courante au moment de la préparation du F.S, Bibliothèque nationale de médecine, Bethesda, Maryland
 - Système Intégré d'Information sur les Risques, la révision courante au moment de la préparation du F.S, Agence de Protection de l'Environnement des États Unis, Washington, DC
 - Guide de Poche de Dangers des Produits Chimiques, la révision courante au moment de la preparation du F.S., Institut National pour la Sécurité et la Santé, Cincinnati, Ohio;
 - Banque de données, l'Agence pour les substances toxiques et les maladies, la

Section 16. Autres informations

révision courante au moment de la préparation du F.S., Département de la santé et des services sociaux des États Unis, Atlanta, Géorgie

Programme national de toxicologie, Rapport sur les cancérogènes, Division de l'Institut national des sciences de la santé de l'environnement, Research Triangle Park, Caroline du Nord.

RTECS. Institut national pour la sécurité et la santé, Cincinnati, Ohio
Code des règlements de la Californie, Titre 27, Div 4, Chapitre 1, Proposition 65, 30 août 2018 revu et mises à jour actuelles
Produit Toxicologie Résultats de l'évaluation, l'Institut d'engrais, Washington, DC, 2003

Avis au lecteur

Partenaires de la chaîne d'approvisionnement doivent veiller à ce qu'ils passent cette FDS, et toutes autres informations pertinentes sur la sécurité à leurs clients.

AVERTISSEMENT ET LIMITATION DE RESPONSABILITE

Les informations et recommandations contenues dans cette fiche signalétique («SDS») ne concernent que les matières spécifiques visées dans les présentes (le «matériel») et ne concernent pas l'utilisation de ces matériaux en combinaison avec tout autre matériel ou processus. Les informations et recommandations contenues dans ce document sont considérées comme exactes et à jour à compter de la date de la présente fiche signalétique. Toutefois, les informations et recommandations sont présentées sans garantie, représentation OU DE LICENCE D'AUCUNE SORTE, EXPLICITE OU IMPLICITE, EN CE QUI CONCERNE à leur exactitude, exactitude ou l'exhaustivité, et le vendeur, fournisseur et fabricant de matériau et de leur filiales respectives (COLLECTIVEMENT, LES «fournisseur») EXCLUENT TOUTE RESPONSABILITÉ POUR LA CONFIANCE DANS ces informations et recommandations. Cette FDS n'est pas une garantie de sécurité. Un acheteur ou l'utilisateur du matériel (un «bénéficiaire») est chargé de veiller à ce qu'elle dispose de tous les renseignements nécessaires pour utiliser en toute sécurité du matériel pour son but spécifique.

EN OUTRE, Le destinataire assume tous les risques RELATION AVEC L'UTILISATION DE LA MATIERE. Le destinataire assume tous responsabilité d'assurer le matériau est utilisé dans toute sécurité en RESPECT DES LOIS APPLICABLES L'ENVIRONNEMENT, DE LA SANTÉ, DE SÉCURITÉ ET DE SECURITE, LES POLITIQUES ET LES LIGNES DIRECTRICES. LE FOURNISSEUR NE GARANTIT PAS LA COMMERCIALISATION DE LA MATIERE OU LA SANTE DE LA MATIERE POUR UN USAGE PARTICULIER ET N'ACCEPTÉ AUCUNE RESPONSABILITÉ pour blessures ou dommages causés directement ou indirectement PAR OU EN RELATION AVEC L'UTILISATION DE LA MATIERE.

Ammonium Nitrate Solution 20-0-0

Section 1. Identification

Product identifier : Ammonium Nitrate Solution 20-0-0

Other means of identification

Product code(s) : Product code: 2502-14206

Product type : Liquid.

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

Identified uses Fertilizer solution


Uses advised against None.	Reason Risk assessment.
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Supplier's details : Agrium Canada Partnership (A Subsidiary of Nutrien Ltd.)
13131 Lake Fraser Drive, S.E.
Calgary, Alberta, Canada, T2J 7E8

Agrium U.S. Inc. (A Subsidiary of Nutrien Ltd.)
5296 Harvest Lake Drive
Loveland, CO 80538

Company phone number (North America):
1-800-403-2861 (Customer Service)

sds@nutrien.com - www.nutrien.com

Emergency telephone number (with hours of operation) :  Nutrien North American
24 HOUR EMERGENCY TELEPHONE NUMBERS:

English:
Transportation Emergencies: 1-800-792-8311
Medical Emergencies: 1-303-389-1653

French or Spanish:
Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

Classification of the substance or mixture : EYE IRRITATION - Category 2B

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements

Hazard pictograms : **Not Applicable.**
No Aplicable.
Non applicable.

Signal word : Warning

Hazard statements : Causes eye irritation.

Precautionary statements

General : Not applicable.

Section 2. Hazard identification

Prevention	: Wash hands thoroughly after handling.
Response	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Not applicable.
Disposal	: Not applicable.
Supplemental label elements	: None known.
Other hazards which do not result in classification	: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Ammonium nitrate	57	6484-52-2
Water	43	7732-18-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact	: Begin eye irrigation immediately. Eye exposures to nitrates may require medical evaluation following decontamination if pain or irritation persists. Immediately rinse eyes with large quantities of water or saline for a minimum of 15 minutes. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
Inhalation	: Remove person to fresh air. No known significant effects. Seek medical attention for any signs of wheezing and/or breathing difficulties. For additional advice call the medical emergency number on this SDS or your poison center or medical provider.
Skin contact	: No known significant effects. Rinse the affected areas with water. Remove contaminated clothing, jewelry, and shoes. Wash/clean items before reuse. Seek medical attention for persistent skin pain or irritation. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
Ingestion	: Nitrate based product. May be irritating to mouth, throat and stomach. May cause methemoglobinemia (a condition that interferes with the oxygen-carrying capacity of the blood) if ingested in large quantities or over a prolonged period of time. Oral exposures: if the affected person requires CPR, avoid mouth to mouth contact. Do not induce vomiting. If vomiting occurs, attempt to keep head lower than chest so that vomit does not enter the lungs. Wash (decontaminate) face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of water. Do not give anything else by mouth. Loosen tight clothing such as collar, tie, belt or waistband to prevent any breathing restrictions. Call for emergency transportation to a hospital if the exposed person feels sick or has breathing difficulties, or a large amount is suspected ingested. For additional advice, call the medical emergency number on this SDS or your poison center or doctor.

Most important symptoms/effects. acute and delayed

Section 4. First-aid measures

Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : May be irritating to the digestive tract. May cause nausea, vomiting, diarrhea, and abdominal pain. May cause methemoglobinemia (a condition that interferes with the oxygen-carrying capacity of the blood) if ingested in large quantities or over a prolonged period of time. Persons with methemoglobinemia may have blue tinge color to lips, nails, and skin. Also they may have shortness of breath or trouble breathing. Persons more susceptible to methemoglobinemia include: very young (less than 3 months), the elderly, those with chronic obstructive pulmonary disease (COPD), anemia, coronary artery disease, recent surgery or infection, and those with a genetic deficiency of G-6-PD.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : The substance will not burn. Undergoes thermal decomposition at elevated temperatures to release toxic and flammable gases. Adverse symptoms may include the following:
headache
respiratory tract irritation
coughing
- Skin contact** : No specific data.
- Ingestion** : Over-exposure by ingestion is unlikely under normal working conditions. Adverse symptoms may include the following:
nausea or vomiting
stomach pains
diarrhea
Methemoglobinemia (see Acute Health Effects)

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products (carbon monoxide, carbon dioxide, nitrogen oxides) in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for up to 72 hours. In cases of suspected methemoglobinemia, monitor methemoglobin blood levels. Treatment is supportive; methylene blue may be indicated based on patient severity. 24 Hr Medical Emergency telephone number for professional support - From Canada or the U.S., English: 1-303-389-1653; French or Spanish: 1-303-389-1654. From all other countries, English: 00-1-303-389-1653; French or Spanish: 00-1-303-389-1654.
- Specific treatments** : Call the medical emergency number on this SDS or your poison center or doctor immediately if large quantities have been ingested. In cases of suspected methemoglobinemia, methylene blue may be indicated based on patient severity.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : The product acts as an oxidizing agent, and supports combustion by liberating oxygen even if smothered. Do not attempt to smother the fire.

Specific hazards arising from the chemical

- : In a fire or if heated, a pressure increase will occur and the container may burst. Not an oxidizer at the manufactured concentration. It may become an oxidizing liquid if concentrated by evaporation. If evaporated to dryness, the product acts as an oxidizing agent, and supports combustion by liberating oxygen even if smothered. Cool containing vessels with flooding quantities of water until well after fire is out. A self contained breathing apparatus should be used to avoid inhalation of toxic fumes. When heated to decomposition it emits toxic fumes (NH₃, NO, NO₂...).
- Contaminated water can cause environmental damage. Contain and collect water used to fight fire.

Hazardous thermal decomposition products

- : Decomposition products may include the following materials:
Nitrogen oxides
Ammonia

Special protective actions for fire-fighters

- : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

- : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark

- : Dangerous if allowed to dry out. Residue may exhibit oxidizing properties.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

- : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Use personal protective equipment as required. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Use personal protective equipment as required. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Pump spilled material to a suitable, labeled container for recycling or disposal. Recycle to process, if possible.
or
Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. While AN solution as produced is not classified as an oxidizer, it is important to prevent conditions during handling and storage which may result in concentration of the product which may encourage it to behave as an oxidizer. Ensure that AN solution pumps are thermally protected against exceeding a temperature of 66 deg. C (150 deg. F). Also ensure that piping systems, if insulated, are not externally heated (heat traced).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Canadian Regulations: U.S. Federal Regulations: Ammonium nitrate Water	None assigned. OSHA (United States): Particulates not otherwise regulated (PNOR) TWA (8 hours), Total dust: 15 mg/m ³ ; Respirable fraction: 5 mg/m ³ . None assigned.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**

Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. No special measures are typically indicated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. No special measures are typically indicated.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. For U.S. work sites where respiratory protection is required, ensure that a respiratory protection program meeting 29 CFR 1910.134 requirements is in place. No personal respiratory protective equipment is normally required.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear to slightly hazy liquid.]
- Color** : Not available.
- Odor** : Ammoniacal. [Slight]
- Odor threshold** : Not available.
- pH** : 6 to 7
- Melting point** : 5.5°C (41.9°F)
- Boiling point** : 121°C (249.8°F)
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Non-flammable. Material will not burn. Decomposes on heating. Evolves toxic fumes when heated to decomposition.
- Lower and upper explosive (flammable) limits** : Not applicable.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.27
Bulk density: 10.58 lbs/gal (U.S.) @ 68°F, 20°C
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Solubility in water** : Water-soluble liquid
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not applicable.
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : Not an oxidizer at the manufactured concentration. It may become an oxidizing liquid if concentrated by evaporation. Take any precaution to avoid mixing with combustibles and other incompatible materials.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Do not allow to dry out. Avoid high temperatures in combination with high pressures.

Incompatible materials : Incompatible with halogens.
Incompatible with copper alloys, copper, and zinc.
May react or be incompatible with acids.
May react or be incompatible with alkalis.
May be incompatible with some materials of construction. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ammonium nitrate	LD50 Dermal	Rat - Male, Female	>5000 mg/kg	-
	LD50 Oral	Rat - Male, Female	2950 mg/kg	-
-	LD50 Oral	Rat	2217 mg/kg	-
Water	LD50 Oral	Rat	>90 g/kg	-

Conclusion/Summary : Very low toxicity to humans or animals.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ammonium nitrate	Skin	Rabbit	0	-	72 hours
	Eyes - Edema of the conjunctivae	Rabbit	3	-	3 days

Conclusion/Summary

Skin : Non-irritating to the skin.

Eyes : Irritating to the eyes.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Ammonium nitrate	Skin	Mouse	Not sensitizing

Conclusion/Summary

Skin : Non-sensitizer.

Respiratory : Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Ammonium nitrate	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative

Conclusion/Summary : No mutagenic effect.

Carcinogenicity

Not available.

Section 11. Toxicological information

Conclusion/Summary : Potential for nitrosamine formation if ingested. Do not ingest.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Ammonium nitrate	Negative	Negative	Negative	Rat - Male, Female	Oral: 1500 mg/ kg	-

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Ammonium nitrate	Negative - Oral	Rat - Female	1500 mg/kg	-

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Eye contact
Skin contact

Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : May be irritating to the digestive tract. May cause nausea, vomiting, diarrhea, and abdominal pain. May cause methemoglobinemia (a condition that interferes with the oxygen-carrying capacity of the blood) if ingested in large quantities or over a prolonged period of time. Persons with methemoglobinemia may have blue tinge color to lips, nails, and skin. Also they may have shortness of breath or trouble breathing. Persons more susceptible to methemoglobinemia include: very young (less than 3 months), the elderly, those with chronic obstructive pulmonary disease (COPD), anemia, coronary artery disease, recent surgery or infection, and those with a genetic deficiency of G-6-PD.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : The substance will not burn. Undergoes thermal decomposition at elevated temperatures to release toxic and flammable gases. Adverse symptoms may include the following:
headache
respiratory tract irritation
coughing
- Skin contact** : No specific data.

Section 11. Toxicological information

Ingestion : Over-exposure by ingestion is unlikely under normal working conditions. Adverse symptoms may include the following:
 nausea or vomiting
 stomach pains
 diarrhea
 Methemoglobinemia (see Acute Health Effects)

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : See above.

Potential delayed effects : See above.

Long term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Potential chronic health effects

Conclusion/Summary : May interfere with the oxygen carrying capacity of the blood if ingested in large quantities or over a prolonged period of time. Persons with anemia, bowel diseases, or infants, are more likely to develop effects. Over-exposure by ingestion is unlikely under normal working conditions.

General : See above.

Carcinogenicity : Potential for nitrosamine formation if ingested. Do not ingest.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Ammonium nitrate	Chronic NOEC 6 to 12 mg/l Fresh water	Crustaceans - Cladocera	21 days
-	NOEC >1700 mg/l Marine water	Algae	10 days
	Acute EC50 490 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 447 mg/l Fresh water	Fish	48 hours

Conclusion/Summary : May be harmful to the environment if released in large quantities. Excessive nutrient runoff to a body of water may result in eutrophication.

Persistence and degradability

Conclusion/Summary : According to EC criteria: Readily biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ammonium nitrate	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Water	-1.38	-	low

Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	Classification per the current revision, Transportation of Dangerous Goods Regulation, Part 2, Sec 2.3.	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: Total of ammonia (NH₃ — CAS RN 7664-41-7) and the ammonium ion (NH₄⁺ — CAS RN 14798-03-9) in solution, expressed as ammonia.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : All components are listed or exempted.

Malaysia : Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Turkey : Not determined.

U.S. Federal Regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
TSCA 8(b) Active inventory: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 Composition/information on ingredients

SARA 304 RQ :

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard.
Ammonium nitrate	57	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Ammonium nitrate	6484-52-2	57
Supplier notification	Ammonium nitrate	6484-52-2	57

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: Ammonium nitrate
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: Ammonium nitrate; Nitric acid ammonium salt.
- Pennsylvania** : The following components are listed: Nitric acid ammonium salt.
- California Prop. 65** : This product, as manufactured, does NOT contain any substance in concentrations known to the state of California to cause cancer, birth defects or other reproductive harm. Nutrien cannot guarantee the downstream compliance of any product once out of Nutrien custody.

Section 16. Other information

History

- Date of issue/Date of revision** : 9/12/2019
- Date of previous issue** : 6/13/2018
- Version** : 2.5

☑ Indicates information that has changed from previously issued version.

- Key to abbreviations** :
- ATE = Acute Toxicity Estimate
 - BCF = Bioconcentration Factor
 - GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 - IATA = International Air Transport Association
 - IBC = Intermediate Bulk Container
 - IMDG = International Maritime Dangerous Goods
 - LogPow = logarithm of the octanol/water partition coefficient
 - MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 - UN = United Nations
 - HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
EYE IRRITATION - Category 2B	Weight of evidence

Section 16. Other information

References

: Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;
 Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
 Domestic Substances List, current revision at time of SDS preparation, Environment Canada;
 29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
 40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
 49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
 Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
 NORMA Oficial Mexicana NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
 Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
 Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
 NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
 NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
 Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
 ERG 2016, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico
 Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
 Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.
 Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
 Agency for Toxic Substances and Disease Registry Databank, current revision at time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia
 National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
 Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
 California Code of Regulations, Title 27, Div 4, Chapter 1, Proposition 65 Aug 30, 2018 rev and current updates
 The Fertilizer Institute, Product Toxicology Testing Program Results, TFI, Washington , D.C., 2003

Notice to reader

Supply chain partners must ensure they pass this SDS, and all other relevant safety information to their customers.

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Section 16. Other information

RECOMMENDATIONS. This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.

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