

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or
CHEMTREC - 1-800-424-9300**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED BY:

LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-561-8273
Medical Emergencies (Prosar): 1-800-301-7976
Additional Emergency Phone (Canutec): 1-613-996-6666 (Collect)

MANUFACTURED FOR:

UNITED AGRI PRODUCTS CANADA, INC.
789 Donnybrook Drive • Dorchester, Ontario N0L 1G5

PRODUCT NAME: FLUSH®
CHEMICAL NAME: Ammonia Solution
CHEMICAL FAMILY: Ammonia
MSDS Number: 8200746-10-LPI **MSDS Revisions:** Section 9 revised **Date Of Issue:** 06/01/10 **Supersedes:** 06/14/07

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Direct contact with eyes will cause severe eye burns. Avoid contact with skin. May cause skin irritation. Do not inhale vapours or spray mist. Remove contaminated clothing and wash clothing before reuse. Eye, skin, and respiratory irritant. Thoroughly wash with soap and water after handling.

This product is a clear, colorless to pale yellow liquid with ammonia-like odor. Primary routes of entry are eye contact and skin contact.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Ammonia	7.00	7664-41-7	17 mg/m ³
Other Ingredients	93.00		

4. FIRST AID MEASURES

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Get medical attention if irritation persists.
If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If irritation persists, get medical attention.
If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
If swallowed: DO NOT INDUCE VOMITING. Give 1 to glasses of water or milk to dilute material. Obtain medical attention immediately.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): >212°F (>100°C)
FLAMMABLE LIMITS (LFL & UFL): Not established
EXTINGUISHING MEDIA: Dry chemical, carbon dioxide (CO₂), foam, water spray or fog.
HAZARDOUS COMBUSTION PRODUCTS: May emit toxic fumes.
SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool containers exposed to fire. Remain upwind. Avoid breathing smoke. Wear self-contained breathing apparatus and full protective gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Avoid breathing vapors and contact with liquid. Collect as much liquid as possible in a clean container for reuse or absorb and sweep up immediately and transfer to suitable containers for disposal. Flush spill area with water after clean up. Check local, state and federal regulations for proper disposal.
CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Avoid breathing vapours or spray mist. Wash thoroughly with soap and water after handling. Use with adequate ventilation. DO NOT mix with chlorine bleach, the resulting gas can cause irritation to eyes, throat and lungs and can cause skin and eye irritation.
STORAGE: Store in a cool, dry place. Do not allow to freeze. Product may salt-out in cold temperatures. Warm to room temperature and agitate prior to use. Store in original container. Keep container tightly closed during storage. Do not reuse empty container. Do not contaminate water food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Work in well-ventilated area, local exhaust may be required if working in confined space.
RESPIRATORY PROTECTION: Not normally required, if vapours or dusts exceed acceptable levels, wear a NIOSH/ MSHA approved respirator designated for ammonia.
EYE PROTECTION: Chemical goggles or shielded safety glasses.
SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, socks and shoes. Wear rubber or chemical-resistant gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Ammonia	35 mg/m ³	17 mg/m ³

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear, colorless to pale yellow liquid with ammonia-like odor
SPECIFIC GRAVITY (Water = 1): 0,97 g/ml
VAPOR PRESSURE: Not established
PERCENT VOLATILE (by volume): Not established
Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

SOLUBILITY: Dispersible
pH: 11.5 – 13.0

BULK DENSITY: 8,09 lbs/gal. (0,97 kg/liter)
BOILING POINT: Not established
EVAPORATION RATE: Not established

10. STABILITY AND REACTIVITY

STABILITY: Stable
INCOMPATIBILITY: Strong oxidizers, acids, and reducing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: May emit toxic fumes in combustion.
HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Cold temperatures.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 350 mg/kg (Ammonia)
Eye Irritation (rabbit): Not established
Inhalation LC₅₀ (rat): Not established
Carcinogenic Potential: None listed in OSHA, NTP, IARC or ACGIH

Acute Dermal LD₅₀ (rabbit): Not established
Skin Irritation (rabbit): Not established
Skin Sensitization (guinea pig): Not established

12. ECOLOGICAL INFORMATION

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT clean equipment near desirable vegetation, wells or other water sources. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

13. DISPOSAL CONSIDERATIONS

Do not reuse containers for any purpose. Container is recyclable, and is to be disposed of at a container collection site. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: Triple or pressure-rinse the empty container, adding the rinsate to the spray tank. Make the empty container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or feed by storage or disposal.

14. TRANSPORT INFORMATION

TDG Shipping Description: NOT REGULATED.
US DOT Shipping Description: NOT REGULATED
U.S. Surface Freight Classification: CLEANING, SCOURING OR WASHING COMPOUNDS, N.O.I., LIQUID, (NMFC 48580, SUB 3; CLASS: 55)

Consult appropriate ICAO/IATA/MDG regulations for shipment requirements in the Air and Vessel shipping modes.

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:	NFPA		HMIS
	2 Health	0 Least	2 Health
	0 Flammability	1 Slight	0 Flammability
	0 Instability	2 Moderate	0 Reactivity
		3 High	H PPE
		4 Severe	

MATERIAL SAFETY DATA SHEET

FLUSH®

SARA Hazard Notification/Reporting

SARA Title III Hazard Category: Immediate Y Fire N Sudden Release of Pressure N
Delayed N Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Ammonia (CAS: 7664-41-7)

SARA, Title III, Section 313: Ammonia (CAS: 7664-41-7)

RCRA Waste Code: Not listed

CA Proposition 65: None listed

16. OTHER INFORMATION

MSDS STATUS: Section 9 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

®Flush is a registered trademark of Loveland Products.

Disclaimer and Limitation of Liability: This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, Inc. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.

Disclaimer and Limitation of Liability: This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and UNITED AGRI PRODUCTS CANADA, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.