



Material Safety Data Sheet

The Dow Chemical Company

Product Name: GREAT STUFF(TM) Pro Gun Cleaner

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The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

GREAT STUFF(TM) Pro Gun Cleaner

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number:

800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

989-636-4400

Local Emergency Contact:

989-636-4400

2. Hazards Identification

Emergency Overview

Color: Colorless

Physical State: Liquid.

Odor: Mild

Hazards of product:

DANGER! Flammable gas - May cause flash fire. Causes eye irritation. May cause central nervous system effects; can cause death if too much is breathed. Vapor reduces oxygen available for breathing. May cause anesthetic effects. May cause central nervous system effects; may cause respiratory tract irritation. Aspiration hazard. Can enter lungs and cause damage. Vapor explosion hazard. Evacuate area. Keep upwind of spill. Warn public of downwind explosion hazard. Aerosol cans exposed to fire can rupture becoming flaming projectiles. Eliminate ignition sources. Contents under pressure.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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Potential Health Effects

Eye Contact: May cause severe eye irritation. May cause slight corneal injury. Effects may be slow to heal. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin Contact: Essentially nonirritating to skin. May cause drying and flaking of the skin.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause respiratory irritation and central nervous system depression. At air concentrations <1000 ppm, propane exerts very little physiological action; at 100,000 ppm and above it may produce dizziness or other central nervous system effects. Excessive exposure may cause headache, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death.

Ingestion: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Effects of Repeated Exposure: Contains component(s) which have been reported to cause effects on the following organs in animals: Blood. Kidney. Liver. Development of cataracts has been reported in laboratory animals after prolonged repeated skin exposure to acetone.

Birth Defects/Developmental Effects: Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

3. Composition Information

Component	CAS #	Amount
Acetone	67-64-1	> 60.0 - < 100.0 %
Propane	74-98-6	>= 10.0 - <= 30.0 %

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin Contact: Wash skin with plenty of water.

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Maintain adequate ventilation and oxygenation of the patient. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote.

Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Suitable extinguishing media

Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Container may vent and/or rupture due to fire. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vaporizes quickly at room temperature.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Warning - flashback potential.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Confined space entry procedures must be followed before entering the area. For large spills, warn public of downwind explosion hazard. Vapor explosion hazard. Keep out of sewers. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Sawdust. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Avoid contact with eyes. Wash thoroughly after handling. Do not swallow. Avoid breathing vapor. Use only with adequate ventilation. Keep container closed. No smoking, open flames or sources of ignition in handling and storage area. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges. Electrically bond and ground all containers and equipment before transfer or use of material. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Do not enter confined spaces unless adequately ventilated. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Storage

Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Store in the following material(s): Carbon steel. Stainless steel. Polypropylene. Polyethylene-lined container. Teflon. Glass-lined container. Aluminum. Plasite 3066 lined container. Plasite 3070 lined container. 316 stainless steel. See Section 10 for more specific information.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Acetone	ACGIH	TWA	500 ppm BEI
	ACGIH	STEL	750 ppm BEI
	OSHA Table Z-1	PEL	2,400 mg/m ³ 1,000 ppm
Propane	OSHA Table Z-1	PEL	1,800 mg/m ³ 1,000 ppm
	ACGIH	TWA	1,000 ppm

A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Wear clean, body-covering clothing.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Natural rubber ("latex"). Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

9. Physical and Chemical Properties

Appearance	
Physical State	Liquid.
Color	Colorless
Odor	Mild
Odor Threshold	No test data available
pH	No test data available
Melting Point	No test data available
Freezing Point	No test data available
Boiling Point (760 mmHg)	No test data available.
Flash Point - Closed Cup	Flammable gas.
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	Lower: 2.1 %(V) <i>Vendor</i> Upper: 8.5 %(V) <i>Vendor</i> (propane)
Vapor Pressure	4,482 hPa <i>Vendor</i>
Vapor Density (air = 1)	greater than air
Specific Gravity (H₂O = 1)	0.87 20 °C/20 °C <i>Vendor</i>
Solubility in water (by weight)	Complete
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.
Autoignition Temperature	450 °C (842 °F) <i>Estimated.</i>
Decomposition Temperature	No test data available
Kinematic Viscosity	No test data available

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Thermally stable at typical use temperatures.

Possibility of hazardous reactions

Will not occur.

Conditions to Avoid: Elevated temperatures can cause container to vent and/or rupture. Avoid static discharge.

Incompatible Materials: Avoid contact with: Acids. Bases. Oxidizers.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity

Ingestion

As product: Single dose oral LD50 has not been determined. Based on information for component(s):
Estimated. LD50, Rat > 5,000 mg/kg

Dermal

As product: The dermal LD50 has not been determined. Based on information for component(s):
Estimated. LD50, Rabbit >= 20,000 mg/kg

Inhalation

As product: The LC50 has not been determined.

Eye damage/eye irritation

May cause severe eye irritation. May cause slight corneal injury. Effects may be slow to heal. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin corrosion/irritation

Essentially nonirritating to skin. May cause drying and flaking of the skin.

Sensitization

Skin

No relevant data found.

Respiratory

No relevant data found.

Repeated Dose Toxicity

Contains component(s) which have been reported to cause effects on the following organs in animals: Blood. Kidney. Liver. Development of cataracts has been reported in laboratory animals after prolonged repeated skin exposure to acetone.

Chronic Toxicity and Carcinogenicity

No relevant data found.

Developmental Toxicity

Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

Reproductive Toxicity

For the major component(s): In animal studies, did not interfere with reproduction.

Genetic Toxicology

Genetic toxicity studies on tested components were predominantly negative.

12. Ecological Information

Toxicity

Data for Component: **Acetone**

Material is practically non-toxic to aquatic organisms on an acute basis
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 5,500 - 6,100 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia magna*, 48 h, immobilization: 6,084 mg/l

Aquatic Plant Toxicity

EC50, diatom *Skeletonema costatum*, biomass growth inhibition, 5 d: 11,800 - 14,400 mg/l

Toxicity to Micro-organisms

IC50, OECD 209 Test; activated sludge, 3 h: > 1,000 mg/l

Data for Component: **Propane**

No relevant data found.

Persistence and Degradability

Data for Component: Acetone

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
91 %	28 d	OECD 301B Test	pass

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.04E-13 cm ³ /s	52 d	Estimated.

Theoretical Oxygen Demand: 2.20 mg/mg

Data for Component: Propane

No relevant data found.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.27E-12 cm ³ /s	8.4 d	Estimated.

Theoretical Oxygen Demand: 3.64 mg/mg

Bioaccumulative potentialData for Component: Acetone

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -0.24 Measured

Data for Component: Propane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 2.36 Measured

Mobility in soilData for Component: Acetone

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 0.37 - 2.0 Estimated.

Henry's Law Constant (H): 1.38E-05 atm*m³/mole; 25 °C Estimated.

Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
44.3 %	55.6 %	< 0.1 %	< 0.1 %	< 0.1 %

Data for Component: Propane

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 24 - 460 Estimated.

Henry's Law Constant (H): 7.07E-01 atm*m³/mole; 25 °C Measured

Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
100 %	0 %	0 %	0 %	0 %

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling &

Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

14. Transport Information

DOT Non-Bulk

Proper Shipping Name: AEROSOLS
Hazard Class: 2.1 ID Number: UN1950
LIMITED QUANTITY

DOT Bulk

NOT AVAILABLE IN BULK CONTAINERS

IMDG

Proper Shipping Name: AEROSOLS
Hazard Class: 2.1 ID Number: UN1950
EMS Number: F-D,S-U

LIMITED QUANTITY

ICAO/IATA

Proper Shipping Name: AEROSOLS, FLAMMABLE
Hazard Class: 2.1 ID Number: UN1950
LIMITED QUANTITY

HAZCHEM CODE: 2YE

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	No
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	Yes

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Acetone	67-64-1	>= 60.0 - <= 100.0 %

Propane

74-98-6

>= 10.0 - <= 30.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

16. Other Information

Recommended Uses and Restrictions

Cleaner. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

Revision

Identification Number: 64097 / 0000 / Issue Date 11/24/2010 / Version: 3.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to

the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.