



Safety Data Sheet SUPER RETARDER



1. Identification

Product identifier	SUPER RETARDER		
Product code	SOL-0061		
Other means of identification	None.		
Recommended use of the chemical and restrictions on use	Paint thinner.		
Manufacturer	GEMINI INDUSTRIES, INC. 2300 Holloway Drive El Reno, OK 73036 USA Tel. 1-800-262-5710 Fax 1-405-262-9310 www.geminicoatings.com		
Emergency phone number	INFOTRAC 800-535-5053 Outside USA, Call Collect 1-352-323-3500 (French & English) 24-hour HAZMAT Response and MSDS help: EMI 800-510-8510		

2. Hazard identification

Summary	<p>DANGER! COMBUSTIBLE LIQUID! VERY TOXIC! Harmful by inhalation, if absorbed through skin and if swallowed. Skin, eyes and respiratory tracts irritant. Contains a substance capable of damaging the target organ. May damage fertility or the unborn child based on animal data. Keep away from heat, sparks and open flame. Avoid contact with skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet. Keep containers tightly closed when not in use. After use, wash hands with soap and water. Wash contaminated clothing before reuse.</p>
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WHMIS 2015/OSHA HCS 2012/GHS



- Flammable liquids (Category 4)
- Acute toxicity, oral (Category 4)
- Acute toxicity, dermal (Category 3)
- Acute toxicity, inhalation (Category 3)
- Skin irritation (Category 2)
- Eye irritation (Category 2)
- Reproductive toxicity (Category 2)
- Specific target organ toxicity, single exposure (Category 1)
- Specific target organ toxicity, single exposure, Respiratory tract irritation (Category 3)
- Specific target organ toxicity, repeated exposure (Category 2)

DANGER

- H227: Combustible liquid
- H311 + H331: Toxic in contact with skin or if inhaled
- H370: Causes damage to organs
- H302: Harmful if swallowed
- H319: Causes serious eye irritation

H315: Causes skin irritation
H335: May cause respiratory irritation
H361: Suspected of damaging fertility or the unborn child
H373: May cause damage to organs through prolonged or repeated exposure
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.
P261: Avoid breathing mist, vapours and spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves, protective clothing and eye protection.
P301+312+P330: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P302+352: IF ON SKIN: Wash with soap and water.
P361+364: Remove/Take off immediately all contaminated clothing and wash before reuse.
P332+313: If skin irritation occurs: Get medical advice or attention.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+313: If eye irritation persists: Get medical advice or attention.
P370+378: In case of fire: Use chemical foam, dry chemical or carbon dioxide for extinction.
P403+P235+P233: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P501: Dispose of contents and container to an approved waste disposal plant.

3. Composition/information on ingredients

Common name	CAS	Weight % content
2-Butoxyethanol	111-76-2	60 - 100 %

4. First-aid measures

Inhalation	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.
Skin contact	Wash skin with warm water and mild soap. Remove contaminated clothing and wash before reuse. Avoid touching eyes with contaminated body parts. If a problem develops or persists, seek medical attention.
Eye contact	IMMEDIATELY flush with plenty of water. Remove contact lenses. Flush with water for at least 15 minutes. Hold eyelids apart to rinse properly. Seek medical attention immediately.
Ingestion	DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. Never give anything by mouth if victim is unconscious or convulsing. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
Other	No information available.
Symptoms	No information available.
Notes to the physician	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	dried powder, carbon dioxide (CO ₂), alcohol resistant foam, Do not use direct water jet.
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Specific hazards arising from the chemical	Vapours are heavier than air and may travel to an ignition source distant from the material handling point. May be ignited by heat, sparks, flame or static electricity. Do not apply to hot surfaces. Contact with strong oxidizers may cause fire. In a fire or if heated, a pressure increase will occur and the container may burst. Emits toxic fumes under fire conditions.
Special protective equipment	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
Special protective actions for fire-fighters	Water stream can scatter and spread fire. If water is used, fog nozzles are preferable. Use water spray to cool fire-exposed containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
Environmental precautions	Prevent entry in sewer and other enclosed area. For a large spill, consult the Department of Environment or the relevant authorities.
Methods and materials for containment and cleaning up	Remove sources of ignition. Ventilate the area well. Stay against the wind spill. Make sure you have a fire extinguisher near you. Stop leak, if it's possible to do so without risk. Use non-sparking and antistatic tools. Absorb with inert material (soil, sand, vermiculite, Dustbane) and place in an appropriate waste disposal clearly identified. Dispose via a licensed waste disposal contractor. Finish cleaning the contaminated surface by rinsing with soapy water.

7. Handling and storage

Precautions for safe handling	Keep away from heat, sparks and open flame. Turn off all pilot lights, flames, stoves, heaters, electric motors, welding equipment and other sources of ignition. Use non-sparking and antistatic tools. Use only in well ventilated area. Do not breathe vapours, mists or aerosols. Avoid contact with skin, eyes and clothing. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet. Keep containers tightly closed when not in use. Containers of this material may be hazardous even when empty. Since empty containers retain product residues (vapour, liquid), all hazard precautions given in this sheet must be observed. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound and before eating, drinking or using toiletries. Remove contaminated clothing and wash before reuse.
Conditions for safe storage, including any incompatibilities	Storage and handling should follow the NFPA 30 Flammable and/or Combustible Liquids Code and the National Fire Code of Canada (NFCC). NFPA: Class IIIA Combustible liquid. Store tightly closed and in properly labelled container in a dry, cool and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from oxidizing materials and incompatible materials (see section 10).
Storage temperature	10 to 30°C (50 to 86°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	2-Butoxyethanol: 700 ppm.		
2-Butoxyethanol	TWA (8h)	20 ppm 20 ppm	ACGIH , BC, ON AB , RSST
Appropriate engineering controls	Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits.		

Individual protection measures	
Eye	Wear safety glasses. If there is a risk of contact with eyes, wear chemical splash goggles.
Hands	Wear nitrile or neoprene gloves. Disposable nitrile gloves can also be used, but discard after single use. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. Wear a neoprene or synthetic apron to prevent contact with skin.
Respiratory	Where the conditions in the workplace require a respirator, it is necessary to follow a respiratory protection program. Moreover, respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and standard 29 CFR 1910.134 (OSHA), ANSI Z88.2 or CSA Z 94.11 (Canada) and approved by NIOSH/MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times of exposure limit, wear a half mask respirator with organic vapour cartridges. For an APF until maximum 100 times of exposure limit, wear a full face mask respirator with organic vapour cartridges.
Feet	Wear rubber boots to clean up a spill.

9. Physical and chemical properties

Physical state	Liquid	Flammability	Combustible
Colour	Clear	Flammability limits	1.1 to 12.7%
Odour	Solvent odor	Flash point	65°C (149°F) Tagliabue closed cup
Odour threshold	0.1 ppm	Auto-ignition temperature	N/Av.
pH	N/Ap.	Sensibility to electrostatic charges	Yes
Melting point	N/Av.	Sensibility to sparks and/or friction	N/Av.
Freezing point	N/Av.	Vapour density	>1 (Air = 1)
Boiling point	171°C (339.8°F)	Relative density	0.902 kg/L (Water = 1)
Solubility	Soluble in water.	Partition coefficient n-octanol/water	N/Av.
Evaporation rate	> Butyl Acetate	Decomposition temperature	N/Av.
Vapour pressure	0.09kPa (0.7 mm Hg) @ 20°C (68°F)	Viscosity	N/Av.
Percent Volatile	100%	Molecular mass	N/Ap.
N/Av.: Not Available N/Ap.: Not Applicable Und.: Undetermined N/E: Not Established			

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under recommended storage conditions.
	A dangerous reaction will not occur.

Possibility of hazardous reactions (including polymerizations)	
Conditions to avoid	Avoid heat, flame and sparks. Avoid contact with incompatible materials.
Incompatible materials	Strong oxidants, strong bases, mineral acids, strong acids.
Hazardous decomposition products	In combustion: nitrogen oxides, carbon oxides (CO, CO ₂).


11. Toxicological information

Numerical measures of toxicity	2-Butoxyethanol Ingestion 560 mg/kg Rat LD50 Inhalation 2.21 mg/l/4h Rat LC50 Skin 220 mg/kg Rabbit LD50
Likely routes of exposure	Skin, eyes, inhalation, ingestion.
Delayed, immediate and chronic effects	<p>Eye contact May cause eye irritation.</p> <p>Skin contact Toxic by skin absorption. May cause skin irritation. Prolonged and repeated contact may cause drying and cracking of the skin.</p> <p>Inhalation Toxic if inhaled. May cause respiratory tract irritation. High concentrations may cause central nervous system depression characterized by headache, dizziness, vertigo, nausea, drowsiness and fatigue. The severity of symptoms may vary depending on exposure conditions. Contains a substance capable of damaging the target organ.</p> <p>Ingestion Harmful if swallowed. May cause gastro-intestinal irritation with nausea and vomiting.</p> <p>Respiratory or skin sensitization This product is not a skin or respiratory sensitizer.</p> <p>IARC/NTP Classification No ingredients listed.</p> <p>Carcinogenicity Not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.</p> <p>Teratogenicity This material is not known to cause teratogenic effect.</p> <p>Mutagenicity This material is not known to cause mutagenic effect.</p> <p>Reproductive toxicity The inhalation of high concentration of 2-Butoxyethanol has an embryotoxic and/or foetotoxic effect on rats and rabbits at doses which were severely toxic to the animals</p> <p>Specific target organ toxicity - single exposure Central nervous system, respiratory system, liver, kidneys, blood forming organs.</p> <p>Specific target organ toxicity - repeated exposure Blood forming organs.</p>
Interactive effects	No information available for this product.
Other information	The acute toxicity estimate (ATE) by inhalation of the mixture was calculated to be greater than 2 mg/L/4h but lower than 10 mg/L/4h. This value is classified according to GHS: Acute toxicity, inhalation (Category 3). The skin acute toxicity estimates (ATE) of the mixture was calculated to be greater than 200 mg/kg but lower than 1000 mg/Kg. This value is classified according to GHS: Acute toxicity, dermal (Category 3). The oral acute toxicity estimate (ATE) of the mixture was calculated to be greater than 300 mg/Kg but lower than 2000 mg/kg. This value is classified according to GHS: Acute toxicity, oral (Category 4).


12. Ecological information

Ecological toxicity	Fish various LC50 >160 mg/L ; 96h (2-Butoxyethanol) Crustaceans various LC50 >130 mg/L ; 96h
Persistence	No information available for this product.
Degradability	Biodegradable (>70% in 28 days).
Bioaccumulative potential	Potential to bioaccumulate is low (log K _{ow} <4).
Mobility in soil	No information available for this product.
Other adverse effects	No information available for this product.

13. Disposal considerations

Container 	Important! Prevent waste generation. Use in full. DO NOT dispose residue in sewers, streams or drinking water supply. Paint residues, including lacquers, stains, shellac, varnish, solvents and paint thinners, can be reprocessed (recycle) anywhere there is a recovery program. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.
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14. Transport information

UN Number	UN 1263
UN Proper Shipping Name	PAINT RELATED MATERIAL
Environmental hazards	This material is not listed as a marine pollutant.
Special precautions for user	No information available.
TDG - Transportation of Dangerous Goods (Canada)	
Transport hazard class(es)	 Class 3
Packing group	III
IMO/IMDG - International Maritime Transport	
Classification	Regulated UN 1263. PAINT RELATED MATERIAL. Class 3, PG III.
IATA - International Air Transport Association	
Classification	Regulated UN 1263. PAINT RELATED MATERIAL. Class 3, PG III.
These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.	

15. Regulatory information

Other regulations

UNITED STATE OF AMERICA:

- Toxic Substance Control Act (TSCA) :
All ingredients are listed in the TSCA Inventory.
- EPCRA Section 313 Toxic Chemicals:

No material is listed.

- California Proposition 65:

No material is listed.

CANADA :

- Canada DSL and NDSL:

All ingredients are listed in the Domestic Substances List (DSL).

- Canadian National Pollutant Release Inventory Substances (NPRI):

2-Butoxyethanol (CAS no. 111-76-2).

WHMIS 1988



B3

D1A

D2B

Class B3 : Combustible Liquid

Class D1A : Very toxic material causing immediate and serious toxic effects

Class D2B : Toxic material causing other toxic effects

HMIS



2

Health

2

Flamability

0

Reactivity

X

Protective Equipment

NFPA



2

2

0

16. Other information

Date
(YYYY-MM-DD)

GEMINI INDUSTRIES, INC. 2015-01-13

Version

01

Other
information

REFERENCES:

- NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, <http://www.cdc.gov/niosh/npg/npg.html>
- IPCS INCHEM, Chemical Safety Information from Intergovernmental Organizations, Canadian Centre for Occupational Health and Safety (CCOHS), Copyright International Programme on Chemical Safety (IPCS), <http://www.inchem.org>
- Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), <http://www.reptox.csst.qc.ca>
- IUCLID Chemical Dataset, European Chemical Substances Information System (ESIS), Joint Research Centre, <http://esis.jrc.ec.europa.eu>
- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, <http://hazmap.nlm.nih.gov/index.php>

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

HMIS: Hazardous Materials Identification System

NFPA: National Fire Protection Association

OSHA: Occupational Safety and Health Administration (USA)

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

RSST: Règlement sur la santé et la sécurité du travail (Québec)

GHS: Globally Harmonized System
IARC: International Agency for Research on Cancer
IDLH: Immediately Dangerous to Life or Health
STEL: Short Term Exposure Limit (15 min)
TWA: Time Weighted Averages
WHMIS: Workplace Hazardous Materials Information System

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