



SAFETY DATA SHEET

1. Identification of the substance/preparation and of the company/undertaking

Product Name: Bath Additive Thinner-1

Product Code : D 0062

Intended use of the substance/preparation

Coating for professional use

Manufacturer, importer, supplier

Producer/Supplier E.I.DuPont India Pvt Ltd
Plot No. KV-1, GIDC Savli,
Village Alindra, Vadodara Dist

Telephone 02667-264618

Emergency telephone +91-11-26791038/26791039

For further information, please also consult our Internet site:

<http://www.dupont.com>

2. Composition/information on ingredients

Chemical characterization

Component	CAS #	Amount (%W/W)
Ethylene glycol monobutyl ether	111-76-2	>= 99 %

Hazardous components

Additional advice

Combustible Liquid and Vapor.
Causes Eye Irritation.
Harmful If Swallowed.
May Cause Respiratory Tract Irritation.

3. Hazards identification

Human health hazards

Combustible Liquid And Vapor.
Causes Eye Irritation.
Harmful If Swallowed.
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Special hazard instructions for humans and environment

Inhalation Excessive exposure may cause irritation to upper respiratory tract (nose and throat). In humans, symptoms may include: headache. In animals, effects have been reported on the following organs: blood (hemolysis). Secondary effects to the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

Eye Contact May cause severe eye irritation. May cause moderate corneal injury. Effects may include discomfort or pain and redness. Effects may be slow to heal. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin Contact Brief contact may cause slight skin irritation with local redness. Repeated exposure may cause irritation, even a burn. May cause more severe response on covered skin (under clothing, gloves).

Skin Absorption Prolonged skin contact to animals which are less sensitive to hemolysis, as are humans, did not result in the absorption of harmful amounts.

Swallowing Moderate toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. In animals, effects have been reported on the following organs: blood (hemolysis). secondary effects to the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits. Massive ingestion of ethylene glycol monobutyl ether (attempted suicides) may produce metabolic acidosis and subsequent secondary effects such as hemolysis, central nervous system and kidney effects.

Chronic, Prolonged or Repeated Overexposure

Effects of Repeated Overexposure In animals, effects have been reported on the following organs: blood (hemolysis). Secondary effects to the kidney and liver. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits. In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling, exposures should not pose a carcinogenic risk to man. Has been toxic to the fetus in lab animals at doses toxic to the mother. In animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

4. First aid measures

4.1 Inhalation

Move person to fresh air; if effects occur, consult a physician.



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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.

Skin Contact

Wash skin with plenty of water.

Swallowing

Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounces (1 1/2 tsp) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 Tbsp) for a 40 pound child or 36 ml for an 18 kg child].

Notes To Physician

Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be of benefit.

In cases where several ounces have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment.

If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion.

Consult standard literature for details of treatment.

4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol, di- or triethylene glycol, ethylene glycol butyl ether, or methanol intoxication if available.

Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg IV, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours.

Continue fomepizole until serum methanol, EG, DEG, or TEG are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement.

If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

If burn is present, treat as any thermal burn, after decontamination.

5. Fire-fighting measures

5.1 Flammable Properties - Refer To Section 9, Physical And Chemical Properties

Extinguishing Media



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Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures

Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.

Fight fire from a protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special Protective Equipment For Firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with SCBA. If this is not available, wear full chemical resistant clothing with SCBA and fight fire from a remote location. For protective equipment in post-fire or non-fire clean up situations, refer to the relevant sections.

Unusual Fire And Explosion Hazards

Container may rupture from gas generation in a fire situation.
Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

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.

6. Accidental release measures

Contain spilled material if possible. Small spills: Absorb with materials such as: dirt, sand. Large spills: Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations for additional information.



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Personal Precautions: Isolate area. Refer to Section 7, Handling for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. 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.

7. Handling and storage

7.1 Handling

General Handling

Keep away from heat, sparks and flame.

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.

Avoid contact with eyes.

Do not swallow.

Avoid breathing vapor.

Wash thoroughly after handling.

See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Ventilation

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Other Precautions

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

7.2 Storage

Store in the following material(s): carbon steel. stainless steel. Teflon. Do not store in: aluminum. copper. galvanized iron. galvanized steel. Viton. neoprene. nitrile. natural rubber.

See Section 10 for more specific information.

8. Exposure controls / personal protection



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8.1 Exposure Limits

Component	Exposure Limits	Skin Form
Ethylene glycol monobutyl ether	20 ppm TWA8 ACGIH	Yes
	50 ppm TWA8 OSHA	Yes
	240 mg/m ³ TWA8 OSHA	Yes

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A "Yes" in the Skin Column indicates a potential significant contribution to overall exposure by the cutaneous (skin) route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance. A "Blank" in the Skin Column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

8.2 Personal Protection

Respiratory Protection:

Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

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

Other Protective

Equipment:

Use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

9. Physical and chemical properties

Physical State: Liquid

Appearance: Colorless

Odor: Ether

Flash Point - Closed Cup: 68 °C 154 °F *Pensky-Martens Closed Cup ASTM D 93*

Flammable Limits In Air:

Lower 1.1 %(V)

Upper 10.6 %(V)

Autoignition Temperature: 244 °C 471 °F

Vapor Pressure: 0.4 mmHg 20 °C



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Boiling Point (760 mmHg): 171 °C 339 °F
Vapor Density (air = 1): 4.1
Specific Gravity (H₂O = 1): 0.902 20 °C / 20 °C
Freezing Point: -65 °C -85 °F
Melting Point: *Not applicable.*
Solubility in Water (by weight): 100 % 20 °C
pH: No test data available.
Molecular Weight: 118.2 g/mol
Octanol/Water Partition Coefficient - Measured: 0.83
Evaporation Rate (Butyl Acetate = 1): 0.06
Percent Volatiles: 100 Wt%

10. Stability and reactivity

10.1 Stability/Instability Thermally stable at typical use temperatures.

Conditions to Avoid: Product can oxidize at elevated temperatures. Do not distill to dryness. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.
Thermal Decomposition: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

10.2 Hazardous Polymerization Will not occur.

11. Toxicological information

Acute Toxicity

Peroral

Rat; LD₅₀ (470 - 3000) mg/kg

Percutaneous

Rabbit; LD₅₀ = 220 mg/kg

Percutaneous

Guinea pig; LD₅₀ = > 2000 mg/kg

Inhalation

Vapor Study Rat; 7 hours; LC₅₀ = 700 ppm

Sensitization (Animal And Human Studies)

Did not cause allergic skin reactions when tested in humans.

Developmental Toxicity

Did not cause birth defects in laboratory animals., Has been toxic to the fetus in lab animals at doses toxic to the mother.

Reproductive Toxicity

In animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Chronic Toxicity And Carcinogenicity



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In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans., If the material is handled in accordance with proper industrial handling, exposures should not pose a carcinogenic risk to man.

Genetic Toxicology

In Vitro

In vitro mutagenicity studies were predominantly negative.

In Vivo

Animal mutagenicity studies were negative.

Significant Data With Possible Relevance To Humans

In animals, effects have been reported on the following organs:

blood (hemolysis).

secondary effects to the kidney and liver.

Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

12. Ecological information

12.1 Environmental Fate

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation reached in Modified OECD Screening Test (OECD Test No. 301 E) after 28 days: 95%. Material is ultimately biodegradable. Reaches > 70% mineralization in OECD test(s) for inherent biodegradability. Biodegradation reached in Modified Zahn-Wellens/EMPA Test (OECD Test No. 302 B) after 28 days: 100%.

BOD (% Oxygen consumption)

	Day 5	Day 10	Day 15	Day 20	Day 28/30
	5.2 %			72.2 %	

12.2 ECOTOXICITY

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

Toxicity to Aquatic Invertebrates

water flea Daphnia magna; LC50

Result value: 835 mg/l

Toxicity to Aquatic Invertebrates

water flea Daphnia magna; Immobilization; EC50

Result value: 2500 mg/l

Toxicity to Aquatic Plants

green alga Selenastrum capricornutum; Growth inhibition; EC50

Result value: > 1000 mg/l

Toxicity to Fishfathead minnow (Pimephales promelas); LC50

Result value: 1900 mg/l

Toxicity to Fish

bluegill (Lepomis macrochirus); LC50



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Result value: 435 mg/l

Toxicity to Fish

golden orfe (*Leuciscus idus*); LC50

Result value: 1600 mg/l

Toxicity to Fish

goldfish (*Carassius auratus*); LC50

Result value: 1700 mg/l

Toxicity to Fish

tidewater silverside (*Menidia beryllina*); LC50

Result value: 1250 mg/l

12.3 FURTHER INFORMATION

Bioconcentration potential is low ($BCF < 100$ or $\text{Log Pow} < 3$). Henry's Law Constant (H) is estimated to be: $1.60E-6 \text{ atm}\cdot\text{m}^3/\text{mole}$. Potential for mobility in soil is high (Koc between 50 and 150). Soil organic carbon/water partition coefficient (Koc) is estimated to be: 67.

Theoretical Oxygen Demand (THOD) - calculated: 2.30 mg/mg

Octanol/Water Partition Coefficient - Measured: 0.83

13. Disposal considerations

13.1 DISPOSAL

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. DUPONT HAS 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 2 (Composition/ Information On Ingredients). FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler. reclaimer. incinerator or other thermal destruction device. As a service to its customers, DuPont can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums.

14. Transport Information

14.1 U.S. D.O.T.

NON-BULK

Proper Shipping Name : NOT REGULATED

BULK

Proper Shipping Name : COMBUSTIBLE LIQUID, NOS

Technical Name : CONTAINS ETHYLENE GLYCOL MONOBUTYL ETHER

Hazard Class : COMBUSTIBLE LIQUID

ID Number : NA1993

Packing Group : PG III

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



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responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

15.1 FEDERAL/NATIONAL

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) SECTION 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act 1986 and 40 CFR Part 372.

Component CAS # Amount

Glycol Ethers Not available >= 99.0000 %

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA)

SECTION 103

This product contains Glycol Ether(s) which, although included as a broad category on the CERCLA hazardous substance list, has not been assigned a reportable quantity.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT) SECTION 302

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

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT) SECTIONS 311 AND 312

Delayed (Chronic) Health Hazard : Yes

Fire Hazard : Yes

Immediate (Acute) Health Hazard : Yes

Reactive Hazard : No

Sudden Release of Pressure Hazard : No

TOXIC SUBSTANCES CONTROL ACT (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

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.

15.2 STATE/LOCAL

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

Glycol Ethers Not available >= 99.0000 %



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**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.

**CALIFORNIA SCAQMD RULE 443.1 (SOUTH COAST AIR QUALITY MANAGEMENT
DISTRICT RULE 443.1,
LABELING OF MATERIALS CONTAINING ORGANIC SOLVENTS)**

VOC: Vapor pressure 0.4 mmHg @ 20° C
899 g/l

This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

16. Other Information

Further information

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.