SAFETY DATA SHEET

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

Product Name: Bath Additive Thinner-2

Product Code : D 0063

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

Component	CAS #	Amount (%W/W)
Ethylene glycol monohexyl ether	112-25-4	>= 98 <= 100%

3. Hazards Identification

3.1 Emergency Overview

Appearance Transparent colorless
Physical State Liquid
Odor Pungent
Hazards of product
DANGER! CAUSES EYE AND SKIN BURNS.
HARMFUL AND CORROSIVE IF SWALLOWED.
HARMFUL IF ABSORBED THROUGH SKIN.
ASPIRATION MAY CAUSE LUNG DAMAGE.

3.2 Potential Health Effects

Effects of Single Acute Overexposure
Inhalation Short-term harmful health effects are not expected from vapor generated at ambient temperature.
Eye Contact Vapor may be moderately to severely irritating, experienced as discomfort, excess

blinking and tear production, with excess redness and swelling of the conjunctiva. Corneal injury may occur.
Skin Contact Brief contact may cause slight irritation with itching, local redness and possibly swelling. Sustained contact of many hours may cause more severe redness and swelling, with the development of
fissures and possibly bleeding into the inflamed area.
Skin Absorption Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material.
Swallowing Moderately toxic. May cause irritation of the mouth, throat, esophagus, and stomach, with pain or discomfort in the mouth, throat, chest and abdomen, nausea, vomiting, diarrhea, thirst, dizziness, drowsiness, and weakness. Loss of consciousness may occur.

Chronic, Prolonged or Repeated Overexposure

Effects of Repeated Overexposure Repeated skin contact may cause a dermatitis.
Other Effects of Overexposure Animals receiving repeated doses develop hemolytic anemia
and secondary injury to the kidney and liver.
Medical Conditions Aggravated by Exposure
Skin contact may aggravate an existing dermatitis.

3.3 Potential Environmental Effects
See Section 12 for Ecological Information.

4. First Aid Procedures

4.1 Inhalation
Remove to fresh air.

4.2 Eye Contact
Immediately flush eyes with water and continue washing for at least 15 minutes. DO NOT remove contact lenses, if worn. Obtain medical attention without delay, preferably from an ophthalmologist.

4.3 Skin Contact
Remove contaminated clothing. Wash skin with soap and water. If irritation persists or if contact has been prolonged, obtain medical attention.

4.4 Swallowing
DO NOT INDUCE VOMITING. Do not give anything to drink. Obtain medical attention without delay. See "Notes to Physician".

4.5 Notes To Physician
There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.
Due to the irritating nature of the material, any aspiration during vomiting could result in severelung injury. Therefore, emesis should not be induced mechanically or pharmacologically.
However, the acute peroral systemic toxicity of the material indicates that evacuation of the

stomach contents should be undertaken at the earliest possible time by means carrying the least likelihood of aspiration (e.g., the use of gastric lavage with endotracheal intubation).

5. Fire Fighting Measures

5.1 Flammable Properties

Flash Point - Closed Cup: *Pensky-Martens Closed Cup ASTM D 93* **99 °C 210 °F**
Flash Point - Open Cup: *Cleveland Open Cup ASTM D 92* **104 °C 220 °F**
Autoignition Temperature: *See Section 8.3 - Engineering Controls*
Flammable Limits In Air:
Lower **1.4 %(V)** Calculated
Upper **9.0 %(V)** Estimated

5.2 Extinguishing Media

Extinguish fires with water spray or apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

5.3 Extinguishing Media To Avoid

No information currently available.

5.4 Special Fire Fighting Procedures

Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.

5.5 Special Protective Equipment For Firefighters

Use self-contained breathing apparatus and protective clothing.

5.6 Unusual Fire And Explosion Hazards

See Section 8.3 - Engineering Controls
This material may produce a floating fire hazard.

5.7 Hazardous Combustion Products

Burning can produce the following products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled. Carbon dioxide in sufficient concentrations can act as an asphyxiant.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled:
Small spills can be flushed with large amounts of water; larger spills should be collected for disposal.
Personal Precautions: Wear suitable protective equipment. Avoid contact with eyes and skin.
See Section 8.2 - Personal Protection.

7. Handling And Storage

7.1 Handling

SAFETY DATA SHEET

General Handling
Do not get in eyes, on skin, on clothing.
Do not swallow.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.
FOR INDUSTRY USE ONLY.
Ventilation
General (mechanical) room ventilation is expected to be satisfactory.

7.2 Storage
Glycol ethers as a family of solvents can be stored in carbon steel. Stainless steel or high baked, phenolic-lined tanks may be considered for critical applications sensitive to slight discoloration or trace iron contamination. Piping can be made of the same material as the storage tank. A centrifugal pump is suitable for transfer services. Butyl rubber or EPDM can be used for gaskets and packing. NOTE: UCC does not recommend using aluminum, copper, galvanized iron, galvanized steel, Viton, neoprene, nitrile or natural rubber with glycol ethers. Glycol ethers do not present a significant flammability hazard at normal storage temperatures.
They have relatively low vapor pressures, viscosities and freezing points.

8. Exposure Controls And Personal Protection

8.1 Exposure Limits

Component	Exposure Limits	Skin Form
Ethylene glycol monohexyl ether	20 ppm TWA8 UCC	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:
None expected to be needed.
If personnel exposure exceeds any exposure limit (Section 8.1) at any time, select respiratory protection equipment in accordance with 29 CFR 1910.134. NIOSH-approved full-facepiece atmospheresupplying respirator or a NIOSH-approved full-facepiece air-purifying respirator with organic vapor cartridge and particulate pre-filter is recommended.
Ventilation: General (mechanical) room ventilation is expected to be satisfactory.
Eye Protection: Monogoggles or faceshield

SAFETY DATA SHEET

Protective Gloves:
Butyl
Other Protective Equipment:
Eye Bath, Safety Shower
Chemical apron

8.3 Engineering Controls
PROCESS HAZARD: Sudden release of hot organic chemical vapor or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions.
Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapor."
Standard (ASTM) test values do not predict many real life situations. Autoignition is the result of a gas-phase runaway reaction which occurs when the heat generation rate inside a given volume of reactant exceeds that of heat loss rate. The heat balance determining autoignition is dependent on factors such as the reactant pressure plus the volume and geometry of any container. The ASTM standard AIT test uses a small (500 ml), heated, open-necked glass flask in which autoignition always occurs at atmospheric pressure. The AITs determined using this test can be appreciably greater than those that might be experienced in large commercial equipment, especially if elevated pressures are involved. Any operation at temperatures close to or above the flash point should be reviewed by the appropriate expert (e.g., safety engineer, chemist).

9. Physical And Chemical Properties

Physical State: Liquid
Appearance: Transparent colorless
pH: 6.3
Solubility in Water (by weight): *20 °C* **0.946 %**
Odor: Pungent
Flash Point - Closed Cup: *Pensky-Martens Closed Cup ASTM D 93* **99 °C 210 °F**
Flash Point - Open Cup: *Cleveland Open Cup ASTM D 92* **104 °C 220 °F**
Percent Volatiles: 100 Wt%
Molecular Weight: 146.2 g/mol
Boiling Point (760 mmHg): 207.8 °C 406 °F
Freezing Point: -45 °C -50 °F
Specific Gravity (H2O = 1): 0.889 *20 °C / 20 °C*
Vapor Pressure at 20°C: 0.0007 kPa 0.05 mmHg
Vapor Density (air = 1): 5
Evaporation Rate (Butyl Acetate = 1): < 0.01
Melting Point: *Not applicable.*

10. Stability And Reactivity

10.1 Stability/Instability Stable
Conditions to Avoid: Do not distill to dryness. Avoid excessive temperature or prolonged

reflux, such as in batch distillations.
Incompatible Materials: Strong alkalies. High temperatures in the presence of strong bases. Acids. Strong oxidizing agents.

10.2 Hazardous Polymerization Will Not Occur.

10.3 Inhibitors/Stabilizers Not applicable.

11. Toxicological Information

Acute Toxicity
Peroral
Rat; male; LD50 = 1.67 (1.43 - 1.96) ml/kg; slope = 13.1
Time to Death: 1 to 3 days.
Major Signs: sluggishness, lacrimation, drooping eyelids, prostration, labored breathing, piloerection, kyphosis, red discharge on perinasal fur
Gross Pathology - Decedents: lungs discolored, stomachs and bladders liquid-filled
Gross Pathology - Survivors: Nothing remarkable.
Peroral
Rat; female; LD50 = 0.83 (0.71 - 0.97) ml/kg; slope = 12.8
Time to Death: 3 hr to 2 days.
Major Signs: sluggishness, lacrimation, piloerection, prostration, unsteady gait
Gross Pathology - Decedents: lungs, stomachs, intestines, urinary bladder (one) discolored,
stomachs and bladders liquid-filled
Gross Pathology - Survivors: lungs dark red, liver with nodule (one)
Percutaneous
Rabbit; male; LD50 = 0.81 (0.59 - 1.12) ml/kg; slope = 5.60; 24 h occluded.
Time to Death: 1 to 2 days.
Major Signs: sluggishness, unsteady gait, red perinasal discharge, comatose appearance
Irritation: erythema, edema, ecchymosis, necrosis, desquamation, scabs, ulceration
Gross Pathology - Decedents: lungs and thymuses discolored
Gross Pathology - Survivors: lungs and trachea discolored, thoracic cavity liquid-filled (one)
Percutaneous
Rabbit; female; LD50 = 0.93 (0.63 - 1.38) ml/kg; slope = 4.96; 24 h occluded.
Time to Death: 1 to 3 days
Major Signs: red stains on fur, sluggishness, unsteady gait, comatose appearance
Irritation: erythema, edema, ecchymosis, necrosis, ulceration, desquamation, scabs
Gross Pathology - Decedents: lungs and thymuses discolored
Gross Pathology - Survivors: lungs and trachea (one) discolored
Inhalation
Substantially saturated vapor studies, 6 hour exposure static generation method Rat; male and
female
Mortality: 0/5
Gross Pathology: Nothing remarkable.
Inhalation
Substantially saturated vapor studies, 4 hour dynamic generation method Rat; male and female
Mortality: 0/5

Gross Pathology: Nothing remarkable.
Inhalation
Saturated Vapor Studies, 8 hour Rat; female
Mortality: 0/6

Irritation
Skin: Rabbit; 4 h occluded; 0.5 ml
Results: minor to moderate erythema, moderate edema, necrosis, desquamation, persisted through 7 days
Eye: Rabbit; 0.005 ml
Results: minor diffuse corneal injury; iritis; moderate to severe conjunctival irritation, healed at 7 days

Repeated Exposure
In a nine-day cutaneous study with rabbits, doses of 44 mg/kg/day and higher resulted in doserelated
local skin irritation. Systemic toxicity as indicated by changes in hematology may result from contact with ethylene glycol monohexyl ether.

Pharmacokinetics And Metabolism
In Vivo
Intravenous and cutaneous administration of ethylene glycol monohexyl ether in rats and rabbits
resulted in systemic absorption, rapid and extensive metabolism, widespread distribution, and elimination in the urine.

Significant Data With Possible Relevance To Humans
A short-term repeated (9 days) and subsequent subchronic (14 weeks) inhalation study with vapor from ethylene glycol monohexyl ether showed only nonspecific signs of toxicity at near vapor-saturated concentrations; these included body weight decrease, liver and kidney weight
changes, and minimal clinical signs. There was no hematological, biochemical, or histological evidence for any specific organ toxicity. At concentrations below about 40 ppm, no effects were
observed. Ethylene glycol monohexyl ether did not produce activity consistent with a mutagenic
event in an Ames test, a forward gene mutation test in cultured cells, and an in vitro test for the
detection of chromatid exchanges. Also, clastogenic activity was not seen in an in vitro cytogenetic test. Exposure of pregnant Fischer 344 rats and New Zealand White rabbits to ethylene glycol monohexyl ether vapor at concentrations of 21, 41 and 79 ppm during the period
of organogenesis (6 hours each day) resulted in minimal toxicity (as decreased body weight gain) in rabbits (79 ppm) and rats (41 and 79 ppm). There was, however, no evidence for either
embryofetotoxicity or teratogenicity at any exposure concentration.

12. ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL FATE

BOD (% Oxygen consumption)

SAFETY DATA SHEET

	Day 5	Day 10	Day 15	Day 20	Day 30
	72 %	93 %		100 %	

STURM (% Carbon dioxide evolved)

	Day 5	Day 10	Day 15	Day 28
in 20 days				97 %

12.2 ECOTOXICITY
Toxicity to Micro-organisms
Bacterial Inhibition; IC50
Result value: 770 mg/l
Toxicity to Aquatic Invertebrates
Daphnia; 48 h; LC50
Result value: 305 mg/l
Toxicity to Aquatic Invertebrates
Daphnia; 48 h; LC50
Result value: 300 mg/l
Toxicity to Aquatic Invertebrates
Daphnia; 48 h; LC50
Result value: 310 mg/l
Toxicity to Fish
Fathead Minnow; 96 h; LC50
Result value: 139.5 mg/l
Toxicity to Fish
Fathead Minnow; 96 h; LC50
Result value: 140 mg/l

12.3 Further Information
Theoretical Oxygen Demand (THOD) - calculated: 2.50 mg/mg
Chemical Oxygen Demand (COD) - measured: 1.89 mg/mg
Chemical Oxygen Demand (COD) - measured: 1.90 mg/mg
Octanol/Water Partition Coefficient - Measured: 1.86

13. Disposal Considerations

13.1 Waste Disposal Method
Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations.
Dispose in accordance with all applicable Federal, State, and local environmental regulations.
Empty containers should be recycled or disposed of through an approved waste management
facility.

13.2 Disposal Considerations

Disposal-Laboratory tests indicate that, at very low concentrations in water, this product is biodegradable in a biological wastewater treatment plant. Burial in an approved chemical landfill
may also be a suitable means of disposal. See Section 13.1

SAFETY DATA SHEET

Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste managementoptions permissible under applicable rules, regulations and/or laws governing your location.

14. Transport Information

14.1 U.S. D.O.T.

Non-Bulk
Proper Shipping Name : CORROSIVE LIQUID, TOXIC, NOS
Technical Name : ETHYLENE GLYCOL MONOHEXYL ETHER
Hazard Class : 8, 6.1
ID Number : UN2922
Packing Group : PG II
Bulk
Proper Shipping Name : CORROSIVE LIQUID, TOXIC, NOS
Technical Name : ETHYLENE GLYCOL MONOHEXYL ETHER
Hazard Class : 8, 6.1
ID Number : UN2922
Packing Group : PG II

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

15.1 Federal/National

Comprehensive Environmental Response, Compensation, And Liability Act Of 1980 Section 103 (Cercla)
The following components of this product are specifically listed as hazardous substances in 40
CFR 302.4 (unlisted hazardous substances are not identified) and are present at levels which could require reporting:
None., 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 (Epcra) Sections 302 And 304
The following components of this product are listed as extremely hazardous substances in 40 CFR Part 355 and are present at levels which could require reporting and emergency planning:
None.
Superfund Amendments And Reauthorization Act Of 1986 Title Iii (Epcra) Section 313
The following components of this product are listed as toxic chemicals in 40 CFR 372.65 and

are present at levels which could require reporting and customer notification under Section 313 and 40 CFR Part 372:

Component CAS # Amount
Glycol Ethers Not available <= 100.0000%
SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EPCRA) SECTIONS 311 AND 312
Delayed (Chronic) Health Hazard : Yes
Fire Hazard : No
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.

European Inventory Of Existing Commercial Chemical Substances (Einecs)
The components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

Cepa - Domestic Substances List (Dsl)
The components of this product are on the DSL or are exempt from reporting under the New Substances Notification Regulations.

15.2 State/Local

Pennsylvania (Worker And Community Right-To-Know Act)
This product is subject to the Worker and Community Right-to-Know Act. The following components of this product are at levels which could require identification in the MSDS:
Component CAS # Amount
Glycol Ethers Not available <= 100.0000%

Massachusetts (Hazardous Substances Disclosure By Employers)
The following components of this product appear on the Massachusetts Substance List and are present at levels which could require identification in the MSDS:

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 0.05 mmHg @ 20°C
887 g/l
887 g/l less water and less exempted solvents
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