MATERIAL SAFETY DATA SHEET

Bayer MaterialScience

Bayer MaterialScience LLC
Product Safety & Regulatory Affairs
100 Bayer Road
Pittsburgh, PA 15205-9741
USA

TRANSPORTATION EMERGENCY

CALL CHEMTREC:	(800) 424-9300
INTERNATIONAL:	(703) 527-3887

NON-TRANSPORTATION

Emergency Phone:	Call Chemtrec
Information Phone:	(800) 662-2927

1. Product and Company Identification

Product Name:	BAYSEAL C C X
Material Number:	80831285
Chemical Family:	Polyol System

2. Hazards Identification

Emergency Overview

Warning Color: Amber **Form:** liquid **Odor:** Amine.
Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Causes respiratory tract irritation. Vapor reduces oxygen available for breathing. Causes skin irritation. May be harmful if absorbed through skin. Causes eye irritation. May cause a temporary fogging of the eyes. When this product is sprayed, a full-face or hood-type supplied air respirator is required. May be harmful if swallowed. May affect nervous system. May cause irregular heartbeat. May cause lung damage. May cause blood disorders. May cause kidney damage. May cause liver damage. May cause adverse reproductive effects.

Potential Health Effects

Primary Routes of Entry:	Inhalation, Eye Contact, Skin Contact
Medical Conditions Aggravated by Exposure:	Respiratory disorders, Eye disorders, Skin disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation
Acute Inhalation
For Component: Hydrofluorocarbon
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. May induce cardiac arrhythmia (irregular heartbeat) in some individuals. Vapor can reduce oxygen available for breathing.

For Component: Tris-(2-chloroisopropyl)-phosphate

May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

For Component: Triethanolamine
Inhalation is unlikely due to the low vapor pressure. If misted or handled at elevated temperatures, high concentrations may cause respiratory tract irritation.

For Component: Trans-1,2-Dichloroethylene
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Overexposure to vapor may produce dizziness, drowsiness, or nausea.

For Component: 2-Butoxyethanol
Expected to be toxic by inhalation. May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

For Component: Tertiary Amine
Corrosive with symptoms of coughing, burning, ulceration, and pain.

For Component: Tertiary Amine
Causes respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

Chronic Inhalation
For Component: Tertiary Amine
May cause lung damage.

Skin
Acute Skin
For Component: Hydrofluorocarbon
Slightly toxic by skin absorption. May cause slight irritation.

For Component: Tris-(2-chloroisopropyl)-phosphate
May cause slight irritation.

For Component: Triethanolamine
May cause irritation with symptoms of reddening and itching.

For Component: Trans-1,2-Dichloroethylene
May cause irritation with symptoms of reddening and itching.

For Component: 2-Butoxyethanol
Toxic by skin absorption. May cause irritation with symptoms of reddening and itching.

For Component: Tertiary Amine
Toxic by skin absorption. Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.

For Component: Tertiary Amine
Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage. Toxic by skin absorption.

Chronic Skin
For Component: 2-Butoxyethanol
May cause defatting of the skin with symptoms of dryness and cracking. Chronic exposure may cause symptoms similar to those described in chronic inhalation.

For Component: Tertiary Amine
Prolonged or repeated skin contact may cause dermatitis with symptoms of red, itchy, dry skin.

Eye

Acute Eye

For Component: Hydrofluorocarbon
May cause slight irritation.

For Component: Tris-(2-chloroisopropyl)-phosphate
Not expected to be irritating.

For Component: Triethanolamine
May cause irritation with symptoms of reddening, tearing and stinging.

For Component: Trans-1,2-Dichloroethylene
May cause irritation with symptoms of reddening, tearing and stinging.

For Component: 2-Butoxyethanol
Causes irritation with symptoms of reddening, tearing, stinging, and swelling.

For Component: Tertiary Amine
Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage. Vapors can cause temporary corneal edema with symptoms of blurred vision or the appearance of halos around bright objects.

For Component: Tertiary Amine
Vapors can cause temporary corneal edema with symptoms of blurred vision or the appearance of halos around bright objects. Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.

Chronic Eye

For Component: Tertiary Amine
Prolonged vapor contact may cause conjunctivitis.

Ingestion

Acute Ingestion

For Component: Tris-(2-chloroisopropyl)-phosphate
May be harmful if swallowed. Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. Moderately toxic by ingestion.

For Component: Triethanolamine
Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.

For Component: Trans-1,2-Dichloroethylene
May be harmful if swallowed.

For Component: 2-Butoxyethanol
Toxic by ingestion. Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

For Component: Tertiary Amine
Moderately toxic by ingestion. Corrosive to the digestive tract with symptoms of burning and ulceration.

For Component: Tertiary Amine
Ingestion and/or vomiting may cause aspiration into the lungs resulting in chemical pneumonitis (inflammation of the lungs). Corrosive to the digestive tract with symptoms of burning and ulceration.

Chronic Ingestion

For Component: Tris-(2-chloroisopropyl)-phosphate

May cause liver damage. May cause kidney damage.

For Component: Triethanolamine
May cause liver damage. May cause kidney damage.

For Component: 2-Butoxyethanol
May cause blood disorders. May cause kidney damage. May cause liver damage.

General Effects of Exposure
Acute Effects of Exposure
For Component: 2-Butoxyethanol
Absorption may cause acute toxic effects, specifically damage to red blood cells.

Carcinogenicity:
No Carcinogenic substances as defined by IARC, NTP and/or OSHA

3. Composition/Information on Ingredients

Hazardous components

Weight percent	Components	CAS-No.
5 - 10%	Hydrofluorocarbon	CAS# is a trade secret
5 - 10%	Tris-(2-chloroisopropyl)-phosphate	13674-84-5
3 - 7%	Triethanolamine	102-71-6
1 - 5%	Trans-1,2-Dichloroethylene	156-60-5
1 - 5%	2-Butoxyethanol	111-76-2
1 - 5%	Tertiary Amine	CAS# is a trade secret
0.1 - 1%	Tertiary Amine	CAS# is a trade secret

4. First aid measures

Eye contact
In case of contact, flush eyes with plenty of water for at least 15 minutes. Call a physician immediately.

Skin contact
In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention.

Inhalation
If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion
If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

5. Firefighting measures

Suitable extinguishing media: Carbon dioxide (CO2), Dry chemical, Foam, water spray for large fires.

Special Fire Fighting Procedures
Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

Unusual Fire/Explosion Hazards
The reaction of this product with polymeric MDI ("A" side) will release heat (e.g., it is an exothermic reaction). Thus, spraying foam too thickly in a single lift, or not allowing sufficient time between lifts, can result in excessive heat generation to the point where the foam may char, smolder or burn. Refer to the appropriate BaySystems technical datasheet for application instructions.

6. Accidental release measures

Spill and Leak Procedures
Evacuate and keep unnecessary people out of spill area. Remove ignition sources. Notify management. Put on protective equipment. Control source of the leak. Ventilate. Contain the spill. Cover spill with inert material (e.g., dry sand or earth) and collect for proper disposal.

7. Handling and storage

Storage temperature:

minimum:	21.11 °C (70 °F)
maximum:	26.67 °C (80 °F)

Storage period
4 Months

Handling/Storage Precautions
Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Keep container closed when not in use. Material is hygroscopic and may absorb small amounts of atmospheric moisture. If contamination with isocyanates is suspected, do not reseal containers. Do not get on skin or clothing. Do not get in eyes. Do not breathe vapours or spray mist.

Further Info on Storage Conditions
Store materials between 70°F to 80°F (21°C to 27°C) in a dry and well ventilated area for a minimum of 48 hours prior to application of material. The transit temperature range is 32°F to 100°F (0°C to 38°C). The pressure in sealed containers can increase under the influence of heat. Protect against heat and direct sunlight.

8. Exposure controls/personal protection

When this product is heated or spray applied, amine vapors can be released.

Triethanolamine (102-71-6)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 mg/m3

Trans-1,2-Dichloroethylene (156-60-5)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 200 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 200 ppm, 790 mg/m3

2-Butoxyethanol (111-76-2)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 20 ppm
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 50 ppm, 240 mg/m3
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Skin designation: Can be absorbed through the skin.
US. ACGIH Threshold Limit Values
Hazard Designation: Group A3 Confirmed animal carcinogen with unknown relevance to humans.

Industrial Hygiene/Ventilation Measures
When handling this product, ventilation of the work area is recommended.

Respiratory protection
When this product is sprayed in combination with polymeric MDI ("A" side), a full-face or hood-type supplied air respirator operated in the positive pressure or continuous flow mode is required. For exterior spray applications where the use of supplied air respiratory protection may create a safety hazard (e.g., roof applications), an air purifying respirator with combination organic vapor/particulate (P100) cartridges may be substituted for a supplied air respirator. When handling the liquid product, particularly if heated or in a confined area, an air purifying respirator with combination organic vapor/particulate (P100) cartridges is recommended. The respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). When APRs are used, (a) the cartridges must be equipped with end-of-service life indicators (ESLI) certified by NIOSH, or (b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program.

Hand protection
When this product is sprayed in combination with polymeric MDI ("A" side), fabric gloves coated in nitrile, neoprene, butyl or PVC are recommended. When handling liquid product, nitrile, neoprene, butyl or PVC gloves are recommended.

Eye protection
When this product is sprayed in combination with polymeric MDI ("A" side), eye protection will be provided by the full-face or hood-type air supplied respirator as mentioned above in the respiratory protection section. When handling liquid product, chemical safety goggles or safety glasses with side-shields are required.

Skin and body protection
When this product is sprayed in combination with polymeric MDI ("A" side), a disposable full body suit (e.g., Tyvek, Kleenguard, etc.) with attached hood and disposable over-boots are required. When handling liquid product, wear cloth work clothing including long pants and long-sleeved shirts. If the potential for splash to the body exists, impermeable protective clothing is recommended.

Additional Protective Measures
Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product.

9. Physical and chemical properties

Form:	liquid
Color:	Amber
Odor:	Amine
pH:	ca. 10
Flash point:	> 100 °C (212 °F) (closed cup)
Specific Gravity:	> 1
Solubility in Water:	Partially soluble

10. Stability and reactivity

Hazardous Reactions

Hazardous polymerisation does not occur.The reaction of this product with polymeric MDI ("A" side) will release heat (e.g., it is an exothermic reaction). Thus, spraying foam too thickly in a single lift, or not allowing sufficient time between lifts, can result in excessive heat generation to the point where the foam may char, smolder or burn. Refer to the appropriate BaySystems technical datasheet for application instructions.

Stability

Stable

Materials to avoid

Oxidizing agents, Isocyanates

Hazardous decomposition products

By Fire and Thermal Decomposition: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke., Chlorine, Hydrogen chloride gas, Hydrogen fluoride, Carbonyl halides, Oxides of phosphorus, Other hazardous decomposition products may be formed.

11. Toxicological information

Toxicity Data for Hydrofluorocarbon

Acute inhalation toxicity

LC50: > 200000 ppm, 4 h (Rat)

Acute dermal toxicity

LD50: > 2,000 mg/kg (rat)

Skin irritation

rabbit, Non-irritating

Eye irritation

rabbit, Mild eye irritation

Sensitisation

non-sensitizer (Dog)

Repeated dose toxicity

28 d, inhalation: NOAEL: 50,000 ppm, (Rat)
90 d, Inhalation: NOAEL: 2000 ppm, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:
Cytogenetic assay: ambiguous (human lymphocytes, Metabolic Activation: with/without)
Ames: negative (Metabolic Activation: with/without)

Genetic Toxicity in Vivo:
Micronucleus Assay: negative (mouse)
negative

Developmental Toxicity/Teratogenicity

No Teratogenic effects observed at doses tested.

Toxicity Data for Tris-(2-chloroisopropyl)-phosphate
Acute oral toxicity
LD50: 632 mg/kg (rat)

Acute inhalation toxicity
LC50: > 17,800 mg/l, 1 h (rat, Male/Female)
aerosol

Acute dermal toxicity
LD50: > 5,000 mg/kg (rabbit, Male/Female)

Skin irritation
Human, Patch Test, No skin irritation
rabbit, No skin irritation

Eye irritation
rabbit, slight irritant
rabbit, Draize, Exposure Time: 24 h, slight irritant

Sensitisation
dermal: non-sensitizer (guinea pig, Maximization Test)
dermal: non-sensitizer (Human, Patch Test)

Repeated dose toxicity
90 Days, oral: NOAEL: 36 mg/kg, (Rat, male)

Mutagenicity
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Positive and negative results were reported.
Mammalian cell - gene mutation assay: positive (Mouse lymphoma cells (L5178Y/TK), Metabolic Activation: with)
Positive and negative results were reported.

Toxicity to Reproduction/Fertility
Other method, inhalation, daily, (rat, male)
Reproductive effects have been observed in animal studies.

Developmental Toxicity/Teratogenicity
rat, female, oral, gestation, daily, NOAEL (teratogenicity): > 1%, NOAEL (maternal): > 1%
No Teratogenic effects observed at doses tested., No fetotoxicity observed at doses tested.

Toxicity Data for Triethanolamine
Acute oral toxicity
LD50: 4,190 mg/kg (Rat)

Acute dermal toxicity

LD50: > 2,000 mg/kg (rabbit)

Skin irritation
rabbit, Slightly irritating
Human, Slightly irritating

Eye irritation
rabbit, Moderately irritating
rabbit, Draize, Severely irritating

Sensitisation
dermal: non-sensitizer (Guinea pig, Maximization Test)

Repeated dose toxicity
28 days, inhalation: NOAEL: > 0.5 mg/l, (Rat, Male/Female, 6 hrs/day 5 days/week)
13 weeks, dermal: NOAEL: 500 mg/kg, (rat, Male/Female, daily)

Mutagenicity
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Genetic Toxicity in Vivo:
Drosophila SLRL test: negative (Drosophila melanogaster)
negative

Carcinogenicity
rat, female, dermal, 2 years, daily,
negative
mouse, Female, dermal, 2 years,
positive
Rat, male, dermal, 2 years,
ambiguous
mouse, male, dermal, 2 years,
ambiguous

Nitrosamines may be formed with nitrates or nitrous acid under certain conditions . Nitrosamines have shown carcinogenic effects in animal tests.

Toxicity Data for Trans-1,2-Dichloroethylene
Acute oral toxicity
LD50: 1,235 mg/kg (rat)

Acute inhalation toxicity
LC50: 24100 ppm, 4 h (rat)

Acute dermal toxicity
LD50: > 5,000 mg/kg (rabbit)

Skin irritation
rabbit, Exposure Time: 24 h, Moderately irritating

Eye irritation
rabbit, Moderately irritating

Toxicity Data for 2-Butoxyethanol
Acute oral toxicity
LD50: 470 mg/kg (rat)

LD50: 300 mg/kg (rabbit)

Acute inhalation toxicity
LC50: 2.21 - 2.39 mg/l, 4 h (Rat)

Acute dermal toxicity
LD50: 220 mg/kg (rabbit)

Skin irritation
rabbit, Draize, Mild skin irritation

Eye irritation
rabbit, Draize, Moderate eye irritation

Sensitisation
dermal: non-sensitizer (Guinea pig, Maximization Test)
dermal: non-sensitizer (Human, Patch Test)

Repeated dose toxicity
90 Days, inhalation: NOAEL: 0.121 mg/kg, (Rat, Male/Female, daily)
30 Days, inhalation: NOAEL: < 0.27 mg/kg, (Rat, Male/Female, daily)
90 days, dermal: NOAEL: 150 mg/kg, (rabbit, Male/Female, daily)

Mutagenicity
Genetic Toxicity in Vitro:
Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic Activation: with/without)
Genetic Toxicity in Vivo:
Micronucleus Assay: negative (mouse,)
negative

Carcinogenicity
mouse, Male/Female, inhalation, 2 years, daily,
Animal experiments showed a statistically significant number of tumours.

Toxicity to Reproduction/Fertility
Other method, oral, daily, (Rat, Male/Female) NOAEL (parental): 304 mg/kg,
Reproductive effects have been observed in animal studies.
Two generation study, oral, (mouse, Male/Female) NOAEL (parental): 720 mg/kg, NOAEL (F1): < 720 mg/kg,

Developmental Toxicity/Teratogenicity
Rat, female, inhalation, gestation, daily, NOAEL (teratogenicity): 0.97 mg/kg, NOAEL (maternal): 0.24 mg/kg,
Teratogenic effects seen only with maternal toxicity.
rabbit, female, gestation, daily, NOAEL (teratogenicity): 0.97 mg/kg, NOAEL (maternal): 0.48 mg/kg,
Rat, Female, dermal, gestation, daily, NOAEL (teratogenicity): 5,400 mg/kg, NOAEL (maternal): < 1,800 mg/kg,

Toxicity Data for Tertiary Amine
Acute oral toxicity
LD50: 1,045 mg/kg (Rat)

Acute inhalation toxicity
LC50: 2.09 mg/l, 6 h (Rat)

Acute dermal toxicity
LD50: 230 mg/kg (rabbit)

Skin irritation
Corrosive

Eye irritation
Corrosive

Toxicity Data for Tertiary Amine
Acute oral toxicity
1,900 mg/kg (Rat)

Acute dermal toxicity
569 mg/kg (rabbit)

Skin irritation
Severely irritating

Eye irritation
Severely irritating

12. Ecological information

Ecological Data for Hydrofluorocarbon
Acute and Prolonged Toxicity to Fish
LC50: > 81.8 mg/l (Rainbow trout (Salmo gairdneri), 48 h)

Acute Toxicity to Aquatic Invertebrates
EC50: > 97.9 mg/l (Water flea (Daphnia magna), 96 h)

Ecological Data for Tris-(2-chloroisopropyl)-phosphate
Biodegradation
Aerobic, 0 %, Exposure time: 28 Days, Not readily biodegradable.

Bioaccumulation
Cyprinus carpio (Carp), Exposure time: 42 Days, ca. 0.8 - 2.8 BCF

Acute and Prolonged Toxicity to Fish
LC50: ca. 84 mg/l (Bluegill (Lepomis macrochirus), 96 h)
LC50: 51 mg/l (Fathead minnow (Pimephales promelas), 96 h)
LC50: 30 mg/l (Guppy (Poecilia reticulata), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: ca. 131 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Aquatic Plants
EC50: 45 mg/l, End Point: biomass (Green algae (Scenedesmus subspicatus), 72 h)
EC50: 41 - 55 mg/l, End Point: biomass (Green algae (Selenastrum capricornutum), 96 h)

Toxicity to Microorganisms
EC50: 295 mg/l, (Photobacterium phosphoreum, 30 min)
EC50: 784 mg/l, (Activated sludge microorganisms, 3 h)

Ecological Data for Triethanolamine

Biodegradation
Aerobic, 82 %, Exposure time: 8 Days
Inherently biodegradable.

Biochemical Oxygen Demand (BOD)
5 Days, 0.17 mg/l

Chemical Oxygen Demand (COD)
0.5 mg/g

Theoretical Biological Oxygen Demand (ThBOD)
1.61 - 2.04 mg/g

Bioaccumulation
Cyprinus carpio (Carp), Exposure time: 42 Days, < 0.4 BCF

Acute and Prolonged Toxicity to Fish
LC50: > 5,000 mg/l (Fathead minnow (Pimephales promelas), 96 h)
LC50: 450 mg/l (Bluegill (Lepomis macrochirus), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: 1,386 mg/l (Water flea (Daphnia magna), 24 h)

Toxicity to Aquatic Plants
EC50: 216 - 750 mg/l, End Point: growth (Green algae (Scenedesmus subspicatus), 72 h)

Toxicity to Microorganisms
EC10: 7,650 mg/l, (Pseudomonas putida, 16 h)
EC50: 525 mg/l, (Photobacterium phosphoreum, 30 min)

Ecological Data for Trans-1,2-Dichloroethylene

Biodegradation
0 %, Exposure time: 28 d, i.e. not readily degradable

Ecological Data for 2-Butoxyethanol

Biodegradation
aerobic, 100 %, Exposure time: 28 Days

Biochemical Oxygen Demand (BOD)
5 Days, 1,300 mg/g
20 Days, 1,800 mg/g

Chemical Oxygen Demand (COD)
2,180 mg/g

Theoretical Biological Oxygen Demand (ThBOD)
2,300 mg/g

Bioaccumulation
ca. 2.5 BCF

Acute and Prolonged Toxicity to Fish
LC50: 1,490 mg/l (Bluegill (Lepomis macrochirus), 96 h)
1,250 mg/l (Silverside Minnow (Menidia peninsulae), 96 h)
LC50: 2,137 mg/l (Fathead minnow (Pimephales promelas), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: 1,720 - 1,850 mg/l (Water flea (Daphnia magna), 24 h)
LC50: 800 mg/l (Common shrimp (Crangon crangon), 48 h)

Toxicity to Aquatic Plants
EC50: > 1,000 mg/l, (Green algae (Selenastrum capricornutum), 7 Days)

Toxicity to Microorganisms
IC50: > 1,000 mg/l, (Activated sludge microorganisms, 16 h)

Ecological Data for Tertiary Amine
Biodegradation
Not readily biodegradable.

Acute and Prolonged Toxicity to Fish
LC50: 220 mg/l (Golden orfe (Leuciscus idus), 96 h)

13. Disposal considerations

Waste Disposal Method
Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions
Recondition or dispose of empty container in accordance with governmental regulations.

14. Transport information

Land transport (DOT)

Proper shipping name:	Other regulated substances, liquid, n.o.s. (contains Hydrofluorocarbon, trans-Dichloroethylene)
Hazard Class or Division:	9
UN/NA Number:	NA3082
Packaging group:	III
Hazard Label(s):	Class 9

RSPA/DOT Regulated Components:
Trans-1,2-Dichloroethylene

Reportable Quantity: 18144 kg (40001 lb)

Sea transport (IMDG)
Non-Regulated

Air transport (ICAO/IATA)

Proper shipping name:	Aviation regulated liquid, n.o.s. (contains Hydrofluorocarbon, trans-Dichloroethylene)
Hazard Class or Division:	9
UN number:	UN3334
Packaging group:	III
Hazard Label(s):	MISCELLANEOUS

Additional Transportation Information
For ground, vessel, rail, when in quantities less than the RQ, this product ships non-regulated.

15. Regulatory information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):

Components	
Trans-1,2-Dichloroethylene	Reportable quantity: 1000 lbs
2-Butoxyethanol	Included in the regulation but with no data values. See regulation for further details

SARA Section 311/312 Hazard Categories:
Acute Health Hazard, Chronic Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):
Components
None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:
Components
Trans-1,2-Dichloroethylene
2-Butoxyethanol

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261)

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight percent	Components	CAS-No.
>=1%	Polyester Polyol	CAS# is a trade secret
5 - 10%	Hydrofluorocarbon	CAS# is a trade secret
>=1%	Non-halogenated flame retardant	CAS# is a trade secret
5 - 10%	Tris-(2-chloroisopropyl)-phosphate	13674-84-5
>=1%	Polyether Polyol	CAS# is a trade secret
3 - 7%	Triethanolamine	102-71-6
1 - 5%	Trans-1,2-Dichloroethylene	156-60-5
1 - 5%	2-Butoxyethanol	111-76-2

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

Weight percent	Components	CAS-No.
1 - 5%	Trans-1,2-Dichloroethylene	156-60-5
1 - 5%	2-Butoxyethanol	111-76-2

0.1 - 1%	Ethylene Glycol	107-21-1

Pennsylvania Right to Know Special Hazard Substance List:

Weight percent	Components	CAS-No.
<0.1%	1,4-Dioxane	123-91-1

MA Right to Know Extraordinarily Hazardous Substance List:

Weight percent	Components	CAS-No.
<0.1%	1,4-Dioxane	123-91-1

California Prop. 65:

Warning! This product contains chemical(s) known to the State of California to be Carcinogenic.

Weight percent	Components	CAS-No.
<0.1%	1,4-Dioxane	123-91-1

16. Other information

NFPA 704M Rating

Health	2
Flammability	1
Reactivity	0
Other	

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

Health	2*
Flammability	1
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

The method of hazard communication for Bayer MaterialScience LLC is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer MaterialScience LLC as a customer service.

Contact person:	Product Safety Department
Telephone:	(412) 777-2835
MSDS Number:	112000047811
Version Date:	02/07/2012
Report version:	1.0