

SAFETY DATA SHEET



1. Identification

Covestro LLC
1 Covestro Circle
Pittsburgh, PA 15205
USA

TRANSPORTATION EMERGENCY

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

NON-TRANSPORTATION

Emergency Phone: Call Chemtrec
Information Phone: (844) 646-0545

Product Name: IMPRANIL C SOLUTION
Material Number: 00126918
Chemical Family: Polyester Polyurethane Resin in Organic Solvent
Use: Raw material for coatings, adhesives, sealants, or elastomers in industrial applications

2. Hazards Identification

GHS Classification

Flammable liquids: Category 2
Reproductive toxicity: Category 2
Specific target organ toxicity - single exposure: Category 3 (Respiratory system, Central nervous system)

GHS Label Elements

Hazard pictograms:



Signal word: Danger

Hazard statements: Highly flammable liquid and vapour.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.

Precautionary statements: **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames, and hot surfaces. - No smoking
Keep container tightly closed.

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Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust, mist, gas, vapors or spray.
Use only outdoors or in a well-ventilated area.
Wear permeation resistant protective gloves and clothing. Wear eye and face protection.

Response:

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

IF exposed or concerned: Get medical attention.

Call a doctor or emergency medical facility (i.e. 911) if you feel unwell.

In case of fire: Use dry chemical, carbon dioxide (CO₂), foam, or water spray (for large fires) to extinguish.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal:

Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

3. Composition/Information on Ingredients

Hazardous Components

Concentration	Components	CAS-No.
60 - 80%	Ethyl Acetate	141-78-6
0.1 - 1%	Toluene	108-88-3

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

4. First Aid Measures

Most Important Symptom(s)/Effect(s)

Acute: May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose., Inhalation of the solvents may cause central nervous system depression with symptoms of nausea, lightheadedness, drowsiness, dizziness and loss of co-ordination.

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention if irritation develops.

Skin Contact

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Thoroughly clean shoes before reuse. Wash clothing before reuse.

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respirator. 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: All extinguishing media are suitable.

Unsuitable Extinguishing Media No Data Available

Fire Fighting Procedure

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.

Special Fire Hazards

Cool containers/tanks with water spray.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Other undetermined compounds

Unusual Fire/Explosion Hazards

Flammable Liquid. Vapors may spread long distances and ignite. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Vapors or fumes may form explosive mixture with air. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

6. Accidental Release Measures**Spill and Leak Procedures**

Cleanup personnel must use appropriate personal protective equipment. Evacuate and keep unnecessary people out of spill area. Remove all sources of ignition, including flames, heat, and sparks. Dike or dam spilled material and control further spillage, if possible. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Use grounded or non-sparking tools and equipment. Wash spill area with soap and water.

7. Handling and Storage**Handling/Storage Precautions**

Remove all sources of ignition, including flames, heat, and sparks. Take precautionary measures against static discharges. Ground and bond containers and equipment before transferring to avoid static sparks. Do not breathe vapours or spray mist. Avoid contact with eyes. Avoid contact with skin or clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

Storage Period:

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6 Months: after receipt of material by customer

Storage Conditions

Store separate from food products. Use spark-proof tools and explosion-proof equipment.

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Substances to Avoid

Oxidizing agents, Reducing agents, Peroxides

8. Exposure Controls/Personal Protection

The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart I.

Exposure Limits

Ethyl Acetate (141-78-6)

US. ACGIH Threshold Limit Values
Time weighted average 400 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Permissible exposure limit 400 ppm, 1,400 mg/m³

Toluene (108-88-3)

US. ACGIH Threshold Limit Values
Time weighted average 20 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)
Time weighted average 200 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)
Ceiling Limit Value 300 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)
Maximum concentration: 500 ppm (10 minutes)

US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent the build up of explosive atmospheres and to prevent off gases from entering the work place.

Respiratory Protection

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The use of a positive pressure supplied air respirator is mandatory when: airborne concentrations are not known; airborne solvent levels are 10 times the appropriate TLV; spraying is performed in a confined space or area with limited ventilation.

Hand Protection

Ensure gloves remain in good condition during use and replace if any deterioration is observed.

Permeation resistant gloves.

Eye Protection

Chemical resistant goggles must be worn., Chemical safety goggles in combination with a full face shield if a splash hazard exists.

Skin Protection

Permeation resistant clothing, Gloves, long sleeved shirts and pants.

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. Emergency showers and eye wash stations should be available.

9. Physical and Chemical Properties

State of Matter:	liquid
Color:	Brown
Odor:	solvent-like
Odor Threshold:	No Data Available
pH:	No Data Available
Freezing Point:	No Data Available
Setting Point:	No Data Available
Melting Point:	No Data Available
Boiling Point:	ca. 70 °C (158 °F) @ 1,013 hPa
Flash Point:	ca. -4 °C (24.8 °F) (DIN 51755)
Evaporation Rate:	No Data Available
Lower explosion limit:	No Data Available
Upper Explosion Limit:	No Data Available
Vapor Pressure:	Approximately 300 hPa @ 50 °C (122 °F)
Vapor Density:	No Data Available
Density:	ca. 1 g/cm ³ @ 20 °C (68 °F) (DIN 51757)
Relative Vapor Density:	No Data Available
Specific Gravity:	No Data Available
Solubility in Water:	No Data Available
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	ca. 460 °C (860 °F) (DIN 51794)
Decomposition Temperature:	No Data Available
Dynamic Viscosity:	27,000 - 53,000 mPa.s @ 23 °C (73.4 °F) (DIN EN ISO 3219/A.3)
Kinematic Viscosity:	No Data Available
Self Ignition:	not applicable

10. Stability and Reactivity

Hazardous Reactions

Material Name: IMPRANIL C SOLUTION

Material Number: 00126918

Hazardous polymerisation does not occur.

Stability

Stable

Materials to Avoid

Oxidizing agents, Reducing agents, Peroxides

Conditions to Avoid

Heat, flames and sparks.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Other undetermined compounds

11. Toxicological Information

Likely Routes of Exposure:

Skin Contact
Eye Contact
Ingestion
Inhalation

Health Effects and Symptoms

Acute: May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose., Inhalation of the solvents may cause central nervous system depression with symptoms of nausea, lightheadedness, drowsiness, dizziness and loss of co-ordination.

Chronic: Suspected of damaging fertility or the unborn child., Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal.

Toxicity Data for: IMPRANIL C SOLUTION

Data is based on the product.

Acute Oral Toxicity

LD50: 5,000 mg/kg (rat)

Toxicological studies at the product

Acute Inhalation Toxicity

Acute toxicity estimate: > 40 mg/l, 4 h, vapour (Calculation method)

Acute Dermal Toxicity

Acute toxicity estimate: > 5,000 mg/kg (Calculation method)

Skin Irritation

rabbit, OECD Test Guideline 404, slight irritant

Toxicological studies at the product

Eye Irritation

rabbit, OECD Test Guideline 405, slight irritant

Toxicological studies at the product

Sensitization

Skin sensitization (local lymph node assay (LLNA)):: negative (Mouse, OECD Test Guideline 429)

Toxicological studies at the product

Material Name: IMPRANIL C SOLUTION

Material Number: 00126918

Toxicity Data for: Ethyl Acetate

Acute Oral Toxicity

LD50: 4,934 mg/kg (rabbit, male/female) (OECD Test Guideline 401)

Acute Inhalation Toxicity

LC50: 4,000 ppm, 4 h, aerosol (rat)

Acute Dermal Toxicity

LD50: > 20,000 mg/kg (rabbit, male)

Skin Irritation

rabbit, Non-irritating

Eye Irritation

Human, irritating

Sensitization

dermal: non-sensitizer (Guinea pig, Magnusson/Kligmann (Maximization Test))

Skin sensitisation according to Magnusson/Kligmann (maximizing test):: negative (Guinea pig, OECD Test Guideline 406)

Repeated Dose Toxicity

90 days, inhalation: NOAEL: 0.002 mg/l, (Rat,)

11 weeks, inhalation: NOAEL: 2000 ppm, (Guinea pig,)

Chronic exposure damages the brain and the central nervous system.

13 w, Oral: NOAEL: 900 mg/kg, LOAEL: 3,600 mg/kg, (rat, male/female, daily)

94 days, inhalation: NOAEL: 350 ppm, LOAEL: 750 ppm, (Rat, male/female, 6 hrs/day 5 days/week)

Mutagenicity

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Positive and negative results were seen in various in vitro studies.

Chromosome aberration test: negative (Chinese hamster ovary (CHO) cells, Metabolic Activation: with/without)

Positive and negative results were seen in various in vitro studies.

Genetic Toxicity in Vivo:

Micronucleus Assay: negative (Mouse,)

negative

Micronucleus Assay: negative (hamster, male/female, Oral)

negative

Carcinogenicity

Mouse, Male/Female, intraperitoneal, 8 weeks Did not show carcinogenic effects in animal experiments.

Developmental Toxicity/Teratogenicity

rat, female, Inhalative, GD 1-19, 7 hrs/day, NOAEL (teratogenicity): 20000 ppm, NOAEL (maternal):

16000 ppm Studies of a comparable product.

Other Relevant Toxicity Information

May cause drowsiness or dizziness.

May cause irritation of respiratory tract.

Toxicity Data for: Toluene

Acute Oral Toxicity

LD50: 5,580 mg/kg (rat, male) (Directive 67/548/EEC, Annex V, B.1.)

Acute Inhalation Toxicity

LC50: 28.1 mg/l, 4 h, vapour (rat, male/female) (OECD Test Guideline 403)

Acute Dermal Toxicity

LD50: > 5,000 mg/kg (rabbit, male)

Skin Irritation

rabbit, Exposure Time: 4 h, irritating

Eye Irritation

Human, Irritating to eyes.

Sensitization

ambiguous (Guinea pig)

non-sensitizer (rat)

Skin sensitisation according to Magnusson/Kligmann (maximizing test):: negative (Guinea pig)

Repeated Dose Toxicity

13 weeks, Inhalation: NOAEL: 312 mg/kg, (rat, Male/Female, 6 hrs/day 5 days/week)

Chronic exposure damages the brain and the central nervous system.

Mutagenicity

Genetic Toxicity in Vitro:

Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic Activation: with/without)

Mammalian cell - gene mutation assay: Negative results were reported in various in vitro studies. (Mouse lymphoma cells (L5178Y/TK), Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Dominant Lethal Assay: positive, negative (Mouse, male)
positive, negative

Sister Chromatid Exchange: negative, Negative results were reported in various in vivo studies. (rat,)
negative, Negative results were reported in various in vivo studies.

Cytogenetic assay: negative (rat,)
negative

Carcinogenicity

rat, Male/Female, inhalation, 18 months, 6 hrs/day 5 days/week negative
Mouse, Male/Female, inhalation, 2 years, 6 hrs/day 5 days/week negative

Toxicity to Reproduction/Fertility

Fertility Screening, inhalation, 6 hrs/day 5 days/week, (Mouse, male) NOAEL (parental): 400 ppm, Reproductive effects have been observed in animal studies. Two generation study, inhalation, (rat, Male/Female) NOAEL (parental): 500 ppm, NOAEL (F1): 500 ppm, NOAEL (F2): 500 ppm Two generation study, inhalation, 6 hrs/day 7 days/week, (rat, Male/Female)

Developmental Toxicity/Teratogenicity

rabbit, inhalation, gestation, 6 hrs/day 7 days/week, NOAEL (teratogenicity): 1.14 mg/l, NOAEL (maternal): 1.14 mg/kg, No Teratogenic effects observed at doses tested. rat, female, inhalation, gestation, 6 hrs/day 5 days/week, NOAEL (teratogenicity): 400 ppm, NOAEL (maternal): 400 ppm No fetotoxicity observed at doses tested. rat, female, Inhalative, pregnancy, 6 hours/day 7 days/week, NOAEL (teratogenicity): 4500 mg/m³, NOAEL (maternal): 2250 mg/m³ Fetotoxicity has been observed in animal studies.

Other Relevant Toxicity Information

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

Carcinogenicity:

No carcinogenic substances as defined by IARC, NTP and/or OSHA

12. Ecological Information**Ecological Data for: IMPRANIL C SOLUTION**

Data on the product is not available. Please find the data available for the components.

Ecological Data for Ethyl Acetate**Biodegradation**

Aerobic, 100 %, Exposure time: 28 Days

Biochemical Oxygen Demand (BOD)

293 mg/g

Chemical Oxygen Demand (COD)

1,816 mg/g

Theoretical Biological Oxygen Demand (ThBOD)

1,820 mg/g

Bioaccumulation

Leuciscus idus (Golden orfe), Exposure time: 3 d, 30 BCF

Acute and Prolonged Toxicity to Fish

LC50: 270 - 333 mg/l (Golden orfe (Leuciscus idus), 96 h)

LC50: 484 mg/l (Rainbow (Donaldson) Trout (Oncorhynchus mykiss), 96 h)

LC50: 230 mg/l (Fathead minnow (Pimephales promelas), 96 h)

Acute Toxicity to Aquatic Invertebrates

EC50: 717 mg/l (Water flea (Daphnia magna), 48 h)

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EC50: Approximately 3,090 mg/l (Water flea (*Daphnia magna*), 48 h)

Toxicity to Aquatic Plants

3,300 mg/l, End Point: biomass (Green algae (*Scenedesmus subspicatus*), 48 h)

EC50: 2,000 mg/l, (Green algae (*Selenastrum capricornutum*), 96 h)

Toxicity to Microorganisms

EC50: 5,870 mg/l, (*Photobacterium phosphoreum*, 15 min)

EC0: 650 mg/l, (*Pseudomonas putida*, 16 h)

Ecological Data for Toluene

Biodegradation

Aerobic, 86 %, Exposure time: 20 d

Biochemical Oxygen Demand (BOD)

2,150 mg/l

Chemical Oxygen Demand (COD)

2,520 mg/g

Bioaccumulation

Golden orfe (*Leuciscus idus*), Exposure time: 3 Days, 90 BCF

Acute and Prolonged Toxicity to Fish

LC50: 13 mg/l (Goldfish (*Carassius auratus*), 96 h)

LC50: 26 mg/l (Fathead minnow (*Pimephales promelas*), 96 h)

LC50: 24 mg/l (Rainbow (Donaldson) Trout (*Oncorhynchus mykiss*), 96 h)

Acute Toxicity to Aquatic Invertebrates

EC50: 11.5 mg/l (Water flea (*Daphnia magna*), 48 h)

Toxicity to Aquatic Plants

EC50: > 433 mg/l, (Green algae (*Selenastrum capricornutum*), 96 h)

Toxicity to Microorganisms

EC0: 29 mg/l, (*Pseudomonas putida*, 16 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

Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

14. Transportation Information

Land transport (DOT)

Proper Shipping Name: Resin solution (contains Ethyl Acetate)
Hazard Class or Division: 3
UN/NA Number: UN1866
Packaging Group: II
Hazard Label(s): FLAMMABLE LIQUID

RSPA/DOT Regulated Components:

Ethyl Acetate

Reportable Quantity: 3076 kg (6781 lb)

Sea transport (IMDG)

Proper Shipping Name: RESIN SOLUTION (contains Ethyl Acetate)
Hazard Class or Division: 3
UN number: UN1866
Packaging Group: II
Hazard Label(s): FLAMMABLE LIQUIDS

Air transport (ICAO/IATA)

Proper Shipping Name: Resin solution (contains Ethyl Acetate)
Hazard Class or Division: 3
UN number: UN1866
Packaging Group: II
Hazard Label(s): FLAMMABLE LIQUIDS

15. Regulatory Information

United States Federal Regulations

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

No substances are subject to TSCA 12(b) export notification requirements.

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

Ethyl Acetate Reportable quantity: 5000 lbs

SARA Section 311/312 Hazard Categories:

Refer to hazard classification information in Section 2.

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:

None

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. In its purchased form, this product meets the criteria of ignitability under 40 CFR 261.21(a), and, when discarded in that form, should be managed as 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 SDS 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:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 80%	Ethyl Acetate	141-78-6
>=1%	Polyurethane Resin	CAS# is a trade secret

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

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 80%	Ethyl Acetate	141-78-6
0.1 - 1%	Talc (non-asbestos form)	14807-96-6
0.1 - 1%	Toluene	108-88-3

California Proposition 65 List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	Toluene	108-88-3

CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

16. Other Information

The method of hazard communication for Covestro LLC is comprised of product labels and safety data sheets. Safety data sheets for all of our products and general product declarations are available for download at www.productsafetyfirst.covestro.com.

Contact: Product Safety Department
Telephone: (412) 413-2835
Version Date: 06/14/2019
SDS Version: 1.5

Information contained in this SDS is believed to be accurate but is furnished without warranty, express or implied, including warranties of merchantability or fitness for a particular purpose. The information relates only to the specific material designated herein. Covestro LLC. assumes no legal responsibility for use of or reliance upon the information in this SDS and such information shall in no case be considered a part of our terms and conditions of sale. The user is responsible for determining whether the Covestro product is suitable for user's method of use or application. Covestro is not liable for any failure to observe the precautionary measures described in this SDS or for any misuse of the product.

