

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 AC 2346
Material Number: 05438535
Chemical Family: Polyacrylate 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
Eye irritation: Category 2A
Carcinogenicity: 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.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.

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

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smoking
Keep container tightly closed.
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.
Wash skin and face thoroughly after handling.
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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical attention.
Call a doctor or emergency medical facility (i.e. 911) if you feel unwell.
If eye irritation persists: Get medical attention.
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

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
55 - 65%	Ethyl Acetate	141-78-6
0.1 - 1%	Ethyl Acrylate	140-88-5

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: Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose., May cause defatting of the skin with symptoms of dryness and cracking., 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.

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 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: 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:

6 Months: after receipt of material by customer

Storage Conditions

Store separate from food products.

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, Isocyanates

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, as amended
Time weighted average 400 ppm

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

Ethyl Acrylate (140-88-5)

US. ACGIH Threshold Limit Values, as amended
Time weighted average 5 ppm

US. ACGIH Threshold Limit Values, as amended
Short term exposure limit 15 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Permissible exposure limit 25 ppm, 100 mg/m³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Skin Dermal absorption possible

US. ACGIH Threshold Limit Values, as amended
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

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., Butyl rubber gloves., Nitrile rubber gloves., Neoprene 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:	Clear, colorless
Odor:	strong, solvent-like
Odor Threshold:	No Data Available
pH:	No Data Available
Freezing Point:	No Data Available
Boiling Point:	> 35 °C (> 95 °F) (DIN 53171)
Flash Point:	ca. -8 °C (17.6 °F) (DIN 51755)
Evaporation Rate:	No Data Available
Lower Explosion Limit:	2.2 %(V) for the solvent
Upper Explosion Limit:	11.5 %(V) for the solvent
Vapor Pressure:	360 hPa @ 50 °C (122 °F) (EC-Directive 92/69 EEC, A4)
Vapor Density:	No Data Available
Density:	ca. 1.1 g/cm ³ @ 20 °C (68 °F) (DIN 51757)
Relative Vapor Density:	No Data Available
Specific Gravity:	No Data Available
Solubility in Water:	insoluble
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	> 500 °C (932 °F) (DIN 51794)
Decomposition Temperature:	No Data Available
Dynamic Viscosity:	Approximately 15,000 - 30,000 mPa.s @ 23 °C (73.4 °F) (DIN EN ISO 3210 / A)

Kinematic Viscosity: No Data Available
Self Ignition: not applicable

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerisation does not occur.

Stability

Stable

Materials to Avoid

Oxidizing agents, Reducing agents, Isocyanates

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: Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose., May cause defatting of the skin with symptoms of dryness and cracking., Inhalation of the solvents may cause central nervous system depression with symptoms of nausea, lightheadedness, drowsiness, dizziness and loss of co-ordination.

Chronic: 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., Suspected of causing cancer.

Toxicity Data for: IMPRANIL AC 2346

Data is based on a similar product.

Acute Oral Toxicity

LD50: > 2,500 mg/kg (rat)

Studies of a comparable product.

Skin Irritation

rabbit, non-irritant

Toxicological studies of a comparable product.

Eye Irritation

rabbit, irritating

Toxicological studies of a comparable product.

Sensitization

Skin sensitization (local lymph node assay (LLNA)):: negative (Mouse, OECD Test Guideline 429)
Studies of a comparable product.

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: Ethyl Acrylate**Acute Oral Toxicity**

LD50: 800 mg/kg (rat)

Acute Dermal Toxicity

LD50: 1,120 mg/kg (rabbit, male)

Skin Irritation

rabbit, OECD Test Guideline 404, Exposure Time: 4 h, irritating

Eye Irritation

Human, irritating

Sensitization

Sensitization of the respiratory airways:

No data available.

Skin sensitization (local lymph node assay (LLNA)):: positive (OECD Test Guideline 429)

Repeated Dose Toxicity

13 weeks, Oral: LOAEL: 20 mg/kg, (rat, male/female, 5 days/week)

6 months, Inhalation: NOAEL: 0.1 mg/l, LOAEL: 0.31 mg/l, (rat, male/female, 6 hrs/day 5 days/week)

Mutagenicity

Genetic Toxicity in Vitro:

Ames test: negative (Salmonella typhimurium)

Mouse lymphoma assay: positive

Genetic Toxicity in Vivo:

Micronucleus Assay: negative (Mouse, male, intraperitoneal)
negative

Toxicity to Reproduction/Fertility

Two-generation study, inhalation, daily, (rat, male/female)

Developmental Toxicity/Teratogenicity

rat, female, inhalation, gestation, 6 hours/day, NOAEL (maternal): 0.21 mg/l,

Other Relevant Toxicity Information

May cause irritation of respiratory tract.

Carcinogenicity:

Ethyl Acrylate

IARC - Overall evaluation: 2B Possibly carcinogenic to humans.

12. Ecological Information

Ecological Data for: IMPRANIL AC 2346

Data is based on a similar product.

Biodegradation

< 60 %, i.e. not readily degradable
Studies of a comparable product.

Acute and Prolonged Toxicity to Fish

LC50: > 100 mg/l (Danio rerio (zebra fish))
Studies of a comparable product.

Acute Toxicity to Aquatic Invertebrates

No toxic effects with saturated solution.: (Daphnia magna (Water flea), 48 h)
Studies of a comparable product.

Toxicity to Aquatic Plants

No toxic effects with saturated solution.: (scenedesmus subspicatus, 72 h)
Studies of a comparable product.

Toxicity to Microorganisms

EC50: > 1,000 mg/l, (activated sludge)
Studies of a comparable product.

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)

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

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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 Ethyl Acrylate**Biodegradation**

66 %, Exposure time: 5 d, i.e. readily biodegradable

> 60 %, Exposure time: 28 d, i.e. readily biodegradable

Acute and Prolonged Toxicity to Fish

LC50: 2,500 ug/l (Fathead minnow (Pimephales promelas), 96 h)

LC50: 15 mg/l (Golden orfe (Leuciscus idus), 96 h)

Acute Toxicity to Aquatic Invertebrates

LC50: 12,000 ug/l (brine shrimp (Artemia salina), 24 h)

EC50: 4.4 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Aquatic Plants

EC50: 48 mg/l, (Green algae (Desmodesmus subspicatus), 72 h)

Toxicity to Microorganisms

EC50: 1,536 mg/l, (Pseudomonas putida, 17 h)

Additional Ecotoxicological Remarks

Toxic to aquatic organisms.

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, Ethyl Acrylate)

Hazard Class or Division: 3

UN/NA Number: UN1866

Packaging Group: II

Material Name: IMPRANIL AC 2346

Material Number: 05438535

Hazard Label(s): FLAMMABLE LIQUID

RSPA/DOT Regulated Components:

Ethyl Acetate

Reportable Quantity: 3489 kg (7692 lb)

Sea transport (IMDG)

Proper Shipping Name: RESIN SOLUTION (contains Ethyl Acetate, Ethyl Acrylate)

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, Ethyl Acrylate)

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:

To the best of our knowledge, this material is not included in the Toxic Substances Control Act (TSCA) Inventory, and is defined as a new chemical substance which cannot be imported or manufactured for commercial purposes without complying with the Pre-manufacture Notice (PMN) requirements codified at 40CFR Part 720. Therefore, we are providing you a small quantity (as defined at 40CFR Part 720.36 (a) (1)) of this product with the understanding it is to be used solely in the course of Research and Development (R&D), as defined in Section 5 (h) (3) of TSCA and 40 CFR Part 720.

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

Ethyl Acrylate Reportable quantity: 1000 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:

Ethyl Acrylate

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

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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>
55 - 65%	Ethyl Acetate	141-78-6
>=1%	Polyacrylate 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>
55 - 65%	Ethyl Acetate	141-78-6
0.1 - 1%	Ethyl Acrylate	140-88-5

Pennsylvania Right to Know Special Hazard Substance List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	Ethyl Acrylate	140-88-5

Massachusetts Right to Know Extraordinarily Hazardous Substance List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	Ethyl Acrylate	140-88-5

California Proposition 65 List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	Ethyl Acrylate	140-88-5

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: 09/27/2019
SDS Version: 2.7

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.

|| Changes since the last version are highlighted in the margin. This version replaces all previous versions.