

Safety Data Sheet



Product Identifier

SECTION 1. IDENTIFICATION

Product Identifier	BondLynx Gen-I CAS# 2409741-22-4
Other Means of Identification	2,2-Bis[4-[3-(trifluoromethyl)-3 <i>H</i> -diazirin-3-yl]phenyl]hexafluoropropane
Recommended Use	Laboratory chemical, polymer crosslinker, adhesive
Restrictions on Use	Not for human or animal use
Initial Supplier Identifier	XlynX Materials Inc. 10217 Surfside Place Sidney, B.C V8L 3R6 Canada
Emergency Telephone Number	250-727-1257

SECTION 2. HAZARD IDENTIFICATION

Classification	Not a hazardous substance or mixture.
Label Elements	Not a hazardous substance or mixture.
Other Hazards	Unknown

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
2,2-Bis[4-[3-(trifluoromethyl)-3 <i>H</i> -diazirin-3-yl]phenyl]hexafluoropropane Formula: C ₁₉ H ₈ F ₁₂ N ₄ Molecular Weight: 520.27	2409741-22-4	Pure solid	BondLynx Gen-I	3,3'-((perfluoropropane-2,2-diyl)bis(4,1-phenylene))bis(3-(trifluoromethyl)-3 <i>H</i> -diazirine)

Notes

SECTION 4. FIRST-AID MEASURES

Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Skin Contact	Wash with soap and plenty of water. Remove contaminated clothing.
Eye Contact	Flush eyes with plenty of water as a precaution. After swallowing, immediately make victim drink water (two glasses at most). Consult a

Ingestion physician. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Most Important Symptoms and Effects, Acute and Delayed No data available (see Section 2)

Immediate Medical Attention and Special Treatment No data available (see Section 2)

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media Suitable Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Extinguishing Media Unsuitable

Extinguishing Media Specific Hazards Arising from the Product Development of hazardous combustion gases or vapors possible in the event of fire. Fire may cause evolution of Carbon oxides, Nitrogen oxides (NOx), Hydrogen fluoride

Special Protective Equipment and Precautions for Fire-Fighters Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures Avoid breathing vapours, mist, or gas. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Methods for Containment and Cleaning Up Keep in suitable, closed containers for disposal. Do not let product enter drains.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling Not a hazardous substance or mixture.

Conditions for Safe Storage Keep container tightly closed in a dry and well-ventilated place. Handle and store away from light and heat. Store at +2°C to +8°C (+36°F to +46°F).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
2,2-Bis[4-[3-(trifluoromethyl)-3H-diazirin-3-yl]phenyl]hexafluoropropane				

Notes	Not a hazardous substance or mixture
Appropriate Engineering Controls	General industrial hygiene practice.
Individual Protection Measures	General industrial hygiene practice.
Eye/Face Protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin Protection	Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Respiratory Protection	Respiratory protection required only when dusts are generated.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless solid or liquid
Odour	None
Odour Threshold	No data available
pH	No data available
Melting Point and Freezing Point	+34 °C
Initial Boiling Point and Boiling Range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	
Upper and Lower Flammability or Explosive Limit	Values of Yoshida correlations for Shock Sensitivity (-0.16) and Explosive Propagation (-0.19) indicate neither is likely. Validated with mechanical testing.
Vapour Pressure	No data available
Vapour Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Solubility in Water	Very low
Solubility in Other Liquids	Soluble in most non-aqueous solvents. Highly soluble in non-polar organics.
Partition Coefficient, n-Octanol / Water (Log Kow)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	The product reacts with light or heat to exothermically release nitrogen gas and produce reactive carbene motifs. Caution should be exercised when encouraging product activation.
Chemical Stability Possibility of	The product is chemically stable under standard ambient conditions (room temperature) No data available

Hazardous Reactions
Conditions to Avoid No data available
Incompatible Materials No data available
Hazardous Decomposition Products In the event of a fire, see Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation Skin contact Eye contact Ingestion

Acute Toxicity

LC50

LD50 (oral)

LD50 (dermal)

Notes No data available

Skin Corrosion / Irritation Not corrosive to skin. Non-phototoxic.

Serious Eye Damage / Irritation Does not induce ocular irritation or changes to opacity or permeability of the cornea. No classification required for eye irritation or serious eye damage.

STOT (Specific Target Organ Toxicity) - Single Exposure No data available

Aspiration Hazard No data available

STOT (Specific Target Organ Toxicity) - Repeated Exposure No data available

Respiratory and/or Skin Sensitization No data available

Carcinogenicity

Chemical Name	IARC	ACGIH®	OSHA
2,2-Bis[4-[3-(trifluoromethyl)-3H-diazirin-3-yl]phenyl]hexafluoropropane	Unknown	Unknown	Unknown

Notes The chemical, physical, and toxicological properties of this chemical have not been thoroughly investigated.

Reproductive Toxicity

Development of Offspring No data available

Sexual Function and Fertility No data available

Effects on or via Lactation No data available

Germ Cell Mutagenicity Not mutagenic in the *Salmonella typhimurium* reverse mutation assay.

Interactive Effects No data available

SECTION 12. ECOLOGICAL INFORMATION *(section heading must appear; all content is optional)*

Ecotoxicity No data available
Persistence and Degradability No data available
Bioaccumulative Potential No data available
Mobility in Soil No data available
Other Adverse Effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS *(section heading must appear; all content is optional)*

Disposal Methods It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION *(section heading must appear; all content is optional)*

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group

Special Precautions Not classified as dangerous in the meaning of transport regulations.
Environmental Hazards No quantitative data available concerning the ecological effects of this product. Discharge into the environment must be avoided.
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION *(section heading must appear; all content is optional)*

Safety, Health and Environmental Regulations Not controlled under WHIMS (Canada).
This product has not been classified according to the hazard criteria of the CPR (USA)

SECTION 16. OTHER INFORMATION

Date of Latest Revision February 23, 2022



Safety Data Sheet

Product Identifier

SECTION 1. IDENTIFICATION

Product Identifier	BondLynx Gen-IIIa
Other Means of Identification	1,8-bis(4-(3-(trifluoromethyl)-3 <i>H</i> -diazirin-3-yl)phenoxy)octane
Recommended Use	Laboratory chemical, polymer crosslinker, adhesive
Restrictions on Use	Not for human or animal use
Initial Supplier Identifier	XlynX Materials Inc. 10217 Surfside Place Sidney, B.C V8L 3R6 Canada
Emergency Telephone Number	250-727-1257

SECTION 2. HAZARD IDENTIFICATION

Classification	Not a hazardous substance or mixture.
Label Elements	Not a hazardous substance or mixture.
Other Hazards	Unknown

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
1,8-bis(4-(3-(trifluoromethyl)-3 <i>H</i> -diazirin-3-yl)phenoxy)octane Formula: C ₂₄ H ₂₄ F ₆ N ₄ O ₂ Molecular Weight: 514.18g/mol		Pure solid	BondLynx Gen-IIIa	

Notes

SECTION 4. FIRST-AID MEASURES

Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Skin Contact	Wash with soap and plenty of water. Remove contaminated clothing.
Eye Contact	Flush eyes with plenty of water as a precaution.

Ingestion After swallowing, immediately make victim drink water (two glasses at most). Consult a physician. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Most Important Symptoms and Effects, Acute and Delayed No data available (see Section 2)

Immediate Medical Attention and Special Treatment No data available (see Section 2)

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media Suitable Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Extinguishing Media Unsuitable

Extinguishing Media Specific Hazards Arising from the Product Development of hazardous combustion gases or vapors possible in the event of fire. Fire may cause evolution of Carbon oxides, Nitrogen oxides (NOx), Hydrogen fluoride

Special Protective Equipment and Precautions for Fire-Fighters Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures Avoid breathing vapours, mist, or gas. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Methods for Containment and Cleaning Up Keep in suitable, closed containers for disposal. Do not let product enter drains.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling Not a hazardous substance or mixture.

Conditions for Safe Storage Keep container tightly closed in a dry and well-ventilated place. Handle and store away from light and heat. Store at +2°C to +8°C (+36°F to +46°F).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
1,8-bis(4-(3-(trifluoromethyl)-3H-diazirin-3-yl)phenoxy)octane				

Notes	Not a hazardous substance or mixture
Appropriate Engineering Controls	General industrial hygiene practice.
Individual Protection Measures	General industrial hygiene practice.
Eye/Face Protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin Protection	Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Respiratory Protection	Respiratory protection required only when dusts are generated.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless solid
Odour	None
Odour Threshold	No data available
pH	No data available
Melting Point and Freezing Point	+49 °C
Initial Boiling Point and Boiling Range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	
Upper and Lower Flammability or Explosive Limit	Values of Yoshida correlations for Shock Sensitivity (-0.03) and Explosive Propagation (-0.12) indicate neither is likely. Validated with mechanical testing.
Vapour Pressure	No data available
Vapour Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Solubility in Water	Very low
Solubility in Other Liquids	Soluble in most non-aqueous solvents. Highly soluble in non-polar organics.
Partition Coefficient, n-Octanol / Water (Log Kow)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	The product reacts with light or heat to exothermically release nitrogen gas and produce reactive carbene motifs. Caution should be exercised when encouraging product activation.
Chemical Stability Possibility of	The product is chemically stable under standard ambient conditions (room temperature) No data available

Hazardous Reactions
Conditions to Avoid No data available
Incompatible Materials No data available
Hazardous Decomposition Products In the event of a fire, see Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation Skin contact Eye contact Ingestion

Acute Toxicity

LC50

LD50 (oral)

LD50 (dermal)

Notes No data available

Skin Corrosion / Irritation No data available

Serious Eye Damage / Irritation No data available

STOT (Specific Target Organ Toxicity) - Single Exposure No data available

Aspiration Hazard No data available

STOT (Specific Target Organ Toxicity) - Repeated Exposure No data available

Respiratory and/or Skin Sensitization No data available

Carcinogenicity

Chemical Name	IARC	ACGIH®	OSHA
1,8-bis(4-(3-(trifluoromethyl)-3H-diazirin-3-yl)phenoxy)octane	Unknown	Unknown	Unknown

Notes The chemical, physical, and toxicological properties of this chemical have not been thoroughly investigated.

Reproductive Toxicity

Development of Offspring No data available

Sexual Function and Fertility No data available

Effects on or via Lactation No data available

Germ Cell Mutagenicity No data available

Interactive Effects No data available

SECTION 12. ECOLOGICAL INFORMATION *(section heading must appear; all content is optional)*

Ecotoxicity No data available
Persistence and Degradability No data available
Bioaccumulative Potential No data available
Mobility in Soil No data available
Other Adverse Effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS *(section heading must appear; all content is optional)*

Disposal Methods It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION *(section heading must appear; all content is optional)*

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group

Special Precautions Not classified as dangerous in the meaning of transport regulations.
Environmental Hazards No quantitative data available concerning the ecological effects of this product. Discharge into the environment must be avoided.
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION *(section heading must appear; all content is optional)*

Safety, Health and Environmental Regulations Not controlled under WHIMS (Canada).
This product has not been classified according to the hazard criteria of the CPR (USA)

SECTION 16. OTHER INFORMATION

Date of Latest Revision February 23, 2022



Safety Data Sheet

Product Identifier

SECTION 1. IDENTIFICATION

Product Identifier	BondLynx Gen-IIIId
Other Means of Identification	Bis(2-(4-(3-(trifluoromethyl)-3H-diazirin-3-yl)phenoxy)ethyl) carbonate
Recommended Use	Laboratory chemical, polymer crosslinker, adhesive
Restrictions on Use	Not for human or animal use
Initial Supplier Identifier	XlynX Materials Inc. 10217 Surfside Place Sidney, B.C V8L 3R6 Canada
Emergency Telephone Number	250-727-1257

SECTION 2. HAZARD IDENTIFICATION

Classification	Not a hazardous substance or mixture.
Label Elements	Not a hazardous substance or mixture.
Other Hazards	Unknown

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Bis(2-(4-(3-(trifluoromethyl)-3H-diazirin-3-yl)phenoxy)ethyl) carbonate Formula: C ₂₁ H ₁₆ F ₆ N ₄ O ₅ Molecular Weight: 518.38g/mol		Pure oil	BondLynx Gen-IIIId	

Notes

SECTION 4. FIRST-AID MEASURES

Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Skin Contact	Wash with soap and plenty of water. Remove contaminated clothing.
Eye Contact	Flush eyes with plenty of water as a precaution.

Ingestion	After swallowing, immediately make victim drink water (two glasses at most). Consult a physician. Never give anything by mouth to an unconscious person. Rinse mouth with water.
Most Important Symptoms and Effects, Acute and Delayed	No data available (see Section 2)
Immediate Medical Attention and Special Treatment	No data available (see Section 2)

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media Suitable	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
Extinguishing Media Unsuitable	
Extinguishing Media Specific Hazards Arising from the Product	Development of hazardous combustion gases or vapors possible in the event of fire. Fire may cause evolution of Carbon oxides, Nitrogen oxides (NOx), Hydrogen fluoride
Special Protective Equipment and Precautions for Fire-Fighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	Avoid breathing vapours, mist, or gas. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
Methods for Containment and Cleaning Up	Keep in suitable, closed containers for disposal. Do not let product enter drains.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling	Not a hazardous substance or mixture.
Conditions for Safe Storage	Keep container tightly closed in a dry and well-ventilated place. Handle and store away from light and heat. Store at +2°C to +8°C (+36°F to +46°F).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Bis(2-(4-(3-(trifluoromethyl)-3H-diazirin-3-yl)phenoxy)ethyl) carbonate				

Notes	Not a hazardous substance or mixture
Appropriate Engineering Controls	General industrial hygiene practice.
Individual Protection Measures	General industrial hygiene practice.
Eye/Face Protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin Protection	Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Respiratory Protection	Respiratory protection required only when dusts are generated.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow oil
Odour	None
Odour Threshold	No data available
pH	No data available
Melting Point and Freezing Point	Yellow oil at room temperature
Initial Boiling Point and Boiling Range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	
Upper and Lower Flammability or Explosive Limit	Values of Yoshida correlations for Shock Sensitivity and Explosive Propagation indicate neither is likely.
Vapour Pressure	No data available
Vapour Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Solubility in Water	Very low
Solubility in Other Liquids	Soluble in most non-aqueous solvents.
Partition Coefficient, n-Octanol / Water (Log Kow)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	The product reacts with light or heat to exothermically release nitrogen gas and produce reactive carbene motifs. Caution should be exercised when encouraging product activation.
Chemical Stability Possibility of	The product is chemically stable under standard ambient conditions (room temperature) No data available

Hazardous Reactions
Conditions to Avoid No data available
Incompatible Materials No data available
Hazardous Decomposition Products In the event of a fire, see Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation Skin contact Eye contact Ingestion

Acute Toxicity

LC50

LD50 (oral)

LD50 (dermal)

Notes No data available

Skin Corrosion / Irritation No data available

Serious Eye Damage / Irritation No data available

STOT (Specific Target Organ Toxicity) - Single Exposure No data available

Aspiration Hazard No data available

STOT (Specific Target Organ Toxicity) - Repeated Exposure No data available

Respiratory and/or Skin Sensitization No data available

Carcinogenicity

Chemical Name	IARC	ACGIH®	OSHA
Bis(2-(4-(3-(trifluoromethyl)-3H-diazirin-3-yl)phenoxy)ethyl) carbonate	Unknown	Unknown	Unknown

Notes The chemical, physical, and toxicological properties of this chemical have not been thoroughly investigated.

Reproductive Toxicity

Development of Offspring No data available

Sexual Function and Fertility No data available

Effects on or via Lactation No data available

Germ Cell Mutagenicity No data available

Interactive Effects No data available

SECTION 12. ECOLOGICAL INFORMATION *(section heading must appear; all content is optional)*

Ecotoxicity No data available
Persistence and Degradability No data available
Bioaccumulative Potential No data available
Mobility in Soil No data available
Other Adverse Effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS *(section heading must appear; all content is optional)*

Disposal Methods It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION *(section heading must appear; all content is optional)*

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group

Special Precautions Not classified as dangerous in the meaning of transport regulations.
Environmental Hazards No quantitative data available concerning the ecological effects of this product. Discharge into the environment must be avoided.
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION *(section heading must appear; all content is optional)*

Safety, Health and Environmental Regulations Not controlled under WHIMS (Canada).
This product has not been classified according to the hazard criteria of the CPR (USA)

SECTION 16. OTHER INFORMATION

Date of Latest Revision May 4, 2022