Safety Data Sheet

1. Product and Company Identification

Product Name: **X-Air® 2**
Material Uses: Air Release Agent & Surface Tension Depressant
(M)SDS#: XAIR 2-20191120
Validation Date: November-20-2019
Supplier/Manufacturer: Specialty Polymers & Services, Inc. (SP&S, Inc.)
27822 Fremont Court
Valencia, California (CA) 91355, U.S.A.
Non-emergency phone number: (661) 294-1790 (7AM – 5PM PST)
E-mail: msds@spolymers.com

In case of emergency: Chemtrec (800) 424-9300 or (703) 527-3887

2. Hazards Identification

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Skin corrosion/irritation:	Category 2, H315	Eye damage/irritation:	Category 2B, H320
Skin sensitization:	Category 1, H317	Aquatic Hazard (Chronic):	Category 4, H413

GHS LABEL ELEMENTS:

HAZARD SYMBOLS:

SIGNAL WORDS: WARNING!

HAZARD STATEMENTS:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H413 May cause long lasting harmful effects to aquatic life.

PRECAUTIONARY STATEMENTS:

PREVENTION:
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, clothing, and eye/face protection.

RESPONSE:
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P364+P353+P352 IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical attention.

STORAGE: None

DISPOSAL: P501 Dispose of contents and containers in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – Annex III

See toxicological information (section 11)
General Information: Read entire MSDS for a more thorough evaluation of the hazards

3. Composition / Information on Ingredients

Name	CAS Number	%
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	68609-97-2	30 – 60
Benzyl Alcohol	100-51-6	15 – 30

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

4. First Aid Measures

Eye Contact:	Check for and remove any contact lenses. Immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get medical attention if irritation occurs.
Skin Contact:	In case of contact, wash affected areas with plenty of water, and soap, if available, for several minutes. Remove and clean contaminated clothing and shoes before re-use. Get medical attention if irritation occurs.
Inhalation:	Move exposed person to fresh air. Get medical attention if irritation occurs. If not breathing, give artificial respiration or oxygen. If breathing is difficult, transport to medical care and, if available, give supplemental oxygen. Loosen tight clothing such as a collar, tie, belt, or waistband. Get immediate medical attention.
Ingestion:	Wash out mouth with water. If swallowed dilute by giving two (2) glasses water to drink. Do not induce vomiting until direct to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Note to physician:	No specific treatment. Treat symptomatically. Call poison control center if large quantities were ingested

5. Fire-Fighting Measures

Flash point:	> 100.4°C (> 212.7°F) closed cup
Hazardous Thermal Decomposition Products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, other oxides, aldehydes, hydrocarbons, and products of incomplete combustion. Irritating or toxic substances may be emitted upon burning, combustion or decomposition. When exposed to high temperatures over a long period of time, formation of outgassing flammable decomposition products may occur.
Extinguishing Media:	Carbon dioxide, foam, dry chemical, water spray as suitable for the surrounding fire. Do not use high volume water jet.
Special Exposure Hazards:	Promptly isolate the scene by removing all persons from the vicinity of the fire. No actions shall be taken involving any personal risk or without suitable training.
Special Protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal Precautions:	No actions shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering area. Do not touch or walk through spilled material. Avoid breathing vapor or mist and provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental Precautions:	Avoid dispersal of spilled material and runoff that leads to contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution.
Methods of Clean Up:	Stop leak if without risk. Eliminate ignition sources. Move containers from spill area. Approach spill from up wind if possible. Prevent spill from entering sewers, rivers and other water courses, basements, or confined areas. Wash into effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material (e.g. sand, earth, vermiculite, or diatomaceous earth) and place in container for disposal according to local regulations. Dispose of only using a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Wash the spillage site with large amounts of water. Note: see section 1 for emergency contact information.

7. Handling and Storage

Handling:	Wear appropriate personal protective equipment (see Section 8) when handling. Eating, drinking, and smoking should be prohibited in areas where chemicals are handled, stored, or processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in processes where this material is used. Keep in the original container or a suitable alternate made from a compatible material. Keep all containers tightly closed when not in use. Empty containers retain product residue and should be disposed of properly. Do not reuse empty containers for other purposes or to hold other materials.
Storage:	Store in accordance with local regulations. Store in original containers, at 15°C - 35°C. Keep away from incompatible materials (see Section 10) and food and drink. Keep away from heat, sparks and open flames. Keep all containers tightly closed when not in use and tightly re-seal after use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls / Personal Protection

Recommended Monitoring Procedures:	If this product contains ingredients with exposure limits, personal, workplace, atmospheric, or biological monitoring may be required to determine the effectiveness of the ventilation system or other control measures and/or to determine whether it is necessary to use respiratory protective equipment. Consider European Standard EN 689 or similar industry or governmental guidelines for appropriate methods for the assessment of exposure by inhalation to chemical agents and/or hazardous substances.
Engineering measures:	No special ventilation requirements are necessary for this product. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure below the recommended or statutory limits.
Hygiene measures:	Wash hands, forearms, and face thoroughly after handling any chemical products, before eating, smoking, and using the lavatory and at the end of the work period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Respiratory:	A respiratory protection program in compliance with 29CFR1910.134, or other applicable regulatory standard must be followed whenever exposure limits may be exceeded. If engineering controls are not feasible, or if inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands:	Wear neoprene, nitrile rubber, butyl rubber or other suitable impervious gloves; consider European Standard EN374 or similar industry or governmental guidelines. Consider the parameters specified by the glove manufacture and check gloves during use to ensure they are retaining their protective properties. Gloves selected must have a breakthrough rating appropriate for the work shift. If a risk assessment indicates that it is necessary, gloves should always be worn when handling chemical products.
Eyes:	When a risk assessment indicates, safety eyewear complying with an approved standard, such as OSHA Standard 29CFR1910.133 or European Standard EN166, should be used to avoid exposure to liquid splashes, mists, or dusts. If contact is possible, at a minimum use chemical splash googles. If significant splash hazard may occur, consider using a full-face shield.
Skin:	Personal Protective equipment for the body should be selected based on the task being performed and the risks involved. Typical protective equipment includes non-absorbent lab coats, disposable protective sleeves, coats, or whole-body suits. Consider CFR1910.132 and CFR1910.136 for OSHA approved standards on protective clothing and footwear. Consider seeing a safety specialist to determine the appropriate level of protection for your task.
Environmental Exposure Controls:	Emissions from ventilation or work processes should be checked to ensure they comply with the requirements of environmental regulations. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Appearance:	Clear to colorless liquid	Odor	Slight
Boiling Point:	Not available	Freezing Point:	Not available
Flash Point:	> 100.4°C (> 212.7°F) closed cup	pH:	Not available

Auto-ignition Temperature:	Not available	Flammable Limits:	Not available
Vapor Pressure:	<1 mm Hg at 20°C (68 °F)	Water Solubility:	Slight
Specific Gravity:	0.95	Vapor Density:	>1 (Air = 1)
Evaporation Rate:	< 1 (butyl acetate =1)	VOC:	~10 g/ L (estimated)
Viscosity:	<100 cP		

10. Stability and Reactivity

Chemical Stability: This product is stable, under normal conditions of storage and use, hazardous reactions will not occur. Large amount of this product will react exothermically with large amounts of amines or mercaptans liberating fumes and heat.

Hazardous Polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur. This material is able to autopolymerize at very high temperatures.

Conditions to Avoid: High temperatures, sources of sparks or flames, and exposure to strong oxidizing agents, acids, bases, iron, zinc, aluminum and phenols. Reaction with peroxides may result in violent decomposition. Large quantities of this product will polymerize exothermically with large amounts of amines, mercaptans, or Lewis acids.

Hazardous Decomposition Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition products may include the following materials: carbon dioxide, carbon monoxide, other oxides, aldehydes, hydrocarbons, and products of incomplete combustion. Irritating or toxic substances may be emitted upon burning, combustion or decomposition. When exposed to high temperatures over a long period of time, formation of outgassing flammable decomposition products may occur.

11. Toxicological Information

Acute Toxicity

Product/Ingredient Name	Test	Endpoint	Species	Result
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	-	LD50 Oral	Rat	19,200 mg/kg
	-	LD50 Dermal	Rabbit	>4,500 mg/kg
	-	LC 0 Inhalation	Rat	0.15 mg/l (7-hr)
Benzyl Alcohol	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat-Male	1,620 mg/kg
	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Dust/mist	Rat	>4,178 mg/m^3

Irritation / Corrosion

Product/Ingredient Name	Test	Species	Result
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	Draize	Rabbit	Skin – Irritant
	-	Rabbit	Eyes – Non-irritant
Benzyl Alcohol	-	Rabbit	Skin – Slight Irritant
	-	Rabbit	Eyes – Irritant

Sensitizer

Product/Ingredient Name	Test	Species	Result
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	-	Guinea pig	Sensitizing to skin
Benzyl Alcohol	-	Skin / Guinea Pig	Not sensitizing

Mutagenicity

Product/Ingredient Name	Test	Result
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	Alkyl Glycidyl Ether did not induce DNA damage in cultured cells or mutation in cultured Chinese hamster ovary cells.	Negative
Benzyl Alcohol	Experiment – In vitro, mammalian-animal, metabolic activation +/-	Positive
	Experiment – In vitro, mammalian-animal, somatic cell	Negative
	Experiment – In vitro, mammalian-animal, germ cell somatic	Negative
	Experiment – In vivo, Insect	Negative
	Experiment – In vivo, mammalian-animal, somatic	Negative

Conclusion/ Summary: the weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Product/Ingredient Name	Test	Species	Dose	Exposure	Result/Result type
Benzyl Alcohol	-	Rat-Male, Female	-	103 weeks	Negative-Oral

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP or OSHA.

Reproductive Toxicity

Product/Ingredient Name	Test	Species	Maternal Toxicity	Fertility	Developmental Effects
Benzyl Alcohol	Mouse – Female; Oral: 550 mg/kg NOAEL, 10 days; 7 days per week				
	Mouse – Female; Oral: 750 mg/kg LOAEL, 8 days; 7 days per week				

Teratogenicity

Product/Ingredient Name	Test	Species	Results
No data available			

Potential Acute Health Effects

Inhalation: High airborne concentrations of vapors resulting from heating, misting or spraying may cause irritation of the respiratory tract and mucous membranes. There may be vomiting, nausea stomach pain, drowsiness, mental confusion. May be harmful if inhaled.

Ingestion: May be harmful if swallowed. Irritating to mouth, throat, and stomach. There may be vomiting, nausea, stomach pain.

Skin Contact: May be a moderate skin irritant. May cause an allergic skin reaction. Once sensitized, an allergic skin reaction may occur with reddening, swelling, and rash when subsequently exposed to very low levels.

Eye Contact: Causes eye irritation with symptoms of reddening, tearing and stinging.

Potential Chronic Health Effects

Product/Ingredient Name	Test	Endpoint	Species	Results

General: Once sensitized, an allergic reaction may occur when subsequently exposed to very low levels.

Target Organs: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental Effects: No known significant effects or critical hazards.

Fertility Effects: No known significant effects or critical hazards.

12. Ecological Information

Environmental Effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic Ecotoxicity

Product/Ingredient Name	Test	Endpoint	Exposure	Species	Result
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	-	Acute LC50	96 hours	Fish	1,800 mg/l
	-	Acute EC50	48 hours	Daphnia	6.07 mg/l
	-	Acute EC0	-	Daphnia	10 mg/l
	-	Acute IC50	72 hours	Algae	844 mg/l

Persistence and Degradability

Product/Ingredient Name	Test	Period	Result
No data available			

Product/Ingredient Name	Aquatic half-life	Photolysis	Biodegradability
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	-	-	Readily

Bioaccumulative potential

Product/Ingredient Name	Log P_{ow}	BCF	Potential
Oxirane, mono[(C12-14-alkyloxy) methyl] derivatives	>3	160	Low

Other adverse effects: No known significant effects or critical hazards

Other information: BOD5: Not determined COD: Not Determined TOC: Not determined

13. Disposal Consideration

Waste Disposal Method: Disposal of this products, solutions, and by-products should at all times comply with the requirements of environmental and waste disposal legislation and any regional or local authority requirements. Dispose of surplus, non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed on untreated to the sewer system unless this is complaint with all applicable laws and regulations. Incineration by an approved and licensed contractor is the most common

disposal method. Packaging materials that and absorbents containing the product can typically be landfilled or incinerated. Contact local authorities to determine the proper means of disposal in your area.

14. Transport Information

DOT (US) Classification: Not regulated for transportation purposes under 49CFR when transported by motor vehicle, rail car, or aircraft.

TDG (Canadian) Classification: Not regulated for transportation purposes when transported by road or rail.

IATA (Air): Not regulated for transportation purposes.

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This product is a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III: Section 304 - CERCLA: This product does not contain any chemicals regulated under Section 304 as extremely hazardous substance(s) for emergency release notification ("CERCLA" List):

SARA Title III: Section 311/312 - Hazard Communication Standard (HCS): Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain any toxic chemicals for routine annual Toxic Chemical Release Reporting under section 313 (40 CFR 372).

TSCA Section 8(b) - Inventory Status: All chemical(s) comprising this product are listed on the TSCA inventory.

TSCA Section 12(b) - Export Notification: This product does not contain chemicals which are subject to Section 12(b) export notification.

State Regulations:

California Proposition 65: ⚠ **WARNING:** This product can expose you to chemicals including Epichlorohydrin, which is known to the state of California to cause cancer, and Epichlorohydrin, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

International Regulations:

WHMIS: Class D-2B: material causing other toxic effects (Toxic)

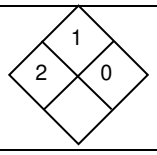
International Lists:

Canadian Inventory (CEPA-DSL):	all components are listed or exempt	Malaysia Inventory (EHS register):	not determined
China Inventory (IECSC):	all components are listed or exempt	Korea Inventory (ECL):	all components are listed or exempt
Taiwan Inventory (CSNN):	not determined		

16. OTHER INFORMATION

Hazardous Material Information System (HMIS) - USA	
Health	2
Flammability	1
Physical Hazards	0
Personal Protection	C*

National Fire Protection Association (USA):



*suggested minimum personal protection equipment. End user must determine appropriateness of these suggestions for their applications and usage conditions.

Reason Issued: update
Prepared By: P. White **Approved By:** C. Meyer Title: Vice President

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