

SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: **STRATA AC52™**

Type of product: Mixture.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Monomer for polymerization.

Uses advised against: All non-monomeric uses and all uses resulting in aerosols.

1.3. Details of the supplier of the safety data sheet

Company:

STRATA WORLDWIDE – GEOTECH
130 Technology Drive Ste 100
Canonsburg, PA 15713

Telephone:

724-745-5030

E-mail address:

info@strataworldwide.com

1.4. Emergency telephone number

24-hour emergency number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

Skin Sens. 1B;H317

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s):



Signal word:

Warning

Hazard statement(s):

H317 - May cause an allergic skin reaction

Precautionary statement(s):

P280 - Wear protective gloves/ protective clothing
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
P362 + P364 - Take off contaminated clothing and wash before reuse

2.3. Other hazards

None.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable, this product is a mixture.

3.2. Mixtures

Hazardous components

Poly(oxy-1,2-ethanediyl), a-(1-oxo-2-propen-1-yl)-w-[(1-oxo-2-propen-1-yl)oxy]-

Concentration/ -range: < 10%

CAS Number: 26570-48-9

Classification according to paragraph (d)
of 29 CFR 1910.1200: Skin Sens. 1B;H317, Eye Irrit. 2A;H319

2-Propen-1-aminium, N,N,N-tri-2-propen-1-yl-, chloride

Concentration/ -range: < 1%

CAS Number: 13107-10-3

Classification according to paragraph (d)
of 29 CFR 1910.1200: Skin Sens. 1B;H317

For explanation of abbreviations see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air. No hazards which require special first aid measures.

Skin contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of persistent eye irritation, consult a physician.

Ingestion:

If swallowed, and the victim is conscious and alert, induce vomiting immediately, as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

May cause allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed

None.

Other information:

None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

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

Unsuitable extinguishing media:

None known.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products:

Ammonia. Carbon oxides (COx). Nitrogen oxides (NOx). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3. Advice for firefighters

Protective measures:

Wear full protective clothing and self-contained breathing apparatus.

Other information:

Cool tanks with water to avoid polymerization.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:

Avoid contact with skin and eyes.

Protective equipment:

Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures:

Prevent further leakage or spillage if safe to do so. Keep people away from spill/leak.

6.2. Environmental precautions

Do not allow contact with soil, surface or ground water.

6.3. Methods and material for containment and cleaning up

Small spills:

Do not flush with water. Cover and soak up with a suitable absorbent material, e.g. diatomite. Keep in suitable, closed containers for disposal.

Large spills:

Do not flush with water. Do not allow solution to dry. Contain with dike. Pump into suitable and properly labelled containers. One-to-one (volume) dilution is suitable to reduce reactivity.

Residues:

After cleaning, flush away traces with water.

6.4. Reference to other sections

Section 7 - Handling and Storage, Section 8 - Exposure Controls/ Personal Protection, Section 13 - Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Avoid creating aerosols.

7.2. Conditions for safe storage, including any incompatibilities

Avoid acids, bases, oxidizing agents, reducing agents, initiators which may cause polymerization.

7.3. Specific end use(s)

Monomer for polymerization.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

None known.

8.2. Exposure controls

Appropriate engineering controls:

Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment:

a) *Eye/face protection:*

Splash glasses for normal handling conditions.

b) *Skin protection:*

i) *Hand protection:* Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to the current EN standard.

ii) *Other:* Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

c) *Respiratory protection:*

Not required ; except in case of aerosol formation.

d) *Additional advice:*

Do not carry food, drink or cigarettes in areas where this product is handled, stored or processed. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Avoid/prevent all emissions through measures such as recycling to process, treatment of emissions or incineration.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) <i>Appearance:</i>	Liquid.
b) <i>Odour:</i>	Slight
c) <i>Odour Threshold:</i>	Not applicable.
d) <i>pH:</i>	5 - 8 (See Technical Bulletin or Product Specifications for a more precise value, if available)
e) <i>Melting point/freezing point:</i>	< 0°C
f) <i>Initial boiling point and boiling range:</i>	> 100°C

g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	2.3 kPa @ 20°C
l) Vapour density:	Equivalent to water (~0.8 g/l).
m) Relative density:	> 1
n) Solubility(ies):	Completely miscible.
o) Partition coefficient n-octanol/water (log value):	No data available.
p) Autoignition temperature:	No data available.
q) Decomposition temperature:	No data available.
r) Viscosity:	See Technical Bulletin.
s) Kinematic viscosity:	No data available.
t) Explosive properties:	Not expected to be explosive based on the chemical structure.
u) Oxidizing properties:	Not expected to be oxidizing based on the chemical structure.
v) Particle characteristics:	Not applicable.

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions. Polymerization is initiated by: free radicals, peroxides.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Contact with strong bases liberates ammonia.

10.4. Conditions to avoid

Avoid extremes of temperature.

10.5. Incompatible materials

Acids and bases. Oxidizing agents. Reducing agents. Initiators.

10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Contact with strong bases liberates ammonia. Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 5000 mg/kg. (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Not irritating.
Serious eye damage/eye irritation:	Not irritating.
Respiratory/skin sensitization:	Sensitizing to skin.
Mutagenicity:	Based on available data, product is not expected to be mutagenic.
Carcinogenicity:	Based on available data, product is not expected to be carcinogenic.
Reproductive toxicity:	Based on available data, product is not expected to be toxic for reproduction.
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	No known effect.
Aspiration hazard:	No hazards resulting from the material as supplied.

Relevant information on the hazardous components:Poly(oxy-1,2-ethanediyl), a-(1-oxo-2-propen-1-yl)-w-[(1-oxo-2-propen-1-yl)oxy]-

Acute oral toxicity:	No data available.
Acute dermal toxicity:	No data available.
Acute inhalation toxicity:	No data available.
Skin corrosion/irritation:	Not irritating. (OECD 404)

<i>Serious eye damage/eye irritation:</i>	Severely irritating to eyes.
<i>Respiratory/skin sensitization:</i>	Sensitizing to skin. (OECD 406)
<i>Mutagenicity:</i>	No data available.
<i>Carcinogenicity:</i>	No data available.
<i>Reproductive toxicity:</i>	No data available.
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	No known effect.
<i>Aspiration hazard:</i>	No known effects.
<u><i>2-Propen-1-aminium, N,N,N-tri-2-propen-1-yl-, chloride</i></u>	
<i>Acute oral toxicity:</i>	LD50/oral/rat > 2000 mg/kg (OECD 401)
<i>Acute dermal toxicity:</i>	LD50/dermal/rat > 2000 mg/kg. (OECD 402)
<i>Acute inhalation toxicity:</i>	Testing by the inhalation route is inappropriate because exposure of humans via inhalation is unlikely: the substance has no vapour pressure and there is practically no exposure to inhalable aerosols.
<i>Skin corrosion/irritation:</i>	Not irritating. (OECD 404)
<i>Serious eye damage/eye irritation:</i>	Not irritating. (OECD 405)
<i>Respiratory/skin sensitization:</i>	Sensitizing to skin. (OECD 406) No respiratory sensitization has been observed in the workplace.
<i>Mutagenicity:</i>	Negative in the Ames Test (OECD 471). Negative in the In Vitro Mammalian Chromosome Aberration Test (OECD 473).
<i>Carcinogenicity:</i>	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.
<i>Reproductive toxicity:</i>	No data available.
<i>STOT - Single exposure:</i>	No known effects.

STOT - Repeated exposure: Based on available data, product is not expected to demonstrate chronic toxic effects.
NOAEL/oral/rat/28 days = 1000 mg/kg/day (OECD 407)

Aspiration hazard: No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

Acute toxicity to fish: LC50/Danio rerio/96 hours > 100 mg/L (Estimated)
Acute toxicity to invertebrates: EC50/Daphnia magna/48 hours > 100 mg/L (Estimated)
Acute toxicity to algae: IC50/Pseudokirchneriella subcapitata/72 hours = 1 - 10 mg/L (Estimated)
Chronic toxicity to fish: No data available.
Chronic toxicity to invertebrates: No data available.
Toxicity to microorganisms: No data available.
Effects on terrestrial organisms: No data available.
Sediment toxicity: No data available.

Relevant information on the hazardous components:

Poly(oxy-1,2-ethanediyl), a-(1-oxo-2-propen-1-yl)-w-[(1-oxo-2-propen-1-yl)oxy]-

Acute toxicity to fish: No data available.
Acute toxicity to invertebrates: No data available.
Acute toxicity to algae: No data available.
Chronic toxicity to fish: No data available.
Chronic toxicity to invertebrates: No data available.
Toxicity to microorganisms: No data available.
Effects on terrestrial organisms: No data available.
Sediment toxicity: Exposure to sediment is unlikely.

2-Propen-1-aminium, N,N,N-tri-2-propen-1-yl-, chloride

Acute toxicity to fish:	LC50/Danio rerio/96 hours = 11 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours = 80 mg/L (OECD 202)
Acute toxicity to algae:	IC50/Pseudokirchneriella subcapitata/72 hours = 9.6 mg/L (OECD 201)
Chronic toxicity to fish:	NOEC/Danio rerio/9 days > 100 mg/L (OECD 212)
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	EC10/activated sludge/3 hours = 784 mg/L (OECD 209)
Effects on terrestrial organisms:	NOEC/Eisenia fetida/14 days = 2780 mg/kg (OECD 207)
Sediment toxicity:	No data available.

12.2. Persistence and degradabilityInformation on the product as supplied:

Degradation:	Readily biodegradable.
Hydrolysis:	No data available.
Photolysis:	No data available.

Relevant information on the hazardous components:Poly(oxy-1,2-ethanediyl), a-(1-oxo-2-propen-1-yl)-w-[(1-oxo-2-propen-1-yl)oxy]-

Degradation:	No data available.
Hydrolysis:	No data available.
Photolysis:	No data available.

2-Propen-1-aminium, N,N,N-tri-2-propen-1-yl-, chloride

Degradation:	Not readily biodegradable. 0% / 28 days (OECD 301 F)
Hydrolysis:	Does not hydrolyse. Half-life: > 1 y @ 50°C, pH 4 - 9 (OECD 111)

Photolysis: No data available.

12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): No data available.

Bioconcentration factor (BCF): ~0

Relevant information on the hazardous components:

Poly(oxy-1,2-ethanediyl), a-(1-oxo-2-propen-1-yl)-w-[(1-oxo-2-propen-1-yl)oxy]-

Partition co-efficient (Log Pow): No data available.

Bioconcentration factor (BCF): No data available.

2-Propen-1-aminium, N,N,N-tri-2-propen-1-yl-, chloride

Partition co-efficient (Log Pow): -1 @ 23°C (OECD 107)

Bioconcentration factor (BCF): No data available.

12.4. Mobility in soil

Information on the product as supplied:

Exposure to soil is not to be expected.

Koc: No data available.

Relevant information on the hazardous components:

Poly(oxy-1,2-ethanediyl), a-(1-oxo-2-propen-1-yl)-w-[(1-oxo-2-propen-1-yl)oxy]-

Koc: No data available.

2-Propen-1-aminium, N,N,N-tri-2-propen-1-yl-, chloride

Koc: No data available.

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products:

Whenever possible, send residues and unused product to the production process. In case of contamination, polymerize the product and then send the polymer to landfill or incineration.

Contaminated packaging:

Completely drain containers and retain product residues. Rinse empty containers with water and use the rinse-water to prepare the working solution. Dispose of empty containers in accordance with regulations.

Recycling:

The product and its packaging are not suitable for recycling.

SECTION 14: Transport information

Land transport (DOT)

Not classified.

Sea transport (IMDG)

Not classified.

Air transport (IATA)

Not classified.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:
Acute.

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Not concerned.

Section 304 - Reportable Quantity:
Not concerned.

Section 313 (De minimis concentration):
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:
Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:
Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:
Not concerned.

RCRA status :

Not RCRA hazardous.

California Proposition 65 Information:

Not concerned.

SECTION 16: Other information

NFPA and HMIS Ratings:

NFPA:

Health:	2
Flammability:	0
Instability:	1



HMIS:

Health: 2
Flammability: 0
Physical Hazard: 0
PPE Code: B

This data sheet contains changes from the previous version in section(s):

SECTION 9. Physical and chemical properties, SECTION 11. Toxicological information, SECTION 12. Ecological information, SECTION 16. Other Information.

Key or legend to abbreviations and acronyms used in the safety data sheet:

Acronyms

STOT = Specific target organ toxicity

Abbreviations

Eye Irrit. 2A = Serious eye damage/eye irritation Category Code 2A

Skin Sens. 1B = Skin sensitization Category Code 1B

Hazard statements

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 23.01.a

LDMR087

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.