

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

1.1. Product identifier

Product form : Mixture
Name : Zerust® Axxanol™ Spray-G
Synonyms : Axxanol Spray-G, Spray-G
Other means of identification : EU SDS: 10-043

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

Use of the substance/mixture : Corrosion inhibitors

1.3. Details of the supplier of the safety data sheet

Northern Technologies International Corporation
4201 Woodland Road
Circle Pines, MN 55014 - United States
T +1 763-225-6600 - F +1 763-225-6645
msds@ntic.com - www.zerust.com

1.4. Emergency telephone number

Emergency number : Chemtrec (800) 424-9300; Chemtrec (Outside USA) +1 703-527-3887 (24 hours; 7 days/week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 4 H227
Aquatic Acute 3 H402
Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : Combustible liquid
Harmful to aquatic life
Precautionary statements (GHS-US) : Keep away from open flames, sparks. - No smoking
Avoid release to the environment
Wear eye protection, protective gloves
In case of fire: Use carbon dioxide (CO₂), dry chemical powder, foam to extinguish
Store in a well-ventilated place. Keep cool
Dispose of contents/container to National regulations

2.3. Other hazards

Other hazards not contributing to the classification : None known.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable
Full text of H-phrases: see section 16

3.2. Mixture

| Name | Product identifier | % | GHS-US classification |
|--|---------------------|---------|--|
| Petroleum distillates, hydrotreated light | (CAS No) 64742-47-8 | 20 - 50 | Flam. Liq. 4, H227 Asp. Tox. 1, H304 Aquatic Acute 3, H402 |
| Benzenesulfonic acid, dodecyl-, calcium salt | (CAS No) 26264-06-2 | <3 | Acute Tox. 4 (Oral), H302 Aquatic Acute 3, H402 |

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| Name | Product identifier | % | GHS-US classification |
|--|---------------------|----|-----------------------|
| Amines, C12-14-alkyl, C6-10-alkyl phosphates | (CAS No) 68603-55-4 | <2 | Eye Irrit. 2A, H319 |

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water.
- First-aid measures after eye contact : Obtain medical attention if pain, blinking or redness persist. Rinse cautiously with water for several minutes.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Sand.
- Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from flames or sparks. - No smoking.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. No naked lights. No smoking.

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Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.
Storage conditions : Store in a dry place. Keep container closed when not in use. Protect from moisture. Keep in fireproof place. Keep cool.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : If the occupational exposure limit is exceeded : Ensure adequate ventilation. Provide good ventilation in process area to prevent formation of flammable vapour.
Personal protective equipment : Gloves. Protective goggles. Avoid all unnecessary exposure. Mist formation: aerosol mask.



Hand protection : Wear protective gloves.
Eye protection : Chemical goggles or safety glasses.
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. During spraying wear suitable respiratory equipment.
Other information : Keep away from sources of ignition - No smoking. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Viscous.
Colour : light brown.
Odour : characteristic.
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : 61 °C
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Density : 0.83 - 0.93 g/cm³
Solubility : No data available
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : > 1123 mm²/s 40 C

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| | |
|----------------------|-----------------------|
| Viscosity, dynamic | : 1000 - 2000 cP 40 C |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

| | |
|-------------|-------------|
| VOC content | : 40 - 45 % |
|-------------|-------------|

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Combustible liquid. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No decomposition if stored normally. Carbon monoxide. Carbon dioxide. vapours. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Benzenesulfonic acid, dodecyl-, calcium salt (26264-06-2)

| | |
|----------------|---------------------------|
| LD50 oral rat | 1300 mg/kg |
| ATE CLP (oral) | 1300.000 mg/kg bodyweight |

Petroleum distillates, hydrotreated light (64742-47-8)

| | |
|--------------------|--------------|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |

| | |
|---|---|
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| | Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| | Based on available data, the classification criteria are not met |
| Specific target organ toxicity (single exposure) | : Not classified |
| Specific target organ toxicity (repeated exposure) | : Not classified |
| | Based on available data, the classification criteria are not met |
| Aspiration hazard | : Not classified |
| | Based on available data, the classification criteria are not met |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life.

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12.2. Persistence and degradability

Zerust® Axxanol™ Spray-G

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

12.3. Bioaccumulative potential

Zerust® Axxanol™ Spray-G

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Recycle or dispose of in compliance with current legislation.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Benzenesulfonic acid, dodecyl-, calcium salt (26264-06-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Amines, C12-14-alkyl, C6-10-alkyl phosphates (68603-55-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

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| | |
|----------------------|---|
| WHMIS Classification | Class B Division 3 - Combustible Liquid |
|----------------------|---|

Benzenesulfonic acid, dodecyl-, calcium salt (26264-06-2)

Listed on the Canadian DSL (Domestic Substances List)

| | |
|----------------------|---|
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
|----------------------|---|

Amines, C12-14-alkyl, C6-10-alkyl phosphates (68603-55-4)

Listed on the Canadian DSL (Domestic Substances List)

| | |
|----------------------|---|
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
|----------------------|---|

Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the Canadian DSL (Domestic Substances List)

| | |
|----------------------|---|
| WHMIS Classification | Class B Division 3 - Combustible Liquid |
|----------------------|---|

EU-Regulations

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Benzenesulfonic acid, dodecyl-, calcium salt (26264-06-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Amines, C12-14-alkyl, C6-10-alkyl phosphates (68603-55-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

15.2.2. National regulations

Benzenesulfonic acid, dodecyl-, calcium salt (26264-06-2)

Listed on the AICS (Australian Inventory of Chemical Substances)
 Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
 Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
 Listed on the Korean ECL (Existing Chemicals List)
 Listed on NZIoC (New Zealand Inventory of Chemicals)
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
 Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Amines, C12-14-alkyl, C6-10-alkyl phosphates (68603-55-4)

Listed on the AICS (Australian Inventory of Chemical Substances)
 Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
 Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
 Listed on the Korean ECL (Existing Chemicals List)
 Listed on NZIoC (New Zealand Inventory of Chemicals)
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the AICS (Australian Inventory of Chemical Substances)
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 Listed on the Korean ECL (Existing Chemicals List)
 Listed on NZIoC (New Zealand Inventory of Chemicals)
 Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

Zerust® Axxanol™ Spray-G()

| | |
|---|----|
| U.S. - California - Proposition 65 - Carcinogens List | No |
| U.S. - California - Proposition 65 - Developmental Toxicity | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No |

Benzenesulfonic acid, dodecyl-, calcium salt (26264-06-2)

| | | | | |
|---|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significance risk level (NSRL) |
| No | No | No | No | |

Amines, C12-14-alkyl, C6-10-alkyl phosphates (68603-55-4)

| | | | | |
|---|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significance risk level (NSRL) |
| No | No | No | No | |

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| Petroleum distillates, hydrotreated light (64742-47-8) | | | | |
|--|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significance risk level (NSRL) |
| No | No | No | No | |

| Benzenesulfonic acid, dodecyl-, calcium salt (26264-06-2) |
|--|
| U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities, U.S. - Louisiana - Reportable Quantity List for Pollutants, U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1, U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2, U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity, U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1, U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2, RTK - U.S. - Massachusetts - Right To Know List, U.S. - Massachusetts - Toxics Use Reduction Act, U.S. - Michigan - Polluting Materials List, U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances, RTK - U.S. - New Jersey - Right to Know Hazardous Substance List, U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances, RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List, RTK - U.S. - Pennsylvania - RTK (Right to Know) List, U.S. - Texas - Effects Screening Levels - Long Term, U.S. - Texas - Effects Screening Levels - Short Term |

SECTION 16: Other information

Data sources : Classification according to Regulation (EC) No. 1272/2008 [CLP]. Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]. Classification GHS-UN (SDS-16).

Other information : None.

Full text of H-phrases:

| | |
|---------------------|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 3 | Hazardous to the aquatic environment — Acute Hazard, Category 3 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A |
| Flam. Liq. 4 | Flammable liquids, Category 4 |
| H227 | Combustible liquid |
| H302 | Harmful if swallowed |
| H304 | May be fatal if swallowed and enters airways |
| H319 | Causes serious eye irritation |
| H402 | Harmful to aquatic life |

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