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

1.1. Product identifier
- Trade name: Alkenylsuccinic Anhydride, ASA 2024
- Product form: Mixture
- Product code: ASA 2024

1.2. Relevant identified uses of the substance or mixture and uses advised against
- Use of the substance/mixture: Manufacture, formulation

1.3. Details of the supplier of the safety data sheet
- Dixie Chemical Company, Inc.
  10601 Bay Area Blvd
  Pasadena TX 77507
  Phone: 281-474-3271
  Email: msds@dixiechemical.com

1.4. Emergency telephone number
- Emergency number: CHEMTREC® (800) 424-9300 Domestic, (703) 527-3887 International

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
- GHS-US classification: Not classified

2.2. Label elements
- GHS-US labelling: No labelling applicable

2.3. Other hazards
- No additional information available

2.4. Unknown acute toxicity (GHS-US)
- No data available

SECTION 3: Composition/information on ingredients

3.1. Substance
- Not applicable

3.2. Mixture
- Name | Product identifier | %
- Contains no hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 4: First aid measures

4.1. Description of first aid measures
- First-aid measures general: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
- First-aid measures after inhalation: IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing.
- First-aid measures after skin contact: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes.
- First-aid measures after eye contact: IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
- First-aid measures after ingestion: IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed
- Symptoms/injuries after inhalation: May cause respiratory irritation.
- Symptoms/injuries after skin contact: May cause skin irritation.
- Symptoms/injuries after eye contact: Direct contact with the eyes is likely to be irritating.
- Symptoms/injuries after ingestion: May cause gastrointestinal irritation.

4.3. Indication of any immediate medical attention and special treatment needed
- No additional information available
SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
Fire hazard: No data available.
Reactivity: Hydrolyses in presence of water.

5.3. Advice for firefighters
Firefighting instructions: Use cold water spray to cool fire-exposed containers to minimize risk of rupture. Do not dispose of fire-fighting water in the environment. Dispose of in accordance with relevant local regulations. Prevent human exposure to fire, fumes, smoke and products of combustion.
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: Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

6.1.1. For non-emergency personnel
Protective equipment: Wear protective equipment as described in Section 8.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions
Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Prevent entry to sewers and public waters.
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Wear personal protective equipment. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well-ventilated place. Keep cool. Protect from sunlight. Keep away from ignition sources. Store away from incompatible materials. Protect from moisture.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Not applicable.

8.2. Exposure controls
Appropriate engineering controls: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.
Personal protective equipment: Gloves. Protective goggles.
Hand protection: Use gloves appropriate to the work environment.
Eye protection: Use eye protection suitable to the environment. Avoid direct contact with eyes.
Skin and body protection: Wear long sleeves and chemically impervious PPE/coveralls to minimize bodily exposure.
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Respiratory protection: Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceeds PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Oily liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>Varies</td>
</tr>
<tr>
<td>Color</td>
<td>Amber.</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild odor.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>≤ 1</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 218 °C PMCC, ASTM D93</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.925 @ 25 °C (WATER = 1)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts slowly with water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>160 cPs @ 25 °C</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Hydrolyses in presence of water.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Moisture. High temperatures, incompatible materials.

10.5. Incompatible materials

Moisture. Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Irritating vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified
Symptoms/injuries after inhalation: May cause respiratory irritation.
Symptoms/injuries after skin contact: May cause skin irritation.
Symptoms/injuries after eye contact: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion: May cause gastrointestinal irritation.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: No information available.

12.2. Persistence and degradability
ASA 2024
Persistence and degradability: No data available.

12.3. Bioaccumulative potential
ASA 2024
Bioaccumulative potential: No information available.

12.4. Mobility in soil
No additional information available.

12.5. Other adverse effects
No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods: Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with DOT
Not hazardous 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
ASA 2024
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt
SARA Section 311/312 Hazard Classes: None.

15.2. International regulations

All chemical substances in this product are listed on the Japanese Existing and New Chemical Substances Inventory (ENCS) or are exempt
All chemical substances in this product are listed on the Chinese Chemical Inventory of Existing Chemical Substances (IECSC) or are exempt
All chemical substances in this product are listed on the Canadian Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or are exempt
One or more of the chemical substances in this product is not listed on the Australian Inventory of Chemical Substances (AICS)
One or more of the chemical substances in this product is not listed on the Korean Existing Chemicals Inventory (KECI)
One or more of the chemical substances in this product is not listed on the New Zealand Inventory of Chemicals (NZIoC)
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One or more of the chemical substances in this product is not listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)
One or more of the chemical substances in this product are not listed on the European EINECS inventory or ELINCS list
One or more of the chemical substances in this product are not listed on the Taiwan Chemical Substance Inventory (TSCI)

15.3. US State regulations
California Proposition 65
This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Indication of changes : Revision 1.0: New SDS Created.
 : 07/15/2015
Other information : Author: ANF.

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard : 1 - Must be preheated before ignition can occur.
NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

HMIS III Rating
Health : 0
Flammability : 1
Physical : 1
Personal Protection :

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.