

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Trade name RHODASURF AAE-10

1.2 Relevant identified uses of the substance or mixture and uses advised against**Uses of the Substance / Mixture**

- Emulsifier

1.3 Details of the supplier of the safety data sheet**Company**

Solvay USA Inc.,
NOVECARE
504 Carnegie Center
Princeton, NJ, 08540, US
Telephone Number: 800-973-7873

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture**HCS 2012 (29 CFR 1910.1200)**

Eye irritation, Category 2A

H319: Causes serious eye irritation.

2.2 Label elements**HCS 2012 (29 CFR 1910.1200)****Pictogram****Signal Word**

- Warning

Hazard Statements

- H319

Causes serious eye irritation.

Precautionary Statements**Prevention**

- P264
- P280

Wash skin thoroughly after handling.
Wear eye protection/ face protection.

Response

- 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 advice/ attention.

2.3 Other hazards which do not result in classification

- Slightly irritating to the skin.

SECTION 3: Composition/information on ingredients

3.1 Substance

- Chemical nature Allyl alcohol ethoxylate

Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [%]
Allyl Alcohol Ethoxylate	27274-31-3	$\geq 90 - \leq 100$
Allyl Alcohol	107-18-6	$\geq 0.1 - < 1$

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

3.2 Mixture

Not applicable, this product is a substance.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

- Show this material safety data sheet to the doctor in attendance.
- First responder needs to protect himself.
- Place affected apparel in a sealed bag for subsequent decontamination.

In case of inhalation

- Negligible or unlikely exposure pathways
- Move to fresh air in case of accidental inhalation of vapors.
- Consult a physician if necessary.

In case of skin contact

- In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Seek medical advice.
- Wash contaminated clothing before reuse.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Seek medical advice.

In case of ingestion

- Do not induce vomiting without medical advice.

- If victim is conscious:
- Rinse mouth with water.
- Keep at rest.
- Do not give anything to drink.
- Do not leave the victim unattended.
- Vomiting may occur spontaneously
- Risk of product entering the lungs on vomiting after ingestion.
- Lay victim on side.
- Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Effects

- Skin contact may aggravate existing skin disease
- Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- Treat symptomatically.
- There is no specific antidote available.
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: Firefighting measures

<u>Flash point</u>	> 302 °F (> 150 °C) closed cup
	Flammability class: Will burn
<u>Autoignition temperature</u>	no data available
<u>Flammability / Explosive limit</u>	no data available

5.1 Extinguishing media

Suitable extinguishing media

- Water spray
- Foam
- Carbon dioxide (CO₂)
- Multipurpose powders

Unsuitable extinguishing media

- High volume water jet
- (frothing possible)

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting

- Under fire conditions:
- Will burn
- Hazardous decomposition products formed under fire conditions.

Hazardous combustion products:

- On combustion or on thermal decomposition (pyrolysis), releases:

- Carbon oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighters

- Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Specific fire fighting methods

- Do not use a solid water stream as it may scatter and spread fire.

Further information

- Standard procedure for chemical fires.
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Wear suitable protective equipment.
- For further information refer to section 8 "Exposure controls / personal protection."

6.2 Environmental precautions

- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.
- Contain the spilled material by diking.
- Do not flush into surface water or sanitary sewer system.
- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

6.3 Methods and materials for containment and cleaning up

- Stop leak if safe to do so.

Recovery

- Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
- Shovel or sweep up.
- Never return spills in original containers for re-use.
- Keep in properly labeled containers.
- Keep in suitable, closed containers for disposal.

Decontamination / cleaning

- Wash nonrecoverable remainder with large amounts of water.
- Clean contaminated surface thoroughly.
- Recover the cleaning water for subsequent disposal.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal

- Dispose of in accordance with local regulations.

Additional advice

- Material can create slippery conditions.

6.4 Reference to other sections

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
- Avoid localized overheating.
- Vent drums while heating
- Homogenize before using.
- Ethylene oxide may collect in container head space.
- Provide adequate ventilation.
- Handle in accordance with good industrial hygiene and safety practice.
- Avoid inhalation of vapor or mist.
- Avoid contact with skin and eyes.

Hygiene measures

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.
- The user is responsible for monitoring the working environment in accordance with local laws and regulations.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Stable under normal conditions.
- Keep in a dry, cool and well-ventilated place.
- Keep container tightly closed.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer
- Keep away from: Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10: "Stability-Reactivity").

Packaging material

Suitable material

- Plastic materials.

Remarks

- Store in original container.

Requirements for storage rooms and vessels

Recommended storage temperature: 59 - 122 °F (15 - 50 °C)

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

- Contains no substances with occupational exposure limit values.

NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations)

Ingredients	CAS-No.	Concentration
Allyl Alcohol	107-18-6	20 ppm

8.2 Exposure controls**Control measures****Engineering measures**

- Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures :
- Effective exhaust ventilation system

Individual protection measures**Respiratory protection**

- When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Hand protection

- Recommended preventive skin protection
- Gloves
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection

- Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.
- Eye contact should be prevented through the use of:
- Safety glasses with side-shields

Skin and body protection

- Recommended preventive skin protection
- Footwear protecting against chemicals
- Impervious clothing

Hygiene measures

- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.
- The user is responsible for monitoring the working environment in accordance with local laws and regulations.

Protective measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Emergency equipment immediately accessible, with instructions for use.
- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.
- The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties**Appearance**

Form: viscous
Physical state: liquid
Color: slightly yellow

Odor

very faint

Odor Threshold

no data available

pH

6.0 - 8.0 (5 % (m/v))
Aqueous solution

Melting point/freezing point

pour point: 46 °F (8 °C)
Softening point: < 50 °F (< 10 °C)

Initial boiling point and boiling range

Boiling point/boiling range: > 167 °F (> 75 °C) (759.81 mmHg (1,013 hPa))

Flash point

> 302 °F (> 150 °C) closed cup

Flammability class: Will burn

Evaporation rate (Butylacetate = 1)

no data available

Flammability (solid, gas)

no data available

Flammability (liquids)

no data available

Flammability / Explosive limit

no data available

<u>Autoignition temperature</u>	no data available
<u>Vapor pressure</u>	< 0.01 mmHg (< 0.0133 hPa) (77 °F (25 °C))
<u>Vapor density</u>	no data available
<u>Density</u>	ca. 1.09 g/cm ³ (68 °F (20 °C))
<u>Relative density</u>	0.84 (77 °F (25 °C))
<u>Solubility</u>	<u>Water solubility:</u> dispersible
	<u>Solubility in other solvents:</u> organic polar solvents : soluble
<u>Partition coefficient: n-octanol/water</u>	Aromatic hydrocarbons : soluble log Pow: < 3 Structure-activity relationship (SAR)
<u>Decomposition temperature</u>	no data available
<u>Viscosity</u>	<u>Viscosity, dynamic :</u> 230 mPa.s (77 °F (25 °C))
<u>Explosive properties</u>	no data available
<u>Oxidizing properties</u>	Not considered as oxidizing., Structure-activity relationship (SAR)

9.2 Other information

no data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

- no data available

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions**Polymerization**

- Hazardous polymerization does not occur.

10.4 Conditions to avoid

- Keep away from heat and sources of ignition.
- Keep away from flames and sparks.

10.5 Incompatible materials

- Strong oxidizing agents
- Strong reducing agents

10.6 Hazardous decomposition products

- On combustion or on thermal decomposition (pyrolysis), releases:
- (Carbon oxides (CO + CO₂)).

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Acute oral toxicity**

Not classified as hazardous for acute oral toxicity according to GHS.
According to the data on the components
According to the classification criteria for mixtures.

Acute inhalation toxicity

Not classified as hazardous for acute inhalation toxicity according to GHS.
According to the data on the components
According to the classification criteria for mixtures.

Acute dermal toxicity

Not classified as hazardous for acute dermal toxicity according to GHS.
According to the data on the components
According to the classification criteria for mixtures.

Acute toxicity (other routes of administration)

no data available

Skin corrosion/irritation

Not classified as irritating to skin
According to the data on the components
According to the classification criteria for mixtures.

Serious eye damage/eye irritation

Causes serious eye irritation.
According to the data on the components
According to the classification criteria for mixtures.

Respiratory or skin sensitization

Does not cause skin sensitization.
According to the data on the components
According to the classification criteria for mixtures.

Mutagenicity**Genotoxicity in vitro**

According to the data on the components
Product is not considered to be genotoxic
According to the classification criteria for mixtures.

Genotoxicity in vivo

According to the data on the components
Product is not considered to be genotoxic
According to the classification criteria for mixtures.

Carcinogenicity

Allyl Alcohol

By analogy

Rat , male and female
Oral
Exposure time: two-year
Method: OECD Test Guideline 453
Published data

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP
IARC
OSHA
ACGIH

Toxicity for reproduction and development**Toxicity to reproduction / fertility**

According to the data on the components
The product is not considered to affect fertility.
According to the classification criteria for mixtures.

Developmental Toxicity/Teratogenicity

According to the data on the components
The product is not considered to be toxic for development.
The product is not considered to be teratogenic.
According to the classification criteria for mixtures.

STOT**STOT-single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria.
According to the classification criteria for mixtures.

STOT-repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria.
According to the classification criteria for mixtures.

Allyl Alcohol

Oral 14 Weeks - Mouse , male and female
NOAEL: 3 mg/kg
Method: OECD Test Guideline 408
Published data

inhalation (vapor) (vapor) 12 Weeks - Rat , male
NOAEC: 0.0483 mg/l
Method: OECD Test Guideline 413
Published data

CMR effects**Carcinogenicity**

Allyl Alcohol

Not classifiable as a human carcinogen.

Mutagenicity

Allyl Alcohol

In vitro tests showed mutagenic effects which were not observed with in vivo test.

Teratogenicity

Allyl Alcohol

No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

Aspiration toxicity

no data available

SECTION 12: Ecological information**12.1 Toxicity****Aquatic Compartment****Acute toxicity to fish**

The product itself has not been tested.

Acute toxicity to daphnia and other aquatic invertebrates.

The product itself has not been tested.

Toxicity to aquatic plants

The product itself has not been tested.

Toxicity to microorganisms

The product itself has not been tested.

Chronic toxicity to fish

The product itself has not been tested.

Chronic toxicity to daphnia and other aquatic invertebrates.

The product itself has not been tested.

Chronic Toxicity to aquatic plants

no data available

M-Factor

Allyl Alcohol

Acute aquatic toxicity = 1
(according to the Globally Harmonized System (GHS))**12.2 Persistence and degradability****Abiotic degradation**

no data available

Physical- and photo-chemical

no data available

elimination**Biodegradation****Biodegradability**

Allyl Alcohol Ethoxylate

The substance fulfills the criteria for ultimate aerobic biodegradability and ready biodegradability category approach

Allyl Alcohol

Ready biodegradability study:
Method: OECD Test Guideline 301C
86 % - 14 Days
The substance fulfills the criteria for ultimate aerobic biodegradability and ready biodegradability
Theoretical oxygen demand
Inoculum: activated sludge
Published data

Degradability assessment

Allyl Alcohol

The product is considered to be rapidly degradable in the environment

12.3 Bioaccumulative potential**Partition coefficient: n-octanol/water**

Not potentially bioaccumulable
Structure-activity relationship (SAR)

Bioconcentration factor (BCF)

Allyl Alcohol

Not potentially bioaccumulable
Structure-activity relationship (SAR)

12.4 Mobility in soil**Adsorption potential (Koc)**

no data available

Known distribution to environmental compartments

Ultimate destination of the product: Water

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects no data available

Ecotoxicity assessment

Acute aquatic toxicity

According to the data on the components
The product does not have any known adverse effects on the aquatic organisms tested
According to the classification criteria for mixtures.

Chronic aquatic toxicity

According to the data on the components
Does not have any known long term adverse effects on the aquatic organisms tested
According to the classification criteria for mixtures.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Waste Code

- Environmental Protection Agency
- Hazardous Waste – NO

Advice on cleaning and disposal of packaging

- Rinse with an appropriate solvent.
- Dispose of in accordance with local regulations.

SECTION 14: Transport information

DOT

not regulated

TDG

not regulated

IMDG

not regulated

IATA

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information**15.1 Notification status**

Inventory Information	Status
United States TSCA Inventory	- On TSCA Inventory
Canadian Domestic Substances List (DSL)	- All components of this product are on the Canadian DSL
Australia Inventory of Chemical Substances (AICS)	- On the inventory, or in compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- On the inventory, or in compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- On the inventory, or in compliance with the inventory

15.2 Federal Regulations**US. EPA EPCRA SARA Title III****SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)**

Fire Hazard	no
Reactivity Hazard	no
Sudden Release of Pressure Hazard	no
Acute Health Hazard	yes
Chronic Health Hazard	no

Section 313 Toxic Chemicals (40 CFR 372.65)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)

The following components are subject to reporting levels established by SARA Title III, Section 302:

Ingredients	CAS-No.	Threshold planning quantity	Remarks
Allyl Alcohol	107-18-6	1000 lb	

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide	75-21-8	10 lb
Allyl Alcohol	107-18-6	100 lb

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide	75-21-8	10 lb
Allyl Alcohol	107-18-6	100 lb

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Ingredients	CAS-No.	Reportable quantity
Ethylene Oxide	75-21-8	10 lb
Allyl Alcohol	107-18-6	100 lb
1,4-Dioxane	123-91-1	100 lb
Acetaldehyde	75-07-0	1000 lb

15.3 State Regulations**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)**

WARNING! This product contains a chemical known in the State of California to cause cancer.

Ingredients	CAS-No.
Ethylene Oxide	75-21-8
1,4-Dioxane	123-91-1
Acetaldehyde	75-07-0

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Ingredients	CAS-No.
Ethylene Oxide	75-21-8

SECTION 16: Other information**NFPA (National Fire Protection Association) - Classification**

Health	2 moderate
Flammability	1 slight
Instability or Reactivity	0 minimal

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	2 moderate
Flammability	1 slight
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Further information

- Product evaluated under the US GHS format.

Date Prepared: 07/05/2016

- ACGIH American Conference of Governmental Industrial Hygienists
- OSHA Occupational Safety and Health Administration
- NTP National Toxicology Program
- IARC International Agency for Research on Cancer
- NIOSH National Institute for Occupational Safety and Health

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may

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not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.