

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

SECTION 1. IDENTIFICATION

Product name : SURFONIC® DA-9

Manufacturer or supplier's details

Company name of supplier : Indorama Ventures Oxides LLC
Address : 24 Waterway Ave., Suite 1100
The Woodlands,
Texas 77380
United States of America (USA)
Telephone : (256) 3405200

Manufacturer or supplier's details

E-mail address of person responsible for the SDS : SDSHUN@indorama.net
Emergency telephone number : CHEMTREC - USA (English)
Local Number (National): +1 703-741-5970
Toll-Free Number: 1-800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Surfactant

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Acute toxicity (Oral) : Category 4
Skin irritation : Category 2
Serious eye damage : Category 1

GHS label elementsHazard pictograms : 

Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.

SURFONIC® DA-9
Version
1.0Revision Date:
12/08/2019SDS Number:
400041011582Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

Storage:

Not available

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS
Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Alcohols, C9-11-iso-, C10-rich, ethoxylated	78330-20-8	95 - 100

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

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.

SURFONIC® DA-9

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	12/08/2019	400041011582	Date of first issue: 12/08/2019

Print Date 06/02/2020

- Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : No data is available on the product itself.
- Further information : 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.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Evacuate personnel to safe areas.
Ensure adequate ventilation.
In case of inadequate ventilation wear respiratory protection.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Keep away from oxidizing agents.
- Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

- Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
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.
- Hand protection
- Remarks : Impervious gloves
The suitability for a specific workplace should be discussed with the producers of the protective 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 wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
Ensure that eyewash stations and safety showers are close to the workstation location.

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : cloudy

Odour : alcohol-like

Odour Threshold : No data is available on the product itself.

pH : 7

Melting point : 57 °F / 14 °C

Boiling point : No data is available on the product itself.

Flash point : 320 °F / 160 °C
Method: closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Flammability (liquids) : No data is available on the product itself.

Upper explosion limit / Upper flammability limit : No data is available on the product itself.

Lower explosion limit / Lower flammability limit : No data is available on the product itself.

Vapour pressure : No data is available on the product itself.

Relative vapour density : 1

Relative density : 1.0193

Density : No data is available on the product itself.

Solubility(ies)
Water solubility : soluble

Solubility in other solvents : Solvent: Methanol
Description: partly soluble

SURFONIC® DA-9

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	12/08/2019	400041011582	Date of first issue: 12/08/2019

Print Date 06/02/2020

Partition coefficient: n-octanol/water	:	log Pow: 2.73 - 3.43
Auto-ignition temperature	:	No data is available on the product itself.
Thermal decomposition	:	No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.
Viscosity		
Viscosity, kinematic	:	36.4 mm ² /s (104 °F / 40 °C)
Explosive properties	:	No data is available on the product itself.
Oxidizing properties	:	None.
Molecular weight	:	Calculation method 510.21 g/mol
Particle size	:	No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Stable under normal conditions.
Conditions to avoid	:	No data available
Hazardous decomposition products	:	Carbon dioxide (CO ₂) Carbon monoxide Aldehydes Ketones

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product	:	LD ₅₀ (Rat): 1,000 mg/kg
Acute inhalation toxicity - Product	:	LC ₅₀ (Rat): > 1600 mg/m ³ Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity - Product	:	LD ₅₀ (Rat, male and female): > 2,000 mg/kg GLP: yes

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation**Product:**

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation**Product:**

Species: Rabbit
Result: Irreversible effects on the eye
Assessment: Severe eye irritation
Method: OECD Test Guideline 405

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation**Product:**

Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.

Assessment: No data available

Germ cell mutagenicity**Product:**

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: no

Product:

Genotoxicity in vivo : Cell type: Germ + somatic
Application Route: Oral
Exposure time: 24 h
Dose: 1.25 - 3.4 g/kg
Method: OECD Test Guideline 475
Result: negative
GLP: no

Cell type: Germ + somatic
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity-
Assessment : No data available

SURFONIC® DA-9Version
1.0Revision Date:
12/08/2019SDS Number:
400041011582Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

Carcinogenicity**Product:**

Species: Rat, male and female
Application Route: Oral
Exposure time: 24 month(s)
Dose: 500 mg/kg
Result: negative

Carcinogenicity - Assessment : No data available

IARC

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.

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

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity**Product:**

Effects on fertility

: Species: Rat, male and female
Application Route: Dermal
Target Organs: Heart
Method: OECD Test Guideline 416

Target Organs: Liver

Target Organs: Lungs

Target Organs: Kidney

Target Organs: Testes

Product:

Effects on foetal

: Species: Rat, male and female

SURFONIC® DA-9

Version 1.0	Revision Date: 12/08/2019	SDS Number: 400041011582	Date of last issue: - Date of first issue: 12/08/2019
----------------	------------------------------	-----------------------------	--

Print Date 06/02/2020

development

Application Route: Dermal
General Toxicity Maternal: No observed adverse effect level:
> 250 mg/kg body weight
Method: OECD Test Guideline 416
Result: No teratogenic effects

Reproductive toxicity - Assessment : No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity**Product:**

Species: Rat, male and female

NOAEL: \geq 500 mg/kg/d

Application Route: Ingestion

Exposure time: 2,160 h

Method: Subchronic toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

Further information
Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity

- Toxicity to fish - Product : LC50 (Oncorhynchus mykiss (rainbow trout)): 14.63 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
- Toxicity to daphnia and other aquatic invertebrates - Product : EC50 (Daphnia magna (Water flea)): 5.64 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
- Toxicity to algae/aquatic plants : No data available
- M-Factor (Acute aquatic toxicity) : No data available
- Toxicity to fish (Chronic toxicity) - Product : EC20 (Pimephales promelas (fathead minnow)): 5.48 mg/l
Exposure time: 30 d
Test substance: Fresh water
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) - Product : EC20 (Daphnia magna (Water flea)): 7.45 mg/l
Exposure time: 21 d
Test substance: Fresh water
- M-Factor (Chronic aquatic toxicity) : No data available
- Toxicity to microorganisms - Product : EC50 (Pseudomonas putida): > 10 g/l
Exposure time: 16.9 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38 412 Part 8
- Toxicity to soil dwelling organisms - Product : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 336 h
- Plant toxicity - Product : NOEC: >= 100 mg/kg
Exposure time: 456 h
Test substance: Natural
Method: Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test
GLP: yes
- Sediment toxicity : No data available

SURFONIC® DA-9

Version 1.0	Revision Date: 12/08/2019	SDS Number: 400041011582	Date of last issue: - Date of first issue: 12/08/2019
----------------	------------------------------	-----------------------------	--

Print Date 06/02/2020

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Persistence and degradability

Biodegradability - Product : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d

Biochemical Oxygen Demand (BOD) : No data available

Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential

Bioaccumulation - Product : Species: Pimephales promelas (fathead minnow)
Bioconcentration factor (BCF): 12.7
Exposure time: 3 d
Test substance: Fresh water
Method: flow-through test
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water - Product : log Pow: 2.73 - 3.43

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

Mobility in soil

Mobility : No data available

Distribution among environmental compartments - Product : Koc: 2533 - 5424.94

Stability in soil : No data available

Other adverse effects

Environmental fate and pathways : No data available

Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

Hazardous to the ozone layer

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information - Product : No data available

Global warming potential (GWP) : No data available

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION
International Regulations

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 06/02/2020

IATA

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**DOT Classification**

Not regulated as dangerous goods

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ethylene oxide	75-21-8	10	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : 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.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

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

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

WARNING: This product can expose you to chemicals including ethylene oxide, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

CH INV : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

SURFONIC® DA-9

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041011582 Date of last issue: -
 Date of first issue: 12/08/2019

Print Date 06/02/2020

- NZIoC : Not in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- TCSI : On the inventory, or in compliance with the inventory
- TSCA : All substances listed as active on the TSCA inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

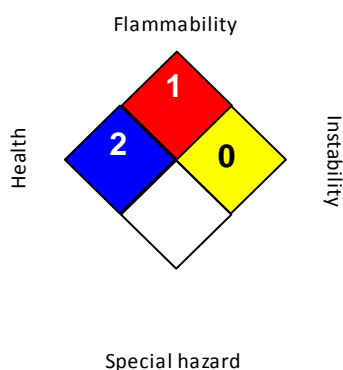
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

HEALTH		2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard

Revision Date : 12/08/2019

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

SURFONIC® DA-9

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	12/08/2019	400041011582	Date of first issue: 12/08/2019

Print Date 06/02/2020

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

The trademarks above are the property of Indorama Ventures Oxides LLC or an affiliate thereof.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED INDORAMA VENTURES EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR INDORAMA VENTURES PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.