

SURFONIC® TDA-6

Version 1.0 Revision Date: 12/08/2019 SDS Number: 400041003734 Date of last issue: -
Date of first issue: 12/08/2019

Print Date 02/23/2021

SECTION 1. IDENTIFICATION

Product name : SURFONIC® TDA-6

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 : Emulsifier

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

Acute toxicity (Oral) : Category 4
Serious eye damage : Category 1
Short-term (acute) aquatic hazard : Category 2
Long-term (chronic) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H318 Causes serious eye damage.
H401 Toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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.
Storage:
Not available
Disposal:
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	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.
Symptoms of poisoning may appear several hours later.
Treat symptomatically.
Get medical attention if symptoms occur.

If inhaled : Call a physician or poison control centre immediately.
If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

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

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- 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.
 Keep eye wide open while rinsing.
 If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
 Do NOT induce vomiting.
 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.
- Notes to physician : Treat symptomatically.

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.
- 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.
 Ensure adequate ventilation.
 Evacuate personnel to safe areas.
 Refer to protective measures listed in sections 7 and 8.
- 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

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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.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid formation of aerosol.
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.
Provide sufficient air exchange and/or exhaust in work rooms.
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 : Prevent unauthorized access.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Keep in properly labelled containers.

Materials to avoid : For incompatible materials please refer to Section 10 of this SDS.

Further information on storage stability : Stable under normal conditions.

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

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other

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circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

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 : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: Clear
Odour	: slight
Odour Threshold	: No data is available on the product itself.
pH	: 7
Melting point	: 34 - 48 °F / 1 - 9 °C
Boiling point	: 484.0 °F / 251.1 °C
Flash point	: 662 °F / 350 °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.

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Relative vapour density : No data is available on the product itself.

Relative density : 0.98

Density : 0.95 - 0.97 g/cm³ (122 °F / 50 °C)

Solubility(ies)
Water solubility : No data is available on the product itself.

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

Partition coefficient: n-octanol/water : log Pow: 4.08 - 4.98

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 : 29 mm²/s (104 °F / 40 °C)

Explosive properties : No data is available on the product itself.

Oxidizing properties : None.

Molecular weight : Calculation method 457.1 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 hazards to be specially mentioned.

Conditions to avoid : None known.

Incompatible materials : None known.

Hazardous decomposition products : Carbon dioxide (CO₂)
Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

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

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Acute toxicity

Acute oral toxicity - Product : LD50 (Rat, male): 1,376.3 mg/kg
Method: OECD Test Guideline 401
GLP: yes

LD50 (Rat, female): 1.7 g/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : No data available

Acute dermal toxicity - Product : LD50 (Rabbit, male and female): 2,270 mg/kg
Method: OECD Test Guideline 402
GLP: no

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

Skin corrosion/irritation**Product:**

Species: Rabbit
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: Normally reversible injuries

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

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

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

Genotoxicity in vitro : No data available

Product:

Genotoxicity in vivo : Cell type: Germ + somatic
Application Route: Intraperitoneal injection
Dose: 50 mg/kg
Result: negative

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GLP: yes

Germ cell mutagenicity-
Assessment : No data available

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.

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.

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

Species: Rat, male and female
Application Route: Oral
Target Organs: Liver
GLP: yes

Product:

Effects on foetal : Species: Rat, male and female

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development

Application Route: Dermal
Result: No teratogenic effectsSpecies: Rat
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level:
> 250 mg/kg body weight
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: 519 mg/kg/d
Application Route: Ingestion
Exposure time: 504 h
Method: Subacute 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

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Further information

Ingestion: No data available

SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity

- Toxicity to fish - Product : LC50 (Pimephales promelas (fathead minnow)): 1.3 mg/l
 Exposure time: 96 h
 Test substance: Fresh water
 Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates - Product : EC50: 1.9 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: Fresh water
 (Daphnia magna (Water flea)):
- Toxicity to algae/aquatic plants : No data available
- M-Factor (Acute aquatic toxicity) : No data available
- Toxicity to fish (Chronic toxicity) - Product : NOEC (Pimephales promelas (fathead minnow)): 0.88 mg/l
 Exposure time: 28 d
 Test substance: Fresh water
 Method: OECD Test Guideline 210
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) - Product : EC10 (Daphnia magna (Water flea)): 0.355 mg/l
 Exposure time: 21 d
 Test substance: Fresh water
 Method: OECD Test Guideline 211
- 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 : No data available
- Plant toxicity - Product : NOEC: >= 100 mg/kg
 Exposure time: 456 h
 Test substance: Natural
 Method: Terrestrial Plants Test: Seedling Emergence and

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Seedling Growth Test
GLP: yes

Sediment toxicity : No data available

Toxicity to terrestrial organisms - Product : EC50: 360 mg/kg
Exposure time: 72 h
Test substance: Natural

Ecotoxicology Assessment

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Acute aquatic toxicity : Toxic to aquatic life.

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

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

SAFETY DATA SHEET



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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: 4.08 - 4.98

Mobility in soil

Mobility : No data available

Distribution among environmental compartments - Product : Koc: 13417.89 - 34437.29

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 : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Global warming potential (GWP) : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of contents/ container to an approved waste disposal plant.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION
International Regulations
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)
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).

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California Prop. 65

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
NZIoC	: On the inventory, or 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

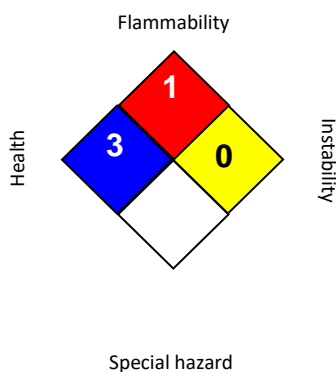
No substances are subject to a Significant New Use Rule.

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.

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SECTION 16. OTHER INFORMATION
Further information
NFPA 704:

HMIS® IV:

HEALTH		3
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

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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.

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