

SURFONIC® TDA-8/90

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/08/2019 400041002044 Date of first issue: 12/08/2019

Print Date 05/07/2020

SECTION 1. IDENTIFICATION

Product name : SURFONIC® TDA-8/90

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

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 + P330 IF SWALLOWED: Call a POISON

CENTER/doctor if you feel unwell. Rinse mouth.

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 waste

disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	60 - 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.



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Continue rinsing eyes during transport to hospital.

Remove contact lenses. Protect unharmed eye.

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

: No action shall be taken involving any personal risk or without

suitable training.

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



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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

fire and explosion

Advice on protection against : 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.

: Keep container tightly closed in a dry and well-ventilated place. Conditions for safe storage

Containers which are opened must be carefully resealed and kept

upright to prevent leakage.

Electrical installations / working materials must comply with the

technological safety standards.

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

: Chemical-resistant, impervious gloves complying with an Remarks

approved standard should be worn at all times when handling

chemical products if a risk assessment indicates this is

necessary.

Considering the parameters specified by the glove manufacturer, check during use that the gloves are still

retaining their protective properties.

It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the



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protection time of the gloves cannot be accurately estimated.

Eye protection : Safety eyewear complying with an approved standard should

be used when a risk assessment indicates this is necessary

to avoid exposure to liquid splashes, mists or dusts.

If contact is possible, the following protection should be worn,

unless the assessment indicates a higher degree of

protection:

Tightly fitting safety goggles Eye wash bottle with pure water

Wear face-shield and protective suit for abnormal processing

problems.

Ensure that eyewash stations and safety showers are close

to the workstation location.

Skin and body protection : Impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before

handling this product.

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 : slight

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

pH : 6.5 - 7.5

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

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

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

Flash point : 354.9 °F / 179.4 °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 : No data is available on the product itself.



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flammability limit

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 : 1.01

Density : No data is available on the product itself.

Solubility(ies)

Water solubility : soluble

Solubility in other solvents : No data is available on the product itself.

Partition coefficient: n-

octanol/water

: No data is available on the product itself.

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 : 47 mm2/s (100.0 °F / 37.8 °C)

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

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

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.

Conditions to avoid : No data available

Hazardous decomposition : Carbon monoxide products : Carbon dioxide (CO2)

SECTION 11. TOXICOLOGICAL INFORMATION

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



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exposure

Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : 1,530 mg/kg

Method: Calculation method

: No data available Acute inhalation toxicity

Acute dermal toxicity -: Acute toxicity estimate : 2,522 mg/kg

Method: Calculation method Product

Acute toxicity (other routes of : No data available

administration)

Skin corrosion/irritation

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Species: Rabbit

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

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Exposure routes: Skin Species: Guinea pig

Method: OECD Test Guideline 406 Result: Does not cause skin sensitisation.

No data available Assessment:

Germ cell mutagenicity

Genotoxicity in vitro : No data available

Genotoxicity in vivo : No data available

Germ cell mutagenicity-

Assessment

: No data available

Carcinogenicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Species: Rat, male and female

Application Route: Oral



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Exposure time: 24 month(s)

Dose: 500 mg/kg Result: negative

Carcinogenicity - : No data available

Assessment

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.

OSHANo 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

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

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: ves

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Effects on foetal : Species: Rat, male and female development : Application Route: Dermal

Result: No teratogenic effects

Species: Rat

Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

> 250 mg/kg body weight Result: No teratogenic effects



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Reproductive toxicity -

Assessment

: No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

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

Further information

Product:

Remarks: No data available



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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1.3 mg/l

Exposure time: 96 h
Test substance: Fresh water
Method: OECD Test Guideline 203

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.9 mg/l

aquatic invertebrates 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

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Toxicity to fish (Chronic : NOEC (Pimephales promelas (fathead minnow)): 0.88 mg/l

toxicity) Exposure time: 28 d

Test substance: Fresh water Method: OECD Test Guideline 210

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Toxicity to daphnia and other : EC10 (Daphnia magna (Water flea)): 0.355 mg/l

aquatic invertebrates Exposure time: 21 d

(Chronic toxicity) Test substance: Fresh water

Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

: No data available

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Toxicity to microorganisms : 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 : No data available



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organisms

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Plant toxicity : 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

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Toxicity to terrestrial : EC50: 360 mg/kg organisms : Exposure time: 72 h

Test substance: Natural

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

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Biodegradability : 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



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Stability in water : No data available

Photodegradation : No data available

Impact on Sewage

Treatment

: No data available

Bioaccumulative potential

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Bioaccumulation : 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.

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Partition coefficient: n- : log Pow: 4.08 - 4.98

octanol/water

Mobility in soil

Mobility : No data available

Components:

Alcohols, C11-14-iso-, C13-rich, ethoxylated:

Distribution among : Koc: 13417.89 - 34437.29

environmental compartments

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



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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

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.

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	Calculated product RQ
		(lbs)	(lbs)
ethylene oxide	75-21-8	10	*



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*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard

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).

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 : 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.



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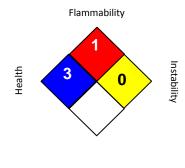
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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Special hazard

HMIS® IV:



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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