

Safety Data Sheet

Material Name: TUBALL MATRIX 605

SDS ID: O-034

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

TUBALL MATRIX 605

Trade Names

TUBALL MATRIX 605

Product Description

Mixture

Product Use

Additive.

Restrictions on Use

None known.

Details of the supplier of the safety data sheet

OCSiAl LLC

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Emergency Phone #: +1 415 906 5271 (09.00-17.00; GMT-4)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Serious Eye Damage/Eye Irritation - Category 2A

GHS Label Elements

Symbol(s)



Signal Word

Warning

Hazard Statement(s)

Causes serious eye irritation.

Precautionary Statement(s)

Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear eye protection/face protection.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Response

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

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Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

The toxicological properties have not been fully investigated.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS ►

CAS	Component Name	Percent
Trade Secret	Siloxanes and silicones	70
Trade Secret	Siloxanes and silicones, vinyl group-terminated	25
CAS No. 7440-44-0 (EC No. 943-098-9)	Single wall carbon nanotubes*	5

* Single wall carbon nanotubes TUBALL™

Component Related Regulatory Information

The chemical identity and/or percentage of composition is being withheld as a trade secret.

Section 4 - FIRST AID MEASURES

Inhalation

Remove person to fresh air and keep comfortable for breathing. Get medical advice if you feel unwell.

Skin

Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

If swallowed, get medical attention.

Most Important Symptoms/Effects

Acute

Causes serious eye irritation.

Delayed

The toxicological properties have not been fully investigated.

Note to Physicians

Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry powder, water spray, alcohol resistant foam

Unsuitable Extinguishing Media

Do not use water jet.

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Special Hazards Arising from the Chemical

Slight fire hazard

Hazardous Combustion Products

carbon dioxide, carbon monoxide, amorphous silica

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Use methods suitable to fight surrounding fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Stop leak if possible without personal risk. Provide adequate ventilation. Do not touch or walk through spilled material. Damp cleaning methods should be used. Dry or wet electrostatic microfiber cleaning cloths may also be effective. Sweep or vacuum but avoid generating dust. Absorb spill with sand or other non-combustible material. Collect material in appropriate container for disposal. Dispose of contents/container in accordance with local/regional/national/international regulations.

Environmental Precautions

Do not allow to enter into ground-water, surface water or drains. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Avoid breathing dust/fume/gas/mist/vapours/spray. Wear eye protection/face protection. Do not allow material to become dry. Avoid dusting when handling and avoid all possible sources of ignition (spark or flame). Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up.

Further information on storage conditions: Store in a cool, dry, well-ventilated area. Keep container tightly closed. Protect from sunlight. Shelf life is 12 months. Keep separated from incompatible substances. Keep away from heat, sparks, open flame and other ignition sources. Keep away from water. Store and handle in accordance with all current regulations and standards.

Incompatible Materials

strong oxidizing agents, alkali, hot caustic solutions

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Single wall carbon nanotubes

CAS No. 7440-44-0 (EC No. 943-098-9)

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NIOSH REL:	1 µg/m ³ TWA (elemental carbon as a respirable mass)
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ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical goggles and a face shield. An eyewash fountain should be available in the work area.

Skin Protection

Wear appropriate chemical resistant clothing.

Respiratory Protection

Where there is a potential for airborne exposure, adequate respiratory protection should be used.

Glove Recommendations

Wear suitable gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black viscous liquid	Physical State	liquid
Odor	characteristic	Color	Black
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	Not available	Flammability (solid, gas)	Not available
Autoignition Temperature	Not available	Flash Point	>280 °C [closed cup]
Lower Explosive Limit	Not available	Decomposition temperature	300 °C
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Not available	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	Not available
Physical Form	Liquid	Molecular Weight	Not available

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Section 10 - STABILITY AND REACTIVITY

Reactivity

No hazard expected.

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

strong oxidizing agents, alkali, hot caustic solutions

Hazardous decomposition products

Thermal decomposition products

carbon dioxide, carbon monoxide, amorphous silica

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

This product contains Carbon nanotube. The toxicological properties have not been fully investigated. May cause inflammation, pulmonary fibrosis.

Skin Contact

No information available for the product.

Eye Contact

Causes serious eye irritation.

Ingestion

No information available for the product.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Siloxanes and Silicones (Trade Secret)

LD50 Rat >5000 mg/kg oral

LD50 Rat >2000 mg/kg dermal

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Oral	> 2000 mg/kg

Immediate Effects

Causes serious eye irritation.

Delayed Effects

The toxicological properties have not been fully investigated.

Irritation/Corrosivity Data

Causes serious eye irritation.

Respiratory Sensitization

No information available for product.

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Dermal Sensitization

No information available for product.

Component Carcinogenicity

Single wall carbon nanotubes	CAS No. 7440-44-0 (EC No. 943-098-9)
IARC:	Monograph 111 [in preparation] (single walled and multi-walled except MWCNT-7) (related to Fullerenes, tubular) (Group 3 (not classifiable))

Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No information available for product.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Siloxanes and Silicones	Trade Secret
Fish:	LC50 96 hr Brachydanio rerio >100 mg/l
Algae:	EC50 72 hr Scenedesmus subspicatus >100 mg/l
Invertebrate:	EC50 48 hr Daphnia magna >100 mg/l

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

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Section 14 - TRANSPORT INFORMATION

US DOT Information:

Further information: Not regulated as a hazardous material.

IATA Information:

Further information: Not regulated as dangerous goods.

ICAO Information:

Further information: Not regulated as dangerous goods.

IMDG Information:

Further information: Not regulated as dangerous goods.

TDG Information:

Further information: Not regulated as dangerous goods.

International Bulk Chemical Code

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations ►

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

This product is subject to the Significant New Use Rule (SNUR) published by the United States Environmental Protection Agency on December 5, 2019 in Federal Register Vol. 84, No. 234.

SARA Section 311/312 (40 CFR 370 Subparts B and C) 2016 reporting categories

Acute Health: Yes **Chronic Health:** No **Fire:** No **Pressure:** No **Reactivity:** No

SARA Section 311/312 (40 CFR 370 Subparts B and C) 2017 reporting categories

Serious Eye Damage/Eye Irritation

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA

Not listed under California Proposition 65

Canada Regulations

Canadian WHMIS Ingredient Disclosure List (IDL)

The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.

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Component Analysis - Inventory ►

Siloxanes and Silicones (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	No	No

Siloxanes and silicones, vinyl group-terminated (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No

U.S. Inventory (TSCA)

One or more components are not listed on the TSCA inventory: Single wall carbon nanotubes Pre-Manufacture Notification number - PMN P-17-0257.

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 4/28/2017

Revision date: 3/16/2020, version 1.1.

Revision: All recent revision(s) are noted by a bold triangle pointed to right '►'

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal



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Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; NDSL – Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

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