SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Corporation 4000 Monroe Road Charlotte, NC, 28205 Telephone No.: +1 704-331-7000 **Information of the substance/preparation:** BU Oil & Mining Services Product Stewardship +1-704-331-7710 **Emergency tel. number:** +1 800-424-9300(CHEMTREC)

Trade name: **WAXTREAT 14621**
Material number: 292787

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids	:	Category 3
Acute toxicity (Inhalation)	:	Category 4
Acute toxicity (Dermal)	:	Category 4
Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Carcinogenicity	:	Category 2
Reproductive toxicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 2 (Central nervous system)
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure	:	Category 2
Aspiration hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 + H332 Harmful in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H361d Suspected of damaging the unborn child.
H371 May cause damage to organs (Central nervous system).
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Chemical name	CAS-No.	Concentration (% w/w)
Xylene	1330-20-7	< 70
Ethylbenzene	100-41-4	< 20
Toluene	108-88-3	< 10
Benzenesulfonic acid, C10-16-alkyl derivs.	68584-22-5	< 5

SECTION 4. FIRST AID MEASURES

If inhaled : Remove to fresh air immediately. Get medical attention immediately.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Use a mild soap if available.
Remove contaminated clothing and shoes.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

If swallowed : Get medical attention immediately.
Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed	:	None known.
Notes to physician	:	Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. Lipoid Pneumonia) that may progress to Pulmonary Fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

SECTION 5. FIREFIGHTING MEASURES

Specific hazards during firefighting	:	In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO2) None known.
Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Wearing appropriate personal protective equipment, contain spill, remove all sparking or ignition sources from area, collect onto inert absorbent, and place in suitable container.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Use only with adequate ventilation and proper protective eyewear, gloves, and clothing. Wash thoroughly after handling.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Xylene	1330-20-7	STEL	150 ppm 655 mg/m3	OSHA P0
		TWA	100 ppm 435 mg/m3	OSHA P0
Ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		TWA	100 ppm 435 mg/m3	NIOSH REL
		ST	125 ppm 545 mg/m3	NIOSH REL
		TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm 435 mg/m3	OSHA P0
		STEL	125 ppm 545 mg/m3	OSHA P0
Toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m3	NIOSH REL
		ST	150 ppm 560 mg/m3	NIOSH REL
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm (10 minutes)	OSHA Z-2
		TWA	100 ppm 375 mg/m3	OSHA P0
		STEL	150 ppm 560 mg/m3	OSHA P0

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : brown, clear

Odour : Aromatic odor.

Odour Threshold : not determined

pH : 5.5 - 8.0

Freezing point	:	not determined
Boiling point	:	not determined
Flash point	:	73 - 140 °F / 23 - 60 °C
Evaporation rate	:	not available
Flammability (solid, gas)	:	Not applicable
Self-ignition	:	no data available
Upper explosion limit / upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapour pressure	:	not determined
Relative vapour density	:	not determined
Relative density	:	0.86 - 0.90
Bulk density	:	7.33 lb/gal
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	not determined
Auto-ignition temperature	:	not determined
Decomposition temperature	:	no data available
Viscosity		
Viscosity, dynamic	:	< 10 mPa.s
Viscosity, kinematic	:	not determined

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable
Incompatible materials	:	none
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 13.44 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: 1,507 mg/kg Method: Calculation method

Components:

Xylene:

Acute oral toxicity	:	LD50 (Rat, male and female): 3523 - > 4000 mg/kg Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral) GLP: no Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat, male): 27.571 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Directive 67/548/EEC, Annex V, B.2. GLP: No information available. Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity	:	Other (Rabbit, male): > 4,200 mg/kg Method: Other GLP: No information available. Assessment: The component/mixture is moderately toxic after single contact with skin.

Ethylbenzene:

Acute oral toxicity	:	LD50 (Rat, male and female): ca. 3,500 mg/kg Method: Other GLP: no
Acute inhalation toxicity	:	Assessment: The component/mixture is moderately toxic after short term inhalation.

Toluene:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Symptoms: Vomiting, Stomach/intestinal disorders
Acute inhalation toxicity	:	(Rat): > 20 mg/l Exposure time: 4 h Target Organs: Lungs, Respiratory system, Liver, Kidney, Nervous system Symptoms: Lung oedema, Breathing difficulties, Vomiting, Pain, Dizziness
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Components:

Xylene:

Species: Rabbit
Method: Other
Result: Irritating to skin.
GLP: No information available.

Ethylbenzene:

Species: Rabbit
Method: Other
Result: slight irritation
GLP: no

Toluene:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Skin irritation

Serious eye damage/eye irritation

Components:

Xylene:

Species: rabbit eye
Result: Irritating to eyes.
Method: Other
GLP: No information available.

Ethylbenzene:

Species: rabbit eye
Result: slight irritation
Method: Other
GLP: no

Toluene:

Species: rabbit eye
Result: slight irritation
Assessment: No eye irritation
Method: OECD Test Guideline 405

Benzenesulfonic acid, C10-16-alkyl derivs.:

Result: Irritating to eyes.

Respiratory or skin sensitisation

Components:

Xylene:

Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: Not a skin sensitizer.
GLP: No information available.

Ethylbenzene:

Remarks: not required

Toluene:

Exposure routes: Skin contact
Species: Rat
Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Components:

Xylene:

Genotoxicity in vitro : Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Concentration: 5 - 50 µg/ml
Metabolic activation: with and without metabolic activation
Method: Other
Result: negative
GLP: No information available.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Concentration: 15,1 - 100,5 µg/ml
Metabolic activation: with and without metabolic activation
Method: Directive 84/449/EEC, B.10
Result: negative
GLP: No information available.

Genotoxicity in vivo	:	Test Type: dominant lethal test Species: Mouse (male and female) Strain: Other Application Route: Subcutaneous Exposure time: single injection Dose: 1 ml/kg Method: OECD Test Guideline 478 Result: negative GLP: no
Germ cell mutagenicity - Assessment	:	It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

Ethylbenzene:

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Concentration: 75 - 125 µg/ml Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: no Test Type: In vitro gene mutation study in mammalian cells Test system: mouse lymphoma cells Concentration: 4,2 - 1060 µg/ml Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Strain: NMRI Cell type: Bone marrow Application Route: oral (gavage) Exposure time: 24 - 48 h Dose: 187,5-375-750 mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Test Type: unscheduled DNA synthesis assay Species: Mouse (male and female) Strain: B6C3F1 Application Route: Inhalation Exposure time: 6 h Dose: 375-500-750-1000 ppm Method: OECD Test Guideline 486 Result: negative GLP: yes

Germ cell mutagenicity - Assessment	:	In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Toluene:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: Regulation (EC) No. 440/2008, Annex, B.13/14 (Ames test) Result: negative Test Type: gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Test Type: Cytogenetic assay Species: Rat Method: Other Result: negative
Germ cell mutagenicity - Assessment	:	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects

Carcinogenicity

Components:

Xylene:

Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.

Ethylbenzene:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

Toluene:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

IARC	Listed
OSHA	Listed
NTP	Listed

Reproductive toxicity

Components:

Xylene:

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Application Route: Inhalation Dose: 25 - 100 - 500 ppm Duration of Single Treatment: 6 h General Toxicity - Parent: NOAEL: >= 2.171 mg/l General Toxicity F1: NOAEL: >= 2.171 mg/l General Toxicity F2: NOAEL: >= 2.171 mg/l Method: Other GLP: No information available. Remarks: By analogy with a product of similar composition
Effects on foetal development	:	Test Type: Two-generation study Species: Rat Application Route: Inhalation Dose: 100 - 500 - 1000 ppm Developmental Toxicity: NOAEL: 342 mg/kg body weight Method: OPPTS 870.3800 GLP: No information available. Remarks: Based on available data, the classification criteria are not met.
Reproductive toxicity - Assessment	:	Classification as "toxic for reproduction" is not justifiable. Classification as "teratogenic" is not justifiable.

Ethylbenzene:

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Strain: Sprague-Dawley Application Route: Inhalation Dose: 25 - 100 - 500 ppm Duration of Single Treatment: 6 h General Toxicity - Parent: NOAEL: 2.21 mg/l General Toxicity F1: NOAEL: 2.21 mg/l General Toxicity F2: NOAEL: 2.21 mg/l Method: OECD Test Guideline 416 GLP: yes
Effects on foetal development	:	Test Type: Fertility/early embryonic development Species: Rat Strain: Sprague-Dawley Application Route: Inhalation Dose: 100-500-1000-2000 ppm Duration of Single Treatment: 15 d General Toxicity Maternal: 500 Teratogenicity: 2,000 Developmental Toxicity: 500

Method: OECD Test Guideline 414
GLP: No information available.

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Toluene:

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

Components:

Xylene:

Exposure routes: Inhalation
Assessment: May cause respiratory irritation.

Ethylbenzene:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Toluene:

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Components:

Xylene:

Target Organs: Kidney, Liver, Central nervous system
Assessment: May cause damage to organs through prolonged or repeated exposure.

Ethylbenzene:

Target Organs: hearing organs
Assessment: May cause damage to organs through prolonged or repeated exposure.

Toluene:

Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Xylene:

Species: Rat, male and female
NOAEL: 250 mg/kg
Application Route: oral (gavage)
Exposure time: 103 w

Number of exposures: Once daily (5 days/week).
Dose: 250 - 500 mg/kg
Group: yes
Method: Other
GLP: No information available.

Species: Rat, male and female
NOAEL: 150 mg/kg
LOAEL: 150 mg/kg
Application Route: oral (gavage)
Exposure time: 90 d
Number of exposures: once daily
Dose: 150 - 750 - 1500 mg/kg
Group: yes
Method: OECD Test Guideline 408
GLP: No information available.

Species: Rat, male
NOAEL: >= 3.515 mg/l
Application Route: Inhalation
Exposure time: 13 w
Number of exposures: 6 hours/day, 5 days/week
Dose: 781 - 1996 - 3515 mg/m3
Group: yes
Method: Other
GLP: No information available.

Application Route: Skin contact
Remarks: This information is not available.

Ethylbenzene:

Species: Rat, male and female
NOAEL: 75 mg/kg
Application Route: oral (gavage)
Exposure time: 3 m
Number of exposures: twice daily
Dose: 75 - 250 - 750 mg/kg
Group: yes
Method: OECD Test Guideline 408
GLP: yes

Species: Rat, male and female
NOAEL: 0.33 - 1.1 mg/l
Application Route: Inhalation
Exposure time: 2 a
Number of exposures: 6 hours/day, 5 days/week
Dose: 75 - 250 - 750 ppm
Group: yes
Method: OECD Test Guideline 453
GLP: yes

Application Route: Skin contact
Remarks: This information is not available.

Toluene:

Target Organs: Liver, Nervous system
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
Remarks: no data available

Aspiration toxicity

Components:

Xylene:

May be fatal if swallowed and enters airways.

Ethylbenzene:

May be fatal if swallowed and enters airways.

Toluene:

May be fatal if swallowed and enters airways.

Further information

Components:

Toluene:

Remarks: Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough.
Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion or inhalation of high concentrations may cause injuries to gastrointestinal tract, liver, kidneys and central nervous system.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Poisoning by resorption through skin possible.
Has a degreasing effect on the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Xylene:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: No information available.

Remarks: By analogy with a product of similar composition

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): ca. 1 mg/l Exposure time: 24 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: No information available. Remarks: By analogy with a product of similar composition
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (microalgae)): 4.36 mg/l End point: Growth rate Exposure time: 73 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: By analogy with a product of similar composition EC50 (Pseudokirchneriella subcapitata (green algae)): 2.2 mg/l End point: Biomass Exposure time: 73 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: By analogy with a product of similar composition NOEC (Pseudokirchneriella subcapitata (green algae)): 0.44 mg/l Exposure time: 73 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: By analogy with a product of similar composition
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l Exposure time: 56 d Test Type: flow-through test Analytical monitoring: yes Method: Other GLP: no
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Freshwater insects): 0.96 - 1.17 mg/l End point: Reproduction rate Exposure time: 7 d Test Type: semi-static test Analytical monitoring: yes Method: Other

GLP: no
Remarks: By analogy with a product of similar composition

Toxicity to microorganisms : EC50 (Nitrosomonas sp.): 96 mg/l
Exposure time: 24 h
Test Type: static test
Analytical monitoring: no
Method: Other
GLP: No information available.
Remarks: By analogy with a product of similar composition
The details of the toxic effect relate to the nominal concentration.

EC50 (activated sludge, domestic): > 157 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: By analogy with a product of similar composition
The details of the toxic effect relate to the nominal concentration.

Toxicity to soil dwelling organisms : Remarks: Not applicable

Plant toxicity : EC50: ca. > 1 mg/kg
>1 milligram per kilogram
Exposure time: 14 d
End point: Growth
Species: Lactuca sativa (lettuce)
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP: No information available.
Remarks: By analogy with a product of similar composition

Sediment toxicity : Remarks: Not applicable

Toxicity to terrestrial organisms : Remarks: Not applicable

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Ethylbenzene:

Toxicity to fish : LC50 (Menidia menidia (Atlantic silverside)): 5.1 mg/l
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: Other

GLP: yes

LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: No information available.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: EPA
GLP: no

LC50 (Mysidopsis bahia (opossum shrimp)): 2.6 mg/l
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: EPA
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): 3.6 mg/l
End point: Biomass
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: EPA
GLP: yes

EC50 (Skeletonema costatum (marine diatom)): 7.7 mg/l
End point: Biomass
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: EPA
GLP: yes

Toxicity to fish (Chronic toxicity) : Chronic Toxicity Value (Fish): 1.13 mg/l
Exposure time: 30 d
Analytical monitoring: no
Method: Expert judgement
GLP: no

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia spec.): 0.96 mg/l
End point: Reproduction rate
Exposure time: 7 d
Test Type: semi-static test
Analytical monitoring: yes
Method: Other
GLP: no

Toxicity to microorganisms	:	EC50 (Nitrosomonas sp.): 96 mg/l Exposure time: 24 h Test Type: static test Analytical monitoring: no Method: Other GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): 0.047 mg/cm2 Exposure time: 48 h End point: mortality Method: OECD Test Guideline 207 GLP: no
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	Remarks: Not applicable

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.

Toluene:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Ceriodaphnia dubia (water flea)): 3.78 mg/l Exposure time: 48 h Test Type: semi-static test Method: EPA
Toxicity to algae/aquatic plants	:	EC50 (Chlorella vulgaris (Fresh water algae)): 134 mg/l Exposure time: 3 h Test Type: static test Method: Other
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus kisutch (coho salmon)): 1.39 mg/l Exposure time: 40 d Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Ceriodaphnia spec.): 0.74 mg/l End point: Reproduction rate Exposure time: 7 d Test Type: semi-static test Method: Other

Toxicity to microorganisms	:	NOEC (Pseudomonas putida): 29 mg/l Exposure time: 16 h
Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	Remarks: Not applicable

Persistence and degradability

Components:

Xylene:

Biodegradability	:	aerobic Inoculum: activated sludge, non-adapted Concentration: 41 mg/l BOD in % of theoretical OD Result: Readily biodegradable. Biodegradation: 87.8 % Exposure time: 28 d Method: OECD Test Guideline 301F GLP: yes

Ethylbenzene:

Biodegradability	:	aerobic Inoculum: activated sludge Concentration: 22 mg/l Dissolved organic carbon (DOC) Result: Readily biodegradable. Biodegradation: 70 - 80 % Exposure time: 28 d Method: ISO/DIS 14853 GLP: yes
Photodegradation	:	Test Type: air Concentration: 500000 molecule/cm³ Rate constant: 7,1E-12 cm³/(molecule*sec) Degradation (indirect photolysis): 50 % Degradation half life: 2.3 d GLP: No information available.

Toluene:

Biodegradability	:	aerobic Result: Readily biodegradable. Biodegradation: 86 % Exposure time: 20 d

Physico-chemical removability	:	Remarks: Biodegradable

Bioaccumulative potential

Components:

Xylene:

Bioaccumulation	:	Species: Oncorhynchus mykiss (rainbow trout) Bioconcentration factor (BCF): 7.2 - 25.9 Exposure time: 56 d Concentration: 0.36 - 0.74 mg/l Method: Other GLP: No information available.

Ethylbenzene:

Bioaccumulation	:	Species: Oncorhynchus kisutch (coho salmon) Bioconcentration factor (BCF): 1 Exposure time: 42 d Concentration: 0.005 mg/l Method: Other GLP: No information available.

Toluene:

Bioaccumulation	:	Bioconcentration factor (BCF): 90 Remarks: Does not bioaccumulate.

Mobility in soil

Components:

Xylene:

Distribution among environmental compartments	:	Adsorption/Soil Medium: water - soil log Koc: 2.73 Method: OECD Test Guideline 121

Ethylbenzene:

Distribution among environmental compartments	:	Adsorption/Soil log Koc: 2.71 Method: estimated

Toluene:

Distribution among environmental compartments	:	Remarks: The product evaporates readily.

Other adverse effects

Product:

Additional ecological information : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Components:

Xylene:

Environmental fate and pathways : not available

Results of PBT and vPvB assessment : The substance is not identified as a PBT or as a vPvB substance.

Additional ecological information : Do not allow to enter ground water, waterways or waste water.

Ethylbenzene:

Environmental fate and pathways : not available

Results of PBT and vPvB assessment : The substance is not identified as a PBT or as a vPvB substance.

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

Toluene:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act : Yes -- If it becomes a waste as sold.

Waste Code : D001

Waste from residues : Consult local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Regulation:

UN/NA-number:	UN 1993
Proper shipping name:	Flammable liquids, n.o.s., mixture
Technical Name:	Xylene Ethylbenzene TOLUENE
Technical Name:	TOLUENE
Primary hazard class:	3
Packing group:	III
Reportable Quantity:	68.705 kg XYLENES
Reportable Quantity:	68.705 kg Xylene 2,877.680 kg Ethylbenzene
Emergency Response Guide:	128

IATA

UN/ID number:	UN 1993
Proper shipping name:	Flammable liquid, n.o.s., mixture
Hazard inducer(s):	TOLUENE
Hazard inducer(s):	Xylene Ethylbenzene TOLUENE
Primary risk:	3
Packing group:	III
Remarks:	Shipment permitted

IMDG

UN no.:	UN 1993
Proper shipping name:	Flammable liquid, n.o.s., mixture
Hazard inducer(s):	TOLUENE
Hazard inducer(s):	Xylene Ethylbenzene TOLUENE
Primary risk:	3
Packing group:	III
EmS:	F-E S-E

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)
Xylene	1330-20-7	100	151

A characteristic waste RQ of 100 lbs applies to this product in a waste form: D001

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulphuric acid	7664-93-9	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Xylene	1330-20-7	50 - 70 %
Ethylbenzene	100-41-4	10 - 20 %
Toluene	108-88-3	5 - 10 %

Clean Water Act

This product contains the following priority pollutants at concentrations greater than 0.1%:, Toluene

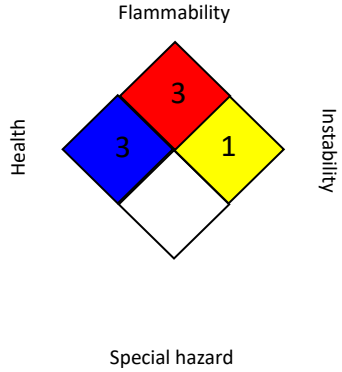
The components of this product are reported in the following inventories:

TSCA : Listed on TSCA, All components are compliant with the TSCA Inventory Notification (Active) rule.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2	:	USA. Occupational Exposure Limits (OSHA) - Table Z-2
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-2 / TWA	:	8-hour time weighted average
OSHA Z-2 / CEIL	:	Acceptable ceiling concentration
OSHA Z-2 / Peak	:	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and

Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Observe all necessary precautions for handling flammable substances. Keep away from sources of heat and ignition. Smoking should be prohibited where material is being handled. Electrical grounding of equipment is required.

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US / EN