

SAFETY DATA SHEET

SURCHEM 404



Version Revision Date: SDS Number: Date of last issue: 02/07/2023
5.0 07/10/2023 203000018227 Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : SURCHEM 404
Product code : 000000000058324942

Manufacturer or supplier's details

Company : LANXESS Corporation
 Product Safety & Regulatory Affairs
 111 RIDC Park West Drive
 Pittsburgh, Pennsylvania 15275-1112

Responsible Department : (800) LANXESS
 (412) 809-1000
 lanxesshes@lanxess.com

Emergency telephone : CHEMTREC (800) 424-9300 or
 (703) 527-3887 (Outside U.S.A) and mention CCN12916.
 Lanxess Emergency Phone (800) 410-3063.

Recommended use of the chemical and restrictions on use

Recommended use : Additive

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin sensitization : Category 1
Reproductive toxicity : Category 2
Specific target organ toxicity : Category 3 (Respiratory system)
- single exposure

GHS label elements

Hazard pictograms : The hazard pictograms consist of two red diamond-shaped symbols. The first symbol contains a black silhouette of a human figure with a white starburst on the chest, representing a health hazard. The second symbol contains a black exclamation mark, representing a general warning.

Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

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Precautionary Statements :
May cause respiratory irritation.
Suspected of damaging the unborn child.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist or vapors.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

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

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	>= 30 - < 50
Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts	93820-55-4	>= 20 - < 30
Sulfonic acids, petroleum, barium salts	61790-48-5	>= 10 - < 20
2-methylpentane-2,4-diol	107-41-5	>= 1 - < 5
barium carbonate	513-77-9	>= 1 - < 5

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|| Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

- If inhaled : Get medical attention immediately.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If unconscious, place in recovery position and get medical attention immediately.
Maintain open airway.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- In case of skin contact : Wash off with soap and water.
Remove contaminated clothing and shoes.
Continue to rinse for at least 20 minutes.
Get medical attention if symptoms occur.
Wash contaminated clothing before reuse.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Get medical attention if symptoms appear.
- If swallowed : Rinse mouth with water.
Do not induce vomiting unless directed to do by medical personnel.
Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

- Symptoms : Skin: Causes irritation with symptoms of reddening, itching, and swelling.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.
Adverse symptoms sometimes include the following:
Effects on fetal development.
- Effects : May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of damaging the unborn child.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

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as the spilled product.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Remove contaminated clothing and protective equipment before entering eating areas.
Workers should wash hands and face before eating, drinking and smoking.
Put on appropriate personal protection equipment.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Persons with a history of skin sensitization to this product should not be employed in any process in which this product is used.
Avoid inhalation, ingestion and contact with skin and eyes.
Use only with adequate ventilation/personal protection.
Avoid exposure during pregnancy.
- Conditions for safe storage : Store in accordance with local regulations.
Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.
Keep containers sealed until ready for use.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabeled containers.
Use appropriate container to avoid environmental contamination.
Empty containers retain residue and can be dangerous.
Do not reuse container.
- Further information on storage conditions : Incompatible with oxidizing agents.
- Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	TWA (Inhalable particulate matter)	5 mg/m ³	ACGIH
2-methylpentane-2,4-diol	107-41-5	TWA (Vapor)	25 ppm	ACGIH

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		STEL (Vapor)	50 ppm	ACGIH
		STEL (Inhalable fraction, Aerosol only)	10 mg/m ³	ACGIH
barium carbonate	513-77-9	TWA	0.5 mg/m ³ (Barium)	OSHA Z-1
		TWA	0.5 mg/m ³ (Barium)	ACGIH

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
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.
NIOSH approved, air-purifying organic vapor respirator.

Hand protection

Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields

Skin and body protection : Wear suitable protective clothing.
Chemical resistant apron
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
Appropriate techniques should be used to remove potentially contaminated clothing.
Wash contaminated clothing before reusing.
Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : viscous liquid

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Physical state : liquid

Color : dark brown

Odor : mild, hydrocarbon-like

Odor Threshold : No data available

pH : Not applicable substance/mixture is non-soluble (in water)

Melting point/range : Not applicable

Boiling point/boiling range : No data available

Flash point : > 356 °F / > 180 °C
Method: open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available
Remarks: No data available

Self-ignition : No data available

Burning number : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : 1 (77 °F / 25 °C)

Density : 1.20 g/cm³ (59.9 °F / 15.5 °C)

Solubility(ies)
Water solubility : insoluble

Solubility in other solvents : soluble
Solvent: Hydrocarbons

Partition coefficient: n-octanol/water : log Pow: > 6

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Ignition temperature : No data available

Decomposition temperature : No data available

Self-Accelerating decomposition temperature (SADT) : No data available

Viscosity

 Viscosity, dynamic : No data available

 Viscosity, kinematic : 110 mm²/s (212 °F / 100 °C)

Explosive properties : No data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Dust explosion class : No data available

Metal corrosion rate : Not corrosive to metals.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is chemically stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Exposure to moisture.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact
Skin Absorption

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Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity
Remarks: No mortality observed at this dose.

Acute dermal toxicity : Acute toxicity estimate: 4,648 mg/kg
Method: Calculation method

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Remarks: Test results on an analogous product

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Remarks: Test results on an analogous product

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: Test results on an analogous product

Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts:

Acute oral toxicity : LD50 Oral (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 1.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OPP 81-3 Acute Inhalation Toxicity
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Dosage caused no mortality

Acute dermal toxicity : LD50 Dermal (Rabbit, male and female): > 5,000 mg/kg

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GLP: yes

Sulfonic acids, petroleum, barium salts:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 1.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OPP 81-3 Acute Inhalation Toxicity
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Dosage caused no mortality

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

2-methylpentane-2,4-diol:

Acute oral toxicity : LD50 (Rat): 3,700 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 13,000 mg/kg

barium carbonate:

Acute oral toxicity : LD50 (Rat): 418 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Method : OECD Test Guideline 431
Result : Not corrosive

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Species : Rabbit
Method : Draize Test
Result : No skin irritation
GLP : yes
Remarks : Test results on an analogous product

Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts:

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Species : Rabbit
Method : OPPTS 870.2500
Result : No skin irritation
GLP : yes

Sulfonic acids, petroleum, barium salts:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

2-methylpentane-2,4-diol:

Species : Rabbit
Result : Skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
GLP : yes
Remarks : Test results on an analogous product

Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts:

Species : Rabbit
Result : No eye irritation
Method : OPPTS 870.2400
GLP : yes

Sulfonic acids, petroleum, barium salts:

Species : Rabbit
Result : No eye irritation
Exposure time : 72 h
Method : OECD Test Guideline 405
GLP : yes

2-methylpentane-2,4-diol:

Species : Rabbit
Result : Eye irritation

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Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitization on laboratory animals.
GLP : yes
Remarks : Test results on an analogous product

Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts:

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 406
Result : Skin sensitizers
GLP : yes

Sulfonic acids, petroleum, barium salts:

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Assessment : The product is a skin sensitiser, sub-category 1B.
Method : OECD Test Guideline 406
GLP : yes

2-methylpentane-2,4-diol:

Routes of exposure : Skin contact
Species : Guinea pig
Result : Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

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Genotoxicity in vitro : Test Type: Ames test
Test system: TA98
Metabolic activation: with metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No information available.
Remarks: Test results on an analogous product

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: no
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: positive
GLP: yes
Remarks: Test results on an analogous product

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
GLP: No information available.
Remarks: Test results on an analogous product

Sulfonic acids, petroleum, barium salts:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

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Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
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)
Cell type: Bone marrow
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
GLP: yes

2-methylpentane-2,4-diol:

Genotoxicity in vitro : Test Type: Ames test
Test system: Bacteria
Metabolic activation: with and without metabolic activation
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Species : Mouse, female
Application Route : Dermal
Exposure time : 18 month(s)
Method : OECD Test Guideline 451
Result : negative
GLP : No information available.
Remarks : Test results on an analogous product

Species : Mouse, male
Application Route : Dermal
Exposure time : 24 month(s)
Method : OECD Test Guideline 453
Result : positive
GLP : No information available.
Remarks : Test results on an analogous product

Carcinogenicity - Assessment : Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)



No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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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 ingredient 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

Suspected of damaging the unborn child.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 0 - 1000 milligram per kilogram
General Toxicity Parent: NOAEL: \geq 1,000 mg/kg body weight
Fertility: NOAEL: \geq 1,000 mg/kg body weight
Early Embryonic Development: NOAEL: \geq 1,000 mg/kg body weight
Method: OECD Test Guideline 421
Result: Animal testing did not show any effects on fertility.
GLP: yes
Remarks: Test results on an analogous product

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat, female
Application Route: Dermal
Dose: 0 - 125 - 500 milligram per kilogram
General Toxicity Maternal: NOAEL: \geq 2,000 mg/kg body weight
Teratogenicity: NOAEL: \geq 2,000 mg/kg body weight
Developmental Toxicity: NOAEL: \geq 2,000 mg/kg body weight
Embryo-fetal toxicity.: NOAEL: \geq 2,000 mg/kg body weight
Method: OECD Test Guideline 414
Result: negative
GLP: No information available.
Remarks: Test results on an analogous product

Sulfonic acids, petroleum, barium salts:

Effects on fertility : Test Type: Fertility
Species: Rat, male and female
Application Route: Oral
Dose: 0 - 50 - 167 - 500 milligram per kilogram
General Toxicity Parent: NOAEL: $>$ 500 mg/kg body weight
Early Embryonic Development: NOAEL: $>$ 500 mg/kg body weight

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Method: OECD Test Guideline 415
Result: negative
GLP: yes

2-methylpentane-2,4-diol:

Effects on fertility : Species: Rat, male
Application Route: Oral
Dose: 190 milligram per kilogram
Result: Some evidence of adverse effects on development, based on animal experiments.

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

STOT-single exposure

May cause respiratory irritation.

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Assessment : May cause respiratory irritation.

2-methylpentane-2,4-diol:

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Species : Rat, male
LOAEL : 125 mg/kg
Application Route : Oral
Exposure time : 90 d
Number of exposures : 5 days/week
Dose : 0 - 125 - 500 mg/kg bw/d
Method : OECD Test Guideline 408
GLP : No information available.
Remarks : Subchronic toxicity
Test results on an analogous product

Species : Rat, male and female
NOAEC : >= 1 mg/l
Application Route : inhalation (dust/mist/fume)

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Exposure time : 20 d
Number of exposures : 6 hours/day
Dose : 0 - 0.05 - 0,22
Method : OECD Test Guideline 412
GLP : No information available.
Remarks : Subacute toxicity
Test results on an analogous product

Species : Rat, male and female
NOAEL : ≥ 2000 mg/kg
Application Route : Skin contact
Exposure time : 90 d
Number of exposures : 5 days/week
Dose : 0 - 2000 mg/kg bw/d
Method : OECD Test Guideline 411
GLP : No information available.
Remarks : Subchronic toxicity
Test results on an analogous product

Sulfonic acids, petroleum, barium salts:

Species : Rat, male and female
NOAEL : 500 mg/kg
Application Route : Oral
Exposure time : 28 d
Number of exposures : daily
Dose : 0 - 500 - 1000 mg/kg bw/day
Method : OECD Test Guideline 407
GLP : yes
Remarks : Subchronic toxicity

Species : Rat, male and female
NOAEL : 50 mg/m³
Application Route : inhalation (vapor)
Exposure time : 28 d
Number of exposures : 6 hours/day, 5 days/week
Dose : 0 - 50 - 150 - 250 mg/m³
Method : OECD Test Guideline 412
GLP : yes
Remarks : Subacute toxicity

Species : Rat, male and female
NOAEL : $> 1,000$ mg/kg
Application Route : Dermal
Exposure time : 28 d
Number of exposures : daily
Dose : 0- 100 - 300 - 1000 mg/kg bw/day
Method : OECD Test Guideline 410
GLP : yes
Remarks : Subacute toxicity

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2-methylpentane-2,4-diol:

Species : Rat
NOAEL : 590 mg/kg
Application Route : Oral
Exposure time : 0.5 yr
Number of exposures : daily
Remarks : Subchronic toxicity

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: nominal concentration
Test results on an analogous product
water extractable fraction

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: No information available.
Remarks: nominal concentration
Test results on an analogous product
water extractable fraction

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Analytical monitoring: no
Method: OECD Test Guideline 201

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GLP: No information available.
Remarks: nominal concentration
Test results on an analogous product
water extractable fraction

NOELR (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
Exposure time: 72 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: No information available.
Remarks: nominal concentration
Test results on an analogous product
water extractable fraction

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 10 mg/l
End point: Reproduction
Exposure time: 21 d
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: nominal concentration
Test results on an analogous product
water extractable fraction

Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts:

Toxicity to fish : LC50 (Fish): 1,000 mg/l
Exposure time: 96 h
Remarks: Fresh water
Aquatic toxicity is unlikely due to low solubility.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,000 mg/l
Exposure time: 48 h
Remarks: Fresh water
Aquatic toxicity is unlikely due to low solubility.

Toxicity to algae/aquatic plants : EC50 (algae): 1,000 mg/l
Exposure time: 96 h
Remarks: Fresh water
Aquatic toxicity is unlikely due to low solubility.

Sulfonic acids, petroleum, barium salts:

Toxicity to fish : LL50 (Cyprinodon variegatus (sheepshead minnow)): > 10,000 mg/l
Exposure time: 96 h
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

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Remarks: salt water
nominal concentration
water extractable fraction

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OPPTS 797.1300
GLP: yes
Remarks: Fresh water
nominal concentration
water extractable fraction

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (microalgae)): > 1,000 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OTS 797.1050 (Algal Toxicity, Tiers I and II)
GLP: yes
Remarks: Fresh water
nominal concentration
water extractable fraction

NOEC (*Pseudokirchneriella subcapitata* (green algae)): 1,000 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OTS 797.1050 (Algal Toxicity, Tiers I and II)
GLP: yes
Remarks: Fresh water
nominal concentration
water extractable fraction

Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: Fresh water
nominal concentration

2-methylpentane-2,4-diol:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 10,700 mg/l

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Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

barium carbonate:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 870 mg/l
Exposure time: 48 h

Persistence and degradability

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Biodegradability : aerobic
Concentration: 44 mg/l
Result: Inherently biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Stability in water : Remarks: The product is insoluble and floats on water.

Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts:

Biodegradability : Result: Not readily biodegradable.

Sulfonic acids, petroleum, barium salts:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 2 mg/l
Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

barium carbonate:

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

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Partition coefficient: n-octanol/water : log Pow: > 3.90
Method: Calculated value

2-methylpentane-2,4-diol:

Partition coefficient: n-octanol/water : log Pow: 0.58
Method: Calculated value

Mobility in soil

Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Mobility : Remarks: The product is insoluble and floats on water.
Known distribution to environmental compartments

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Waste from residues : The generation of waste should be avoided or minimized wherever possible.
This material and its container must be disposed of in a safe way.
Empty containers retain product residue; observe all precautions for product.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Waste disposal should be in accordance with existing federal, state, provincial and/or local environmental controls.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

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IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Hazard and Handling Notes.

Not dangerous cargo

Keep separated from foodstuffs

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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 : Respiratory or skin sensitization
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

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

Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts 93820-55-4 $\geq 20 - < 30 \%$

Sulfonic acids, petroleum, barium salts 61790-48-5 $\geq 10 - < 20 \%$

Benzenesulfonic acid, mono-C16-24-alkyl derivs., barium salts, overbased 70024-68-9 $\geq 10 - < 20 \%$

barium carbonate 513-77-9 $\geq 1 - < 5 \%$

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US State Regulations

Massachusetts Right To Know

2-methylpentane-2,4-diol	107-41-5	1 - 5
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Pennsylvania Right To Know

Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	30 - 50
Benzenesulfonic acid, di-C10-18-alkyl derivs., barium salts	93820-55-4	20 - 30
Sulfonic acids, petroleum, barium salts	61790-48-5	10 - 20
Benzenesulfonic acid, mono-C16-24-alkyl derivs., barium salts, overbased	70024-68-9	> 1
2-methylpentane-2,4-diol	107-41-5	1 - 5
barium carbonate	513-77-9	1 - 5

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

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

SECTION 16. OTHER INFORMATION

Further information

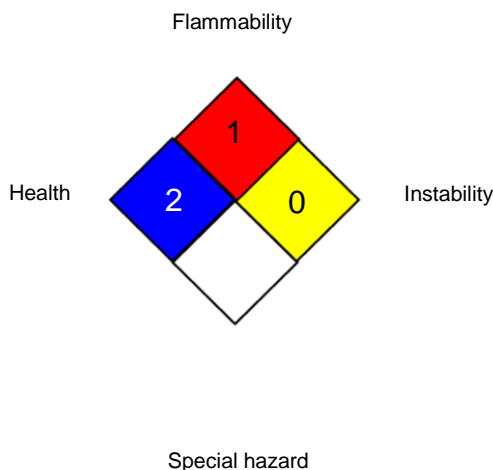
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NFPA 704:



HMIS® IV:

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

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

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; 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); EC_x - Concentration associated with x% response; EHS - Extremely Hazardous Substance; EL_x - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC_x - 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

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opment; 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; TECI - Thailand Existing Chemicals 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

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The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.