SAFETY DATA SHEET

TruFuel 50 Fuel

Section 1. Identification

GHS product identifier : TruFuel 50 Fuel

Product code : 301027210001

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Fuel.

Uses advised against
Not applicable.

Supplier's details : Calumet Branded Products, LLC
1060 N Capitol Ave Suite 6-401
Indianapolis, IN 46204
USA
Technical Services:317-328-5660

Emergency telephone number (with hours of operation) : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.

Section 2. Hazards identification

May cause damage to organs through prolonged or repeated exposure. (kidneys, liver)
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling.

Response : Collect spillage. IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation occurs: Get medical advice or attention. 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 or attention.

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

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified : Prolonged or repeated contact may dry skin and cause irritation.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	Synonyms	%	Identifiers
Naphtha (petroleum), full-range alkylate, butane-contg.	Low boiling point modified naphta; Naphtha, petroleum, full range alkylate, butane containing; Full range alkylate naphtha, with butanes, petroleum; naphtha (petroleum), full-range alkylate, butane-contg., for undergoing chemical transformation by a process other than those specified in respect of subheading 2710 12 11; naphtha (petroleum), full-range alkylate, butane-contg., for undergoing a specific process; low boiling point modified naphtha, for undergoing chemical transformation by a process other than those specified in respect of subheading 2710 12 11; low boiling point modified naphtha, for undergoing a specific process; Naphtha (petroleum), full-range alkylate, butane-contg., Low boiling point modified naphta	≥65 - ≤85	CAS: 68527-27-5
xylene	Benzene, dimethyl-; Xylol; Benzene, dimethyl-, mixed	≥10 - ≤30	CAS: 1330-20-7

Section 3. Composition/information on ingredients

	isomers; xylene, mixed isomers, pure; xylene, crude; photosensitive emulsion consisting of cyclized polyisoprene containing: — 55 % or more but not more than 75 % by weight of xylene (CAS RN 1330-20-7) and — 12 % or more but not more than 18 % by weight of ethylbenzene (CAS RN 100-41-4); Benzene, dimethyl-,; Xylene (mixed); xylene (total); Xylenes; Dimethylbenzene		
isopentane	2-methylbutane; Butane, 2-methyl-; difluoromethane—1,1,1,2,2-pentafluoroethane—1,1,1,2-tetrafluoroethane—1,1,1,2,3,3,3-heptafluoropropane—n-butane—2-methylbutane; 1,1,1,2,2-pentafluoroethane—1,1,1,2-tetrafluoroethane—n-butane—2-methylbutane; R601a; R453; R32—R125—R134a—R227ea—R600—R601a; R426; R125—R134a—R600—R601a; Iso-Pentane; Isoamyl hydride; Ethyl dimethyl methane; Isopentan (2-methylbutane)	≥10 - ≤30	CAS: 78-78-4
pentane	n-PENTANE; Normal-Pentane; R601; AMYL HYDRIDE; 2-methylbutane; isopentane; Normal pentane; n-pentana	≥10 - ≤30	CAS: 109-66-0
toluene	Benzene, methyl-; Methylbenzene; Toluol; Phenyl methane; Methyl benzol; toluene, pure; toluene, crude	≥10 - ≤30	CAS: 108-88-3
1,2,4-trimethylbenzene	Benzene, 1,2,4-trimethyl-; . pseudo.-Cumene; Pseudocumene; psi-Cumene; Asymmetrical trimethylbenzene; hemimellitene; solution of more than 61 % but not more than 63 % by weight of methylcyclopentadienyl manganese tricarbonyl (CAS RN 12108-13-3) in an aromatic hydrocarbon solvent, containing by weight not more than: — 4,9 % of 1,2,4-trimethylbenzene (CAS RN 95-63-6), — 4,9 % of naphthalene (91-20-3), and — 0,5 % of 1,3,5-trimethylbenzene (108-67-8); Trimethylbenzene; unsym-Trimethylbenzene; Trialkyl (C1-4)benzene; Tri-or tetramethylbenzene	≤0.1	CAS: 95-63-6

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and 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 containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Naphtha (petroleum), full-range alkylate, butane-contg.	**ACGIH TLV (United States)** TWA 8 hours: 200 ppm.
xylene	**CAL OSHA PEL (United States, 1/2025) [xylene]** STEL 15 minutes: 655 mg/m³. STEL 15 minutes: 150 ppm. C: 300 ppm. TWA 8 hours: 435 mg/m³. TWA 8 hours: 100 ppm. **OSHA PEL (United States, 5/2018) [Xylenes]** TWA 8 hours: 100 ppm.

Section 8. Exposure controls/personal protection

	TWA 8 hours: 435 mg/m³. **OSHA PEL 1989 (United States, 3/1989) [Xylenes (o-, m-, p-isomers)]** TWA 8 hours: 100 ppm. TWA 8 hours: 435 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 655 mg/m³. **ACGIH TLV (United States, 1/2025) [p-xylene and mixtures containing p-xylene]** A4. Ototoxicant. TWA 8 hours: 20 ppm.
isopentane	**ACGIH TLV (United States, 1/2025) [Pentane]** TWA 8 hours: 1000 ppm.
pentane	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 120 ppm. TWA 10 hours: 350 mg/m³. CEIL 15 minutes: 610 ppm. CEIL 15 minutes: 1800 mg/m³. **CAL OSHA PEL (United States, 1/2025)** TWA 8 hours: 1800 mg/m³. TWA 8 hours: 600 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 1000 ppm. TWA 8 hours: 2950 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 600 ppm. TWA 8 hours: 1800 mg/m³. STEL 15 minutes: 750 ppm. STEL 15 minutes: 2250 mg/m³. **ACGIH TLV (United States, 1/2025) [Pentane]** TWA 8 hours: 1000 ppm.
toluene	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 100 ppm. TWA 10 hours: 375 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 560 mg/m³. **OSHA PEL Z2 (United States, 2/2013)** TWA 8 hours: 200 ppm. CEIL: 300 ppm. AMP 10 minutes: 500 ppm. **CAL OSHA PEL (United States, 1/2025)** Absorbed through skin. STEL 15 minutes: 560 mg/m³. STEL 15 minutes: 150 ppm. C: 500 ppm. TWA 8 hours: 37 mg/m³. TWA 8 hours: 10 ppm. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 100 ppm. TWA 8 hours: 375 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 560 mg/m³. **ACGIH TLV (United States, 1/2025)** A4. Ototoxicant. TWA 8 hours: 20 ppm.
1,2,4-trimethylbenzene	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 25 ppm. TWA 10 hours: 125 mg/m³. **CAL OSHA PEL (United States, 1/2025)**

Section 8. Exposure controls/personal protection

	[trimethylbenzene, all isomers] TWA 8 hours: 125 mg/m³. TWA 8 hours: 25 ppm. **OSHA PEL 1989 (United States, 3/1989) [Trimethyl benzene]** TWA 8 hours: 25 ppm. TWA 8 hours: 125 mg/m³. **ACGIH TLV (United States, 1/2025)** A4. TWA 8 hours: 10 ppm.

Biological exposure indices

Ingredient name	Exposure indices
xylene	**ACGIH BEI (United States, 1/2025) [xylenes (technical or commercial grades)]** BEI: 0.3 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
toluene	**ACGIH BEI (United States, 1/2025)** BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift. BEI: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift. BEI: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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.

Eye/face 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an 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 protection time of the gloves cannot be accurately estimated.

Body protection : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Clear. Red.

Odor : Characteristic. Hydrocarbon.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : >54.444°C (>130°F)

Flash point : Closed cup: -40°C (-40°F)

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
isopentane	592.54814	79				

Relative vapor density : Not available.

Relative density : 0.732

Solubility(ies) :

Media	Result
cold water	Partially soluble
hot water	Partially soluble

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	215	419	EU A.15

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): <20.5 mm^2/s (<20.5 cSt)

Particle characteristics

Median particle size : Not applicable.

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 stable.

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

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
Naphtha (petroleum), full-range alkylate, butane-contg.	**Rat - Oral - LD50** >5000 mg/kg **Rabbit - Dermal - LD50** >2000 mg/kg **Rat - Inhalation - LC50 Vapor** 5610 mg/m³ [4 hours]
xylene	**Rat - Oral - LD50** 4300 mg/kg Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes **Rat - Inhalation - LC50 Vapor** 5000 ppm [4 hours] **Rat - Inhalation - LC50 Gas.** 6670 ppm [4 hours]
isopentane	**Rat - Oral - LD50** >2000 mg/kg **Rat - Inhalation - LC50 Vapor** 280000 mg/m³ [4 hours]
pentane	**Rat - Oral - LD50** >2000 mg/kg **Rat - Inhalation - LC50 Vapor** 364 g/m³ [4 hours]
toluene	**Rat - Oral - LD50** 636 mg/kg **Rabbit - Dermal - LD50** 5000 mg/kg **Rat - Inhalation - LC50 Vapor** 49 g/m³ [4 hours]
1,2,4-trimethylbenzene	**Rat - Oral - LD50** 5 g/kg **Rabbit - Dermal - LD50** >3440 mg/kg **Rat - Inhalation - LC50 Vapor** 18000 mg/m³ [4 hours]

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Skin corrosion/irritation

Product/ingredient name	Result
xylene	**Rat - Skin - Mild irritant** Duration of treatment/exposure: 8 hours Amount/concentration applied: 60 uL **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Skin - Moderate irritant** Amount/concentration applied: 100 %
toluene	**Pig - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 250 uL **Rabbit - Skin - Mild irritant** Amount/concentration applied: 435 mg **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg **Rabbit - Skin - Moderate irritant** Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
xylene	**Rabbit - Eyes - Mild irritant** Amount/concentration applied: 87 mg **Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 5 mg
toluene	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 0.5 minutes Amount/concentration applied: 100 mg **Rabbit - Eyes - Mild irritant** Amount/concentration applied: 870 ug **Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 2 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 0.1 Ml

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
xylene	-	3	-
toluene	-	3	-

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Ingredient name	Conclusion/Summary
toluene	Reproductive toxicant - female. Suspected of damaging the unborn child if inhaled.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Naphtha (petroleum), full-range alkylate, butane-contg.	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
xylene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
isopentane	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
pentane	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
toluene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
1,2,4-trimethylbenzene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
xylene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
toluene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 2

Aspiration hazard

Product/ingredient name	Result

Section 11. Toxicological information

Naphtha (petroleum), full-range alkylate, butane-contg.	ASPIRATION HAZARD - Category 1
xylene	ASPIRATION HAZARD - Category 1
isopentane	ASPIRATION HAZARD - Category 1
pentane	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1
1,2,4-trimethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
TruFuel 50 Bulk	2795.1	3047.5	48561.9	N/A	N/A
Naphtha (petroleum), full-range alkylate, butane-contg.	N/A	2500	N/A	N/A	N/A
xylene	4300	1100	6670	N/A	N/A
isopentane	2500	N/A	N/A	280	N/A
pentane	2500	N/A	N/A	364	N/A
toluene	636	5000	N/A	49	N/A
1,2,4-trimethylbenzene	5000	2500	N/A	18	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
xylene	**Acute - LC50 - Marine water** Crustaceans - Daggerblade grass shrimp - *Palaemon pugio* 8500 µg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: 31 days; Size: 18.4 mm; Weight: 0.077 g 13.4 mg/l [96 hours] Effect: Mortality
isopentane	**Acute - EC50** Daphnia - *Daphnia magna* 2.3 mg/l [48 hours]
toluene	**Acute - LC50 - Fresh water** Fish - Coho salmon,silver salmon - *Oncorhynchus kisutch* - Fry Weight: 1 g 5500 µg/l [96 hours] Effect: Mortality **Acute - EC50 - Fresh water** Daphnia - Water flea - *Daphnia magna* - Juvenile (Fledgling, Hatchling, Weanling) 6000 µg/l [48 hours] Effect: Intoxication **Acute - EC50 - Fresh water**

Section 12. Ecological information

	Algae - Green algae - *Raphidocelis subcapitata* 12.5 mg/l [72 hours] Effect: Growth **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* Age: ≤24 hours 1 mg/l [21 days] Effect: Mortality
1,2,4-trimethylbenzene	**Acute - LC50 - Marine water** Crustaceans - Scud - *Elasmopus pectenicrus* - Adult 4910 µg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: 34 days 7720 µg/l [96 hours] Effect: Mortality

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name	Result
isopentane	Ready Biodegradability - Manometric Respirometry Test 71.43% [28 days]

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
isopentane	-	-	Readily
toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Naphtha (petroleum), full-range alkylate, butane-contg.	-	10 to 2500	High
xylene	3.12	8.1 to 25.9	Low
isopentane	3	171	Low
pentane	3.45	171	Low
toluene	2.73	90	Low
1,2,4-trimethylbenzene	3.63	243	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Xylene	1330-20-7	Listed	U239
Toluene	108-88-3	Listed	U220

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1203	UN1203	UN1203	UN1203	UN1203
UN proper shipping name	Gasoline	GASOLINE	GASOLINA	GASOLINE	Gasoline
Transport hazard class(es)	3 	3 	3 	3 	3 
Packing group	II	II	II	II	II
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification : This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.
Reportable quantity 408.08 lbs / 185.27 kg [66.861 gal / 253.1 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.
Special provisions 144, 177, B1, B33, IB2, T4

Section 14. Transport information

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark).
The marine pollutant mark is not required when transported by road or rail.
Explosive Limit and Limited Quantity Index 30
Passenger Carrying Vessel Index 100
Passenger Carrying Road or Rail Index 5
Special provisions 17, 88, 98, 150

Mexico Classification : **Special provisions** 243

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, S-E
Special provisions 243

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
Special provisions A100

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations :
TSCA 4(a) proposed test rules: (tetrapropenyl)succinic acid
TSCA 4(a) final test rules: 2-Butenedioic acid (E)-, di-C8-18-alkyl esters
TSCA 8(a) PAIR: pentane; 2-Butenedioic acid (E)-, di-C8-18-alkyl esters
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 8(d) H and S data reporting: ethylbenzene
Clean Water Act (CWA) 307: toluene
Clean Water Act (CWA) 311: xylene; toluene
Clean Air Act (CAA) 112 regulated flammable substances: isopentane; pentane

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Section 15. Regulatory information

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
vinyl acetate	≤0.1	Yes.	1000	129	5000	644.8

SARA 304 RQ : 185988656179.9 lbs / 84438849905.7 kg [30473202524.7 gal / 115353620089.7 L]

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
HNOC - Defatting irritant

Composition/information on ingredients

Name	%	Classification
Naphtha (petroleum), full-range alkylate, butane-contg.	≥65 - ≤85	FLAMMABLE LIQUIDS - Category 1 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
xylene	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
isopentane	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid HNOC - Defatting irritant
pentane	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 SIMPLE ASPHYXIANTS SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid HNOC - Defatting irritant
toluene	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Section 15. Regulatory information

1,2,4-trimethylbenzene	≤0.1	ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	xylene toluene	1330-20-7 108-88-3	≥10 - ≤30 ≥10 - ≤30
Supplier notification	xylene toluene	1330-20-7 108-88-3	≥10 - ≤30 ≥10 - ≤30

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: XYLENE; ISOPENTANE; PENTANE; TOLUENE

New York : The following components are listed: Xylene mixed; Toluene

New Jersey : The following components are listed: XYLENES; ISOPENTANE; PENTANE; TOLUENE

Pennsylvania : The following components are listed: BENZENE, DIMETHYL-; BUTANE, 2-METHYL-; PENTANE; BENZENE, METHYL-

California Prop. 65

⚠ **WARNING**: This product can expose you to chemicals including cumene, which is known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Toluene cumene	- -	Yes. -

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : Not determined.

Section 15. Regulatory information

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : All components are listed or exempted.

Taiwan : Not determined.

Thailand : Not determined.

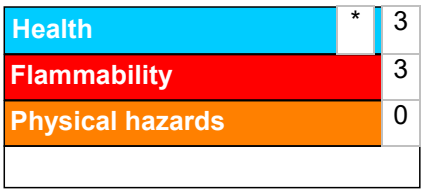
Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method
AQUATIC HAZARD (ACUTE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

History

Date of printing : 1/9/2026

Date of issue/Date of revision : 1/9/2026

Date of previous issue : 4/29/2025

Version : 8

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.