

Section 1. Identification

Product name : FORSA™ PAO77 PARAFFIN DISPERSANT
™ a trademark of Baker Hughes Incorporated.

Product code : PAO77

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

Identified uses : Paraffin Dispersant.

Print date : 1/19/2023

Validation date : 1/19/2023

Version : 3.01

Supplier's details : Baker Petrolite LLC
 12645 W. Airport Blvd.
 Sugar Land, TX 77478
 For Product Information/SDSs Call: 800-231-3606
 (8:00 a.m. - 5:00 p.m. CST, Monday - Friday) 281-276-5400

Emergency telephone number (with hours of operation) : CHEMTREC: 800-424-9300 (U.S. 24 hour)
 Baker Petrolite: 800-231-3606
 (001)281-276-5400
 CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

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
 ACUTE TOXICITY (oral) - Category 4
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements	<ul style="list-style-type: none"> : Highly flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Causes damage to organs. (optic nerve) Toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	<ul style="list-style-type: none"> : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves: > 8 hours (breakthrough time): Nitrile or Neoprene gloves.. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
Response	<ul style="list-style-type: none"> : Collect spillage. IF exposed: Call a POISON CENTER or doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of 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	<ul style="list-style-type: none"> : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Disposal	<ul style="list-style-type: none"> : Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	<ul style="list-style-type: none"> : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Light aromatic naphtha	30 - 40	64742-95-6
1,2,4-Trimethylbenzene	20 - 30	95-63-6
Oxyalkylated alkyl phenol	5 - 10	Trade secret.
1,3,5-Trimethylbenzene	5 - 10	108-67-8
Methanol	5 - 10	67-56-1
Alkylaryl sulfonates	1 - 5	Trade secret.
Diethylene glycol monobutyl ether	1 - 5	112-34-5
1,2,3-Trimethylbenzene	1 - 5	526-73-8
Xylene	1 - 5	1330-20-7
2-Ethylhexanol	1 - 5	104-76-7
Isopropanol	1 - 5	67-63-0
Cumene	0.1 - 1	98-82-8
Ethylbenzene	0.1 - 1	100-41-4

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

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

Section 3. Composition/information on ingredients

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. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes damage to organs following a single exposure in contact with skin. Causes skin irritation.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following: pain or irritation, watering, redness
- Inhalation** : respiratory tract irritation, coughing, nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness
- Skin contact** : irritation, redness
- Ingestion** : No specific data.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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.

Section 4. First aid measures

See toxicological information (Section 11)

Additional information

If product is ingested and vomiting occurs naturally, have person lean forward to reduce the risk of aspiration into the lungs.

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).
- 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. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. 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 : carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides

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.

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. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- 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. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.

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. 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 ingest. 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 a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store in original container, protected from direct sunlight. 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
Light aromatic naphtha 1,2,4-Trimethylbenzene	None. NIOSH REL (United States, 10/2020). TWA: 125 mg/m ³ , 0 times per shift, 10 hours. TWA: 25 ppm, 0 times per shift, 10 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 125 mg/m ³ , 0 times per shift, 8 hours. TWA: 25 ppm, 0 times per shift, 8 hours. ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours.
Oxyalkylated alkyl phenol 1,3,5-Trimethylbenzene	None. ACGIH TLV (United States, 1/2022).

Section 8. Exposure controls/personal protection

Methanol	<p>TWA: 123 mg/m³, 0 times per shift, 8 hours. TWA: 10 ppm, 0 times per shift, 8 hours. NIOSH REL (United States, 10/2020). TWA: 125 mg/m³, 0 times per shift, 10 hours. TWA: 25 ppm, 0 times per shift, 10 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 125 mg/m³, 0 times per shift, 8 hours. TWA: 25 ppm, 0 times per shift, 8 hours. ACGIH TLV (United States, 1/2022). Absorbed through skin. STEL: 328 mg/m³, 0 times per shift, 15 minutes. STEL: 250 ppm, 0 times per shift, 15 minutes. TWA: 262 mg/m³, 0 times per shift, 8 hours. TWA: 200 ppm, 0 times per shift, 8 hours. NIOSH REL (United States, 10/2020). Absorbed through skin. STEL: 325 mg/m³, 0 times per shift, 15 minutes. STEL: 250 ppm, 0 times per shift, 15 minutes. TWA: 260 mg/m³, 0 times per shift, 10 hours. TWA: 200 ppm, 0 times per shift, 10 hours. OSHA PEL (United States, 5/2018). TWA: 260 mg/m³, 0 times per shift, 8 hours. TWA: 200 ppm, 0 times per shift, 8 hours. OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. STEL: 325 mg/m³, 0 times per shift, 15 minutes. STEL: 250 ppm, 0 times per shift, 15 minutes. TWA: 260 mg/m³, 0 times per shift, 8 hours. TWA: 200 ppm, 0 times per shift, 8 hours.</p>
Alkylaryl sulfonates Diethylene glycol monobutyl ether	<p>None. ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor ACGIH TLV (United States). TWA: 10 ppm, (Inhalable fraction.)</p>
1,2,3-Trimethylbenzene	<p>ACGIH TLV (United States, 1/2022). TWA: 123 mg/m³, 0 times per shift, 8 hours. TWA: 10 ppm, 0 times per shift, 8 hours. NIOSH REL (United States, 10/2020). TWA: 125 mg/m³, 0 times per shift, 10 hours. TWA: 25 ppm, 0 times per shift, 10 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 125 mg/m³, 0 times per shift, 8 hours. TWA: 25 ppm, 0 times per shift, 8 hours.</p>
Xylene	<p>ACGIH TLV (United States, 1/2022). TWA: 20 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>
2-Ethylhexanol Isopropanol	<p>None. ACGIH TLV (United States, 4/2014). STEL: 400 ppm, 0 times per shift, 15 minutes. TWA: 200 ppm, 0 times per shift, 8 hours.</p>

Section 8. Exposure controls/personal protection

Cumene	<p>NIOSH REL (United States, 10/2013). STEL: 1225 mg/m³, 0 times per shift, 15 minutes. STEL: 500 ppm, 0 times per shift, 15 minutes. TWA: 980 mg/m³, 0 times per shift, 10 hours. TWA: 400 ppm, 0 times per shift, 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 980 mg/m³, 0 times per shift, 8 hours. TWA: 400 ppm, 0 times per shift, 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). STEL: 1225 mg/m³, 0 times per shift, 15 minutes. STEL: 500 ppm, 0 times per shift, 15 minutes. TWA: 980 mg/m³, 0 times per shift, 8 hours. TWA: 400 ppm, 0 times per shift, 8 hours.</p> <p>ACGIH TLV (United States, 1/2022). TWA: 5 ppm, 0 times per shift, 8 hours.</p> <p>NIOSH REL (United States, 10/2020). Absorbed through skin. TWA: 245 mg/m³, 0 times per shift, 10 hours. TWA: 50 ppm, 0 times per shift, 10 hours.</p> <p>OSHA PEL (United States, 5/2018). Absorbed through skin. TWA: 245 mg/m³, 0 times per shift, 8 hours. TWA: 50 ppm, 0 times per shift, 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 245 mg/m³, 0 times per shift, 8 hours. TWA: 50 ppm, 0 times per shift, 8 hours.</p>
Ethylbenzene	<p>ACGIH TLV (United States, 1/2022). Ototoxicant. TWA: 20 ppm, 0 times per shift, 8 hours.</p> <p>NIOSH REL (United States, 10/2020). STEL: 545 mg/m³, 0 times per shift, 15 minutes. STEL: 125 ppm, 0 times per shift, 15 minutes. TWA: 435 mg/m³, 0 times per shift, 10 hours. TWA: 100 ppm, 0 times per shift, 10 hours.</p> <p>OSHA PEL (United States, 5/2018). TWA: 435 mg/m³, 0 times per shift, 8 hours. TWA: 100 ppm, 0 times per shift, 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). STEL: 545 mg/m³, 0 times per shift, 15 minutes. STEL: 125 ppm, 0 times per shift, 15 minutes. TWA: 435 mg/m³, 0 times per shift, 8 hours. TWA: 100 ppm, 0 times per shift, 8 hours.</p>

Consult local authorities for acceptable exposure limits.

If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

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.

[Individual protection measures](#)

Section 8. Exposure controls/personal protection

- 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** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.
- Hand protection** : Chemical-resistant gloves: Nitrile or Neoprene gloves.
- Skin protection** : Wear long sleeves to prevent repeated or prolonged skin contact.
- Respiratory protection** : If a risk assessment indicates it is necessary, use a properly fitted supplied air respirator complying with an approved standard. 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.

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** : Amber.
- Odor** : Aromatic. Alcohol-like.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial Boiling Point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Closed cup: 16°C (60.8°F) [SFCC]
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : Not available.
- Flammability** : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** : 49.6 kPa (372.3 mm Hg, 7.2 psig) @ 54.4°C, 130 F (Reid)
- Relative vapor density** : >1 [Air = 1]
- Relative density** : 0.891 (15.6°C)
- Density** : 7.43 (lbs/gal)
- Solubility in water** : Insoluble
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (16°C): 70.9 cP
- VOC** : Not available.
- Pour Point** : -40°C (-40°F)
- Particle characteristics**

Section 9. Physical and chemical properties

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. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials, reducing materials and acids.
Methanol and isopropanol are incompatible and may react with chromium trioxide, acetyl bromide, alkyl aluminum solutions, beryllium hydride, boron trichloride, nitric acid, cyanuric chloride, dichloromethane, diethylzinc, metals (granulated forms of aluminum and magnesium – including aluminum and zinc salts), phosphorus III oxide, and potassium tert-butoxide.

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	Species	Dose	Exposure
<input checked="" type="checkbox"/> Light aromatic naphtha 1,2,4-Trimethylbenzene	LD50 Oral	Rat	2900 mg/kg	-
	LC50 Inhalation Vapor	Rat	18000 mg/m ³	4 hours
	LD50 Oral	Rat	5 g/kg	-
1,3,5-Trimethylbenzene	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LD50 Oral	Rat	5000 mg/kg	-
Methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
Diethylene glycol monobutyl ether	LD50 Oral	Human	500 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
	LD50 Dermal	Rabbit	2700 mg/kg	-
Xylene	LD50 Oral	Rat	4500 mg/kg	-
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	29 mg/l	4 hours
	LD50 Dermal	Rabbit	20000 mg/kg	-
	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Male rat	3523 mg/kg	-
2-Ethylhexanol	LD50 Oral	Rat	3287 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	1.5 mg/l	4 hours
	LC50 Inhalation Vapor	Rat	0.89 mg/l	4 hours
	LD50 Dermal	Rabbit	1970 mg/kg	-
	LD50 Oral	Rat	2040 mg/kg	-
Isopropanol	LD50 Oral	Rat	2049 mg/kg	-
	LC50 Inhalation Vapor	Rat	>10000 ppm	6 hours

Section 11. Toxicological information

Cumene	LD50 Dermal	Rabbit	6.29 g/kg	-
	LD50 Oral	Rat	4700 mg/kg	-
	LC50 Inhalation Vapor	Mouse	10000 mg/m ³	7 hours
	LC50 Inhalation Vapor	Rat	39000 mg/m ³	4 hours
Ethylbenzene	LD50 Dermal	Rabbit	10600 mg/kg	-
	LD50 Oral	Rat	2.9 g/kg	-
	LD50 Dermal	Rabbit	15400 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

No available toxicity data.

Sensitization

No available toxicity data.

Mutagenicity

No available toxicity data.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Isopropanol	-	3	-
Cumene	-	2B	Reasonably anticipated to be a human carcinogen.
Ethylbenzene	-	2B	-

Reproductive toxicity

No available toxicity data.

Teratogenicity

No available toxicity data.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 3	-	Narcotic effects
1,2,4-Trimethylbenzene	Category 3	-	Respiratory tract irritation
1,3,5-Trimethylbenzene	Category 3	-	Respiratory tract irritation
Methanol	Category 1	oral	optic nerve
1,2,3-Trimethylbenzene	Category 3	-	Respiratory tract irritation
Xylene	Category 3	-	Narcotic effects
2-Ethylhexanol	Category 3	-	Respiratory tract irritation
Isopropanol	Category 3	-	Narcotic effects
Cumene	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

Section 11. Toxicological information

Name	Result
<input checked="" type="checkbox"/> Light aromatic naphtha <input checked="" type="checkbox"/> 1,2,3-Trimethylbenzene <input checked="" type="checkbox"/> Xylene <input checked="" type="checkbox"/> Cumene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes damage to organs following a single exposure in contact with skin. Causes skin irritation.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following: ,pain or irritation, watering, redness
- Inhalation** : respiratory tract irritation, coughing, nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness
- Skin contact** : irritation, redness
- Ingestion** : No specific data.

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.
- Potential delayed effects** : Not available.

Potential chronic health effects

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
FORSA™ PAO77 PARAFFIN DISPERSANT	1095.5	3857.5	136946.3	26.4	60.2
Light aromatic naphtha	2900	Not available.	Not available.	Not available.	Not available.
1,2,4-Trimethylbenzene	5000	Not available.	Not available.	18	Not available.
Oxyalkylated alkyl phenol	500	Not available.	Not available.	Not available.	Not available.
1,3,5-Trimethylbenzene	5000	Not available.	Not available.	24	Not available.
Methanol	100	300	64000	3	Not available.
Alkylaryl sulfonates	500	Not available.	Not available.	Not available.	Not available.
Diethylene glycol monobutyl ether	4500	2700	Not available.	Not available.	Not available.
Xylene	3287	1100	5000	29	Not available.
2-Ethylhexanol	2040	Not available.	Not available.	11	1.5
Isopropanol	4700	6290	Not available.	Not available.	Not available.
Cumene	2900	10600	Not available.	39	Not available.
Ethylbenzene	3500	15400	Not available.	11	Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
1,2,4-Trimethylbenzene	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pecteniscrus	48 hours
1,3,5-Trimethylbenzene	Acute LC50 22.4 mg/l Fresh water Acute LC50 12520 to 15050 µg/l Fresh water	Fish - Tilapia zillii Fish - Carassius auratus	96 hours 96 hours
Methanol	Chronic NOEC 400 µg/l Fresh water Acute EC50 16.912 mg/l Marine water Acute EC50 10000000 µg/l Fresh water Acute LC50 2500000 µg/l Marine water Acute LC50 100 mg/l Fresh water	Daphnia - Daphnia magna Algae - Ulva pertusa Daphnia - Daphnia magna Crustaceans - Crangon crangon Fish - Pimephales promelas	21 days 96 hours 48 hours 48 hours 96 hours
Diethylene glycol monobutyl ether	Chronic NOEC 9.96 mg/l Marine water Acute LC50 1300000 µg/l Fresh water	Algae - Ulva pertusa Fish - Lepomis macrochirus	96 hours 96 hours
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
2-Ethylhexanol	Acute LC50 13400 µg/l Fresh water Acute LC50 75 mg/dm3 Fresh water	Fish - Pimephales promelas Fish - Oncorhynchus mykiss	96 hours 96 hours
Isopropanol	Acute LC50 1400000 µg/l Marine water Acute LC50 1400000 µg/l	Crustaceans - Crangon crangon Fish - Gambusia affinis	48 hours 96 hours
Cumene	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours

Section 12. Ecological information

Ethylbenzene	Acute LC50 7400 to 11290 µg/l Fresh water	Crustaceans - Artemia sp.	48 hours
	Acute LC50 30500 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 2930 to 4400 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5200 µg/l Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 4200 µg/l Fresh water Chronic NOEC 1000 µg/l Fresh water	Fish - Oncorhynchus mykiss Algae - Pseudokirchneriella subcapitata	96 hours 96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> Light aromatic naphtha	-	10 to 2500	high
1,2,4-Trimethylbenzene	3.63	243	low
1,3,5-Trimethylbenzene	3.42	161	low
Methanol	-0.77	<10	low
Diethylene glycol monobutyl ether	1	-	low
1,2,3-Trimethylbenzene	3.66	194.98	low
Xylene	3.12	8.1 to 25.9	low
2-Ethylhexanol	2.9	25.33	low
Isopropanol	0.05	-	low
Cumene	3.55	94.69	low
Ethylbenzene	3.6	-	low

Mobility in soil








Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1993	UN1993	UN1993	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Contains: Methanol, Isopropanol)	FLAMMABLE LIQUID, N.O.S. (Contains: Methanol, Isopropanol)	FLAMMABLE LIQUID, N.O.S. (Contains: Methanol, Isopropanol)	FLAMMABLE LIQUID, N.O.S. (Contains: Methanol, Isopropanol)
Transport hazard class(es)	3  	3  	3  	3 
Packing group	II	II	II	II
Environmental hazards	Yes.	Yes.	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** 2738.9 lbs / 1243.5 kg [368.68 gal / 1395.6 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

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.

IMDG

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

IATA

: The environmentally hazardous substance mark may appear if required by other transportation regulations.

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.

DOT Reportable Quantity Methanol, 9924 gal of this product.
Xylene, 369 gal of this product.

Marine pollutant Light aromatic naphtha
1,2,4-Trimethylbenzene

North-America NAERG : 128

Section 15. Regulatory information

- U.S. Federal regulations** : TSCA 12(b) one-time export: No products were found.
 TSCA 12(b) annual export notification: No products were found.
 United States inventory (TSCA 8b): All components are active or exempted.
 Clean Water Act (CWA) 307: ethylbenzene; naphthalene
 Clean Water Act (CWA) 311: xylene; ethylbenzene; naphthalene

United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

List name	Status	Ingredient name	Name on list	Conc.
United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed	Methanol	Methanol	5 - 10
United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed	Diethylene glycol monobutyl ether	Glycol ethers	1 - 5
United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed	Xylene	Xylenes	1 - 5
United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed	Cumene	Cumene	0.1 - 1
United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed	Ethylbenzene	Ethyl benzene	0.1 - 1
United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed	Naphthalene	Naphthalene	0 - 0.1

SARA 302/304 : No products were found.


SARA 311/312

- Classification** : FLAMMABLE LIQUIDS - Category 2
 ACUTE TOXICITY (oral) - Category 4
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

SARA 313

	Product name	CAS number	%
Supplier notification	<input checked="" type="checkbox"/> 1,2,4-Trimethylbenzene	95-63-6	20 - 30
	Methanol	67-56-1	5 - 10
	Diethylene glycol monobutyl ether	112-34-5	1 - 5
	Xylene	1330-20-7	1 - 5
	Isopropanol	67-63-0	1 - 5
	Cumene	98-82-8	0.1 - 1
	Ethylbenzene	100-41-4	0.1 - 1

California Prop. 65

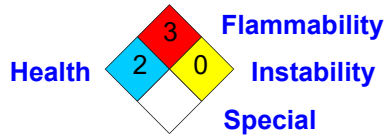
 **WARNING:** This product can expose you to chemicals including cumene, ethylbenzene and naphthalene, which are known to the State of California to cause cancer, and methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Canada

Canada (CEPA DSL): : All components are listed or exempted.

Section 16. Other information

[National Fire Protection Association \(U.S.A.\)](#)



[History](#)

Date of printing	: 1/19/2023
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods 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 UN = United Nations

✔ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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