



HYDRO-FORCE™

SAFETY DATA SHEET

Supersedes Date: 02 Dec 2021

Revision Date: 02 Dec 2021

Version: 1.0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Label Name Viper Aerosol Grout Sealer
Other means of identification
UPC Code(s) Not applicable
Product code 2687-2097
Synonyms Surface sealant protectant

Recommended use of the chemical and restrictions on use

Recommended Use Grout coating.
Uses advised against Follow label instructions. Not recommended for any use except intended use.

Supplier's details

| | |
|--------------------------|-----------------------------|
| Supplier Address | Manufacturer Address |
| Hydro-Force | AramSCO |
| 4282 South 590 West | 4282 South 590 West |
| Salt Lake City, UT 84123 | Salt Lake City, UT 84123 |
| USA | USA |

Emergency telephone number

Company Phone Number 1-800-658-5314
Company Emergency Phone Number United States: 1-800-535-5053 (INFOTRAC – 24 hours, 7 days a week)
International: 1-352-323-3500 (INFOTRAC – 24 hours, 7 days a week)
Emergency telephone Poison Control 1-800-222-1222 (24 hour)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Physical Hazards | |
|--|-------------------------------|
| Flammable Aerosol | Category 1 |
| Health Hazards | |
| Serious Eye Damage/Eye Irritation | Category 2A |
| Specific Target Organ Toxicity – Single Exposure | Category 3 (Narcotic effect.) |
| Aspiration Hazard | Category 1 |
| Environmental Hazards | |
| Acute hazards to the aquatic environment | Category 2 |
| Chronic hazards to the aquatic environment | Category 2 |

GHS Label elements, including precautionary statements

Emergency Overview

Danger

4. FIRST AID MEASURES

First aid measures for different exposure routes

| | |
|---|---|
| Inhalation | Move to fresh air |
| Eye contact | Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. |
| Skin contact | Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| Protection of First-aid Responders | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |

Most important symptoms/effects, acute and delayed

| | |
|----------------------|---------------------------|
| Main Symptoms | No information available. |
| Hazards | No information available. |

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

| | |
|------------------|--------------------------|
| Treatment | Symptoms may be delayed. |
|------------------|--------------------------|

5. FIRE-FIGHTING MEASURES

General Fire Hazards:

Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media Use fire-extinguishing media appropriate for surrounding materials. Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol-resistant foam

Unsuitable Extinguishing Media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapors may travel considerable distance to a source of ignition and flash back.

Protective Equipment and Precautions for Firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

| | |
|--|--|
| Personal precautions | Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep upwind. |
| Advice for emergency responders | For personal protection see section 8. |

Accidental release measures: Prevent entry into waterways, sewer, basements, or confined areas. Stop the flow of material if this is without risk. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk.

Environmental precautions

Environmental precautions Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

Methods and materials for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Absorb spill with vermiculite or other inert material, then place in a container for chemical waste

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.

Technical measures (e.g. local and general ventilation) No data available.

Contact avoidance measures No data available.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Store locked up. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Aerosol Level 3

Packaging material Keep product in packaging product is initially sold in.

Storage temperature No data available.

Incompatible products No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

| Chemical Name | Type | Exposure Limit Values | | Source |
|---|------|-----------------------|-----------------------|--|
| Naphtha (petroleum), hydrotreated light | REL | 100 ppm | 400 mg/m ³ | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | TWA | 100 ppm | 400 mg/m ³ | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | PEL | 100 ppm | 400 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| Acetic acid, methyl ester | REL | 200 ppm | 610 mg/m ³ | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | STEL | 250 ppm | 760 mg/m ³ | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | PEL | 200 ppm | 610 mg/m ³ | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | STEL | 250 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | TWA | 200 ppm | 610 mg/m ³ | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | STEL | 250 ppm | 760 mg/m ³ | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | TWA | 200 ppm | | US. ACGIH Threshold Limit Values, as amended. |

| | | | | |
|--------------------------|-----------|-----------|-------------|--|
| Propane | REL | 1,000 ppm | 1,800 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | PEL | 1,000 ppm | 1,800 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | TWA | 1,000 ppm | 1,800 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| Butane | REL | 800 ppm | 1,900 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | STEL | 1,000 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | TWA | 800 ppm | 1,900 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| Heptane | TWA | 400 ppm | 1,600 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | REL | 85 ppm | 350 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | PEL | 500 ppm | 2,000 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | STEL | 500 ppm | 2,000 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | TWA | 400 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | STEL | 500 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | Ceil Time | 440 ppm | 1,800 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| 2-Propanone | STEL | 1,000 ppm | 2,400 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | PEL | 1,000 ppm | 2,400 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | TWA | 250 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | TWA | 750 ppm | 1,800 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | STEL | 500 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | REL | 250 ppm | 590 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| Acetic acid, butyl ester | REL | 150 ppm | 710 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | STEL | 200 ppm | 950 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | TWA | 150 ppm | 710 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | PEL | 150 ppm | 710 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | TWA | 50 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | STEL | 200 ppm | 950 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | STEL | 150 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| Cyclohexane, methyl- | PEL | 500 ppm | 2,000 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | TWA | 400 ppm | 1,600 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | TWA | 400 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | REL | 400 ppm | 1,600 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| Methanol | STEL | 250 ppm | 325 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | TWA | 200 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | STEL | 250 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | STEL | 250 ppm | 325 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | REL | 200 ppm | 260 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | PEL | 200 ppm | 260 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | TWA | 200 ppm | 260 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| Benzene, methyl- | STEL | 150 ppm | 560 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | REL | 100 ppm | 375 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | TWA | 100 ppm | 375 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | Ceiling | 300 ppm | | US. OSHA Table Z-2 (29 CFR 1910.1000), as amended |
| | TWA | 20 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | TWA | 200 ppm | | US. OSHA Table Z-2 (29 CFR 1910.1000), as amended |
| | Max CONC | 500 ppm | | US. OSHA Table Z-2 (29 CFR 1910.1000), as amended |
| | STEL | 150 ppm | 560 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| Hexane | TWA | 50 ppm | 180 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | PEL | 500 ppm | 1,800 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | REL | 50 ppm | 180 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | TWA | 50 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| Cyclohexane | TWA | 100 ppm | | US. ACGIH Threshold Limit Values, as amended. |

| | | | | |
|-----------------|----------|---------|-------------|---|
| | TWA | 300 ppm | 1,050 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | REL | 300 ppm | 1,050 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | PEL | 300 ppm | 1,050 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| Benzene, ethyl- | STEL | 125 ppm | 545 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | REL | 100 ppm | 435 mg/m3 | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | PEL | 100 ppm | 435 mg/m3 | US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended. |
| | STEL | 125 ppm | 545 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | TWA | 100 ppm | 435 mg/m3 | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | TWA | 20 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| Benzene | REL | 0.1 ppm | | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |
| | TWA | 1 ppm | | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | Ceiling | 25 ppm | | US. OSHA Table Z-2 (29 CFR 1910.1000), as amended |
| | TWA | 0.5 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | STEL | 2.5 ppm | | US. ACGIH Threshold Limit Values, as amended. |
| | STEL | 5 ppm | | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended. |
| | OSHA ACT | 0.5 ppm | | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended. |
| | TWA | 10 ppm | | US. OSHA Table Z-2 (29 CFR 1910.1000), as amended |
| | Max CONC | 50 ppm | | US. OSHA Table Z-2 (29 CFR 1910.1000), as amended |
| | STEL | 5 ppm | | US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended. |
| | TWA | 1 ppm | | US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended. |
| | STEL | 1 ppm | | US. NIOSH: Pocket Guide to Chemical Hazards, as amended. |

Biological Exposure Values

| Chemical Name | Exposure Limit Values | Source |
|---|--------------------------------|-----------|
| 2-Propanone (acetone: Sampling time: End of shift.) | 25 mg/L (Urine) | ACGIH BEL |
| Methanol (methanol: Sampling time: End of shift.) | 15 mg/L (Urine) | ACGIH BEL |
| Benzene, methyl- (toluene: Sampling time: End of shift.) | 0.03 mg/L (Urine) | ACGIH BEL |
| Benzene, methyl- (o-Cresol, with hydrolysis: Sampling time: End of shift.) | 0.3 mg/g (Creatinine in urine) | ACGIH BEL |
| Benzene, methyl- (toluene: Sampling time: Prior to last shift of work week.) | 0.02 mg/L (Blood) | ACGIH BEL |
| Benzene, ethyl- (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.) | 0.15 g/g (Creatinine in urine) | ACGIH BEL |
| Hexane (2,5-Hexanedion, without hydrolysis: Sampling time: End of shift.) | 0.5 mg/L (Urine) | ACGIH BEL |
| Benzene (S-Phenylmercapturic acid: Sampling time: End of shift.) | 25 µg/g (Creatinine in urine) | ACGIH BEL |
| Benzene (t,t-Muconic acid: Sampling time: End of shift.) | 500 µg/g (Creatinine in urine) | ACGIH BEL |

Exposure Guidelines

| | | |
|-----------|---|-----------------------------------|
| Menthanol | US. ACGIH Threshold Limit Values, as amended. | Can be absorbed through the skin. |
| Hexane | US. ACGIH Threshold Limit Values, as amended. | Can be absorbed through the skin. |
| Benzene | US. ACGIH Threshold Limit Values, as amended. | Can be absorbed through the skin. |

Appropriate engineering controls No data available.

Individual protection measures, such as personal protective equipment

- Eye/Face Protection** Wear safety glasses with side shields (or goggles).
- Skin and body protection** Wear suitable protective clothing.
- Respiratory protection** In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures Observe good industrial hygiene practices. Avoid contact with eyes. When using do not smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

| | | | |
|---|--|-------------------------|--------------------|
| Physical state | Liquid | Odor | No data available. |
| Appearance | Spray Aerosol | Odor threshold | No data available. |
| Color | No data available. | | |
| Property | Values | Remarks • Method | |
| pH | No data available. | 9.9 | |
| Melting point | No data available. | | |
| Boiling point/boiling range | No data available. | | |
| Flash Point | Estimated 104 °C / 219 °F | | |
| Evaporation rate | No data available. | | |
| Flammability (solid, gas) | No data available. | | |
| Flammability Limits in Air | | | |
| Upper Flammability Limit | Estimated 9.5% (V) | | |
| Lower Flammability Limit | Estimated 1.9% (V) | | |
| Vapor pressure | 1,172 - 2,551 hPa (20 °C) 3,998 – 5,377 hPa (54 °C) | | |
| Vapor density | No data available. | | |
| Specific Gravity | No data available. | | |
| Water solubility | No data available. | | |
| Solubility in other solvents | No data available. | | |
| Partition coefficient: n-octanol/water | No data available. | | |
| Autoignition temperature | No data available. | No data available. | |
| Decomposition temperature | No data available. | | |
| Viscosity, kinematic | No data available. | 20 cps | |
| Viscosity, dynamic | No data available. | | |
| Explosive properties | No data available. | | |
| Oxidizing Properties | No data available. | | |

10. STABILITY AND REACTIVITY

| | |
|--|--|
| <u>Reactivity</u> | No data available. |
| <u>Chemical stability</u> | Stable under recommended storage conditions. |
| <u>Possibility of hazardous reactions</u> | No data available. |
| <u>Conditions to Avoid</u> | Avoid heat or contamination. |
| <u>Incompatible Materials</u> | No data available. |
| <u>Hazardous Decomposition Products</u> | No data available. |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| | |
|---------------------|--------------------|
| Inhalation | No data available. |
| Eye contact | No data available. |
| Skin contact | No data available. |
| Ingestion | No data available. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|---------------------|--------------------|
| Inhalation | No data available. |
| Eye contact | No data available. |
| Skin contact | No data available. |
| Ingestion | No data available. |

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

| | |
|---------------------------|---|
| Oral Product | Not classified for acute toxicity based on available data. |
| Dermal Product | ATEmix: 3,835.9 mg/kg |
| Inhalation Product | ATEmix: 136.15 mg/L vapor; 25.95 mg/L dusts, mists, and fumes |

Repeated dose toxicity Product

No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | NOAEL (Rat(Female, Male), Inhalation): 10,000 mg/m ³ Inhalation Experimental result, Key study LOAEL (Rat(Female, Male), Oral, 13 Weeks): 1,250 mg/kg Oral Read across based on grouping of substances (category approach), Key study NOAEL (Rat(Female, Male), Dermal, 28 d): > 375 mg/kg Dermal Experimental result, Supporting study |
| Acetic acid, methyl ester | NOAEL (Rat(Female, Male), Inhalation, 28 d): 350 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation, 28 d): 2,000 ppm(m) Inhalation Experimental result, Key study |
| Propane | NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study |
| Butane | LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study |
| Heptane | NOAEL (Rat(Male), Inhalation): 12,470 mg/m ³ Inhalation Experimental result, Key study |
| 2-Propanone | NOAEL (Rat(Male), Oral, 13 Weeks): 10,000 ppm(m) Oral Experimental result, Key study |
| Acetic acid, butyl ester | NOAEL (Rat(Female, Male), Inhalation, 13 Weeks): 500 ppm(m) Inhalation Experimental result, Key study |

Skin Corrosion/Irritation Product

No data available.

Components

| | |
|---|---------------------------------|
| Naphtha (petroleum), hydrotreated light | In vitro (Human): not corrosive |
| Acetic acid, methyl ester | In vivo (Rabbit): Not irritant |
| Heptane | In vivo (Rabbit): Irritant |
| 2-Propanone | In vivo (Rabbit): Not irritant |
| Acetic acid, butyl ester | In vivo (Rabbit): Not irritant |

Serious Eye Damage/Irritation Product

No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | Rabbit, 24 - 72 hrs: Not irritating |
| Acetic acid, methyl ester | Rabbit: Irritating |
| Heptane | Rabbit, 24 - 72 hrs: Not irritating |
| 2-Propanone | Irritating. Rabbit, 24 hrs: Minimum grade of severe eye irritant |
| Acetic acid, butyl ester | Rabbit, 24 - 72 hrs: Not irritating |

Respiratory or Skin Sensitization

Product No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | Skin sensitization:, in vivo (Guinea pig): Non sensitizing |
| Heptane | Skin sensitization:, in vivo (Guinea pig): Non sensitizing |
| 2-Propanone | Skin sensitization:, in vivo (Guinea pig): Non sensitizing |
| Acetic acid, butyl ester | Skin sensitization:, in vivo (Guinea pig): Non sensitizing |

Carcinogenicity

Product No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No carcinogenic components identified.

US. National Toxicology Program (NTP) Report on Carcinogens

No carcinogenic components identified.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogenic components identified.

Germ Cell Mutagenicity

In vitro

Product No data available.

In vivo

Product No data available.

Reproductive Toxicity

Product No data available.

Specific Target Organ Toxicity - Single Exposure

Product No data available.

Components

| | |
|--------------------------|--|
| Heptane | Narcotic effect. - Category 3 with narcotic effects. |
| 2-Propanone | Inhalation - vapor: Narcotic effect. - Category 3 with narcotic effects. |
| Acetic acid, butyl ester | Inhalation - vapor Inhalation - dust and mist Inhalation - gas: Narcotic effect., Nervous System - Category 3 with narcotic effects. |

Specific Target Organ Toxicity - Repeated Exposure

Product No data available.

Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect

Aspiration Hazard

Product No data available.

Components

| | |
|---|---|
| Naphtha (petroleum), hydrotreated light | May be fatal if swallowed and enters airways. |
| Heptane | May be fatal if swallowed and enters airways. |

Other Effects

No data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Acute hazards to the aquatic environment

Fish

Product No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | LC 50 (96 h): 8.41 mg/L Experimental result, Key study |
| Acetic acid, methyl ester | LC 50 (Fathead minnow (Pimephales promelas), 96 h): 295 - 348 mg/L Mortality LC 50 (Danio rerio, 48 h): 250 - 350 mg/L Experimental result, Key study |
| Propane | LC 50 (Various, 96 h): 147.54 mg/L QSAR QSAR, Key study |
| Butane | LC 50 (Various, 96 h): 147.54 mg/L QSAR QSAR, Key study |
| 2-Propanone | LC 50 (Oncorhynchus mykiss, 96 h): 5,540 mg/L Experimental result, Key study |
| Acetic acid, butyl ester | LC 50 (Menidia beryllina, 96 h): 185 mg/L Experimental result, Not specified |

Aquatic Invertebrates

Product No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | EC 50 (Daphnia magna, 48 h): 4.5 mg/L Experimental result, Key study |
| Acetic acid, methyl ester | EC 50 (Daphnia magna, 48 h): 1,026.7 mg/L Experimental result, Key study |
| Butane | LC 50 (Daphnia sp., 48 h): 69.43 mg/L QSAR QSAR, Key study |
| 2-Propanone | LC 50 (Daphnia pulex, 48 h): 8,800 mg/L Experimental result, Key study |

Chronic hazards to the aquatic environment

Fish

Product No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | NOAEL (Daphnia magna): 2.6 mg/L Other, Key study |
|---|--|

Aquatic Invertebrates

Product No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | EC 50 (Daphnia magna): 10 mg/L Experimental result, Key study |
| 2-Propanone | LOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study NOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study |

Toxicity to Aquatic Plants

Product No data available.

Persistence and Degradability

Biodegradation

Product No data available.

Components

| | |
|---|--|
| Naphtha (petroleum), hydrotreated light | 95 % (10 d) The 10-day window requirement is fulfilled. 90.35 % (28 d) Detected in water. Experimental result, Supporting study |
| Acetic acid, methyl ester | 70 % Detected in water. Experimental result, Key study |
| Propane | 100 % (385.5 h) Detected in water. Experimental result, Key study 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study |
| Butane | 100 % (385.5 h) Detected in water. Experimental result, Key study |
| 2-Propanone | 90.9 % (28 d) Detected in water. Experimental result, Key study |
| Acetic acid, butyl ester | 83 % Detected in water. Experimental result, Not specified |

BOD/COD Ratio

Product No data available.

Bioaccumulative Potential**Bioconcentration Factor (BCF)****Product** No data available.**Components**

| | |
|---|---|
| Naphtha (petroleum), hydrotreated light | Bioconcentration Factor (BCF): 10 - 2,500 Aquatic sediment Estimated by calculation, Key study |
| Propane | Haddock, adult, Bioconcentration Factor (BCF): 0.69 Aquatic sediment Experimental result, Not specified |
| Acetic acid, butyl ester | Bioconcentration Factor (BCF): 15.3 Aquatic sediment Estimated by calculation, Supporting study |

Partition Coefficient n-octanol / water (log Kow)**Product** No data available.**Components**

| | |
|---|---|
| Naphtha (petroleum), hydrotreated light | Log Kow: > 2.4 - < 5.7 23 °C Yes Experimental result, Key study |
|---|---|

Mobility in Soil**Product** No data available.**Components**

| | |
|--|--------------------|
| Naphtha (petroleum), hydrotreated light | No data available. |
| Acetic acid, methyl ester | No data available. |
| Propane | No data available. |
| Butane | No data available. |
| Heptane | No data available. |
| 2-Propanone | No data available. |
| Acetic acid, butyl ester | No data available. |
| Poly(Hexadecyl Acrylate/2- Hydroxyethyl Methacrylate/Octadecyl Acrylate/3,3,4,4,5,5,6,6,7,7,8,8,8- Tridecafluorooctyl Methacrylate | No data available. |

Other Adverse Effects

Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS**Waste treatment****Waste Disposal Methods**

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Contaminated Packaging

No data available.

14. TRANSPORT INFORMATION**DOT**

UN/ID No UN1950
 Proper shipping name Aerosols, flammable
 Hazard class 2.1
 Packing Group –
 Special Provisions None known.

IMDG

UN/ID No UN1950
 Proper shipping name Aerosols, flammable
 Hazard class 2.1
 Packing Group –
 EmS No. F-D, S-U
 Special Provisions None known.

IATA

| | |
|-------------------------------------|---------------------|
| UN/ID No | UN1950 |
| Proper shipping name | Aerosols, flammable |
| Hazard class | 2.1 |
| Packing Group | – |
| Special Provisions | None known. |
| Passenger and cargo aircraft | Allowed. 203 |
| Cargo aircraft only | Allowed. 203 |

The classification shown in this section may be eligible for use of an exception, such as "Limited Quantity", per the dangerous goods regulations. The shipper of this product should consult the applicable mode's regulation for the UN number displayed above to determine if any exceptions are available and may be utilized, at the shipper's discretion.

15. REGULATORY INFORMATION

US Federal Regulations

Restrictions on use None known.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

| Chemical Identity | OSHA Hazard(s) |
|-------------------|--|
| Benzene | Flammability, Cancer, Aspiration, Eye, Blood, Skin, Respiratory Tract Irritation, Central Nervous System |

CERCLA Hazardous Substance List (40 CFR 302.4)

| Chemical Identity |
|--|
| Acetic acid, methyl ester |
| UNLISTED HAZARDOUS WASTES CHARACTERISTIC OF IGNITABILITY |
| RCRA HAZARDOUS WASTE NO. D001 |
| 2-Propanone |
| ACETONE |
| BUTYL ACETATE |
| METHANOL |
| METHYL ALCOHOL |
| BENZENE, METHYL-HEXANE |
| Hexane |
| CYCLOHEXANE |
| BENZENE, HEXAHYDRO-ETHYLBENZENE |
| BENZENE |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories

Flammable (gases, aerosols, liquids, or solids), Serious eye damage or eye irritation, Specific target organ toxicity (single or repeated exposure), Aspiration Hazard

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

US State Regulations

US. California Proposition 65



WARNING: This product can expose you to chemicals including, Benzene which is [are] known to the State of California to cause cancer and birth defects or other reproductive harm.
 This product can expose you to chemicals including, Benzene, ethyl which is [are] known to the State of California to cause cancer.
 This product can expose you to chemicals including, Methano, lBenzene, methyl-, Hexane which is [are] known to the State of California to cause birth defects or other reproductive harm.
 For more information go to www.P65Warnings.ca.gov.

US. New Jersey Worker and Community Right-to-Know Act

| |
|---|
| Chemical Identity |
| Naphtha (petroleum), hydrotreated light |
| Acetic acid, methyl ester |
| Propane |
| Butane |
| Heptane |
| 2-Propanone |
| Acetic acid, butyl ester |

US. Massachusetts RTK - Substance List

| |
|---|
| Chemical Identity |
| Naphtha (petroleum), hydrotreated light |

US. Pennsylvania RTK - Hazardous Substances

| |
|---|
| Chemical Identity |
| Naphtha (petroleum), hydrotreated light |
| Acetic acid, methyl ester |
| Propane |
| Butane |
| Heptane |
| 2-Propanone |
| Acetic acid, butyl ester |

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal Protocol

| |
|---------------------------|
| Acetic acid, methyl ester |
| 2-Propanone |

Stockholm Convention

| |
|---------------------------|
| Acetic acid, methyl ester |
| 2-Propanone |

Rotterdam Convention

| |
|---------------------------|
| Acetic acid, methyl ester |
| 2-Propanone |

Kyoto Protocol

Inventory Status

| | |
|---------------------------|---------------------------------------|
| Australia AICS | Not in compliance with the inventory. |
| Canada DSL Inventory List | Not in compliance with the inventory. |

| | |
|---|---------------------------------------|
| Canada NDSL Inventory | Not in compliance with the inventory. |
| Ontario Inventory | Not in compliance with the inventory. |
| China Inv. Existing Chemical Substances | Not in compliance with the inventory. |
| Japan (ENCS) List | Not in compliance with the inventory. |
| Japan ISHL Listing | Not in compliance with the inventory. |
| Japan Pharmacopoeia Listing | Not in compliance with the inventory. |
| Korea Existing Chemicals Inv. (KECI) | Not in compliance with the inventory. |
| Mexico INSQ | Not in compliance with the inventory. |
| New Zealand Inventory of Chemicals | Not in compliance with the inventory. |
| Philippines PICCS | Not in compliance with the inventory. |
| Taiwan Chemical Substance Inventory | Not in compliance with the inventory. |
| US TSCA Inventory | Not in compliance with the inventory. |
| EINECS, ELINCS or NLP | Not in compliance with the inventory. |

16. OTHER INFORMATION

| | | | | |
|-------------|-----------------|----------------|-------------------|---------------------------------|
| NFPA | Health hazard 2 | Flammability 2 | Instability 0 | Physical and chemical hazards – |
| HMIS | Health hazard 2 | Flammability 2 | Physical Hazard 0 | Personal protection X |

Prepared By Aramsco
 Environmental Health & Safety
 Revision Date 02 Dec 2021
 Revision Note

Disclaimer
 The (M)SDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Bridgewater LLC to be dependable and is accurate to the best of the Company’s knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

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End of Material Safety Data Sheet