

SAFETY DATA SHEET



SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : Advance+

Date of issue/ Date of revision : 20/01/2023

Date of previous issue : No previous validation

Version : 1

Product description : Mixture

Product type : Liquid.

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

Identified uses

Industrial applications: Fuel additive.

1.3 Details of the supplier of the safety data sheet

Supplier : Valiantech Sdn Bhd
Lot 10 & 12, Jalan PJU 3/39,
Kompleks Kilang SME Bank,
Sunway Damansara, 47810
Petaling Jaya, Selangor.

Telephone no.: : +6017-6881148

**e-mail address of person
responsible for this SDS** : admin@valiantech.com.my

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315
Eye Irrit. 2, H319
Carc. 2, H351
STOT SE 3, H336
Asp. Tox. 1, H304
Aquatic Chronic 2, H411

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H351 - Suspected of causing cancer.
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

Supplemental label elements : Not applicable.

Precautionary statements

General : Not applicable.

Prevention : P201 - Obtain special instructions before use.
P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.
P273 - Avoid release to the environment.

Response : P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

SECTION 2: Hazards identification

- Storage** : P405 - Store locked up.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazardous ingredients** : Solvent naphtha (petroleum), heavy arom.; naphthalene

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

| Product/ingredient name | Identifiers | % | Classification | |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| | | | Regulation (EC) No. 1272/2008 [CLP] | Type |
| Solvent naphtha (petroleum), heavy arom. | REACH #: 01-2119463588-24, EC: 265-198-5 CAS: 64742-94-5 | ≥25 - ≤50 | STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066 | [1] [2] |
| Amides, C16-18 and C18-unsatd., N,N-bis(hydroxyethyl) | REACH #: 01-2119951823-33 EC: 271-653-9 CAS: 68603-38-3 | ≥10 - ≤25 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411 | [1] |
| Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics [Distillates (petroleum), hydrotreated light] | REACH #: 01-2119456620-43 EC: 265-149-8 [926-141-6] CAS: 64742-47-8 [1174522-15-6] Index: 649-422-00-2 | <10 | Asp. Tox. 1, H304 EUH066 | [1] [2] |
| naphthalene | REACH #: Compliant EC: 202-049-5 CAS: 91-20-3 Index: 601-052-00-2 | ≤5 | Acute Tox. 4, H302 Carc. 2, H351 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) | [1] [2] |
| Camphor | REACH #: Compliant EC: 200-945-0 CAS: 76-22-2 | ≤3 | Flam. Sol. 2, H228 Acute Tox. 4, H302 Acute Tox. 4, H332 STOT SE 2, H371 See Section 16 for the full text of the H statements declared above. | [1] [2] |

SECTION 4: First aid measures

4.1 Description of 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. 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Remove dentures if any. Wash out mouth with water. Stop if the exposed person feels sick as vomiting may be dangerous. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
- 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.

4.2 Most important symptoms and effects, both 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.
- Skin contact** : Causes skin irritation.
- 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:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 4: First aid measures

- 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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. 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
nitrogen oxides

5.3 Advice for firefighters

- 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.

SECTION 6: Accidental release measures

6.1 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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

6.2 Environmental precautions

- : Avoid dispersal of spilt 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.

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. 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. Approach the 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment. 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 swallow. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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.

7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|-------------------------------------------------------|------|----------------------|-----------------------|------------|----------|
| Solvent naphtha (petroleum), heavy arom. | DNEL | Long term Dermal | 12.5 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 151 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 7.5 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Inhalation | 32 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Oral | 7.5 mg/kg bw/day | Consumers | Systemic |
| Amides, C16-18 and C18-unsatd., N,N-bis(hydroxyethyl) | DNEL | Long term Inhalation | 73 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 4.16 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 21.73 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Dermal | 2.5 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Oral | 6.25 mg/kg bw/day | Consumers | Systemic |
| naphthalene | DNEL | Long term Dermal | 3.57 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 25 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 25 mg/m ³ | Workers | Local |

SECTION 8: Exposure controls/personal protection

PNECs

| Product/ingredient name | Type | Compartment Detail | Value | Method Detail |
|-----------------------------------------------------------------------------|------|------------------------|------------------|---------------|
| Amides, C16-18 and C18-unsatd., N,N-bis(hydroxyethyl) naphthalene | - | Fresh water | 0.007 mg/l | - |
| | - | Fresh water sediment | 0.973 mg/kg dwt | - |
| | - | Marine water | 0.0007 mg/l | - |
| | - | Marine water sediment | 0.0973 mg/kg dwt | - |
| | - | Sewage Treatment Plant | 830000 mg/l | - |
| | - | Soil | 0.038 mg/kg dwt | - |
| | PNEC | Fresh water | 2.4 µg/l | - |
| | PNEC | Marine | 0.24 µg/l | - |
| | PNEC | Sewage Treatment Plant | 2.9 mg/l | - |
| | PNEC | Fresh water sediment | 67.2 µg/kg dwt | - |
| | PNEC | Marine water sediment | 67.2 µg/kg dwt | - |
| | PNEC | Soil | 53.3 µg/kg dwt | - |

8.2 Exposure controls

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.

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.

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.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical state | : Liquid. |
| Colour | : Amber. |
| Odour | : Aromatic. |
| Odour threshold | : Not available. |
| pH | : Not available. |
| Melting point/freezing point | : Not available. |
| Initial boiling point and boiling range | : Lowest known value: 178 to 215°C (352.4 to 419°F)(Solvent naphtha (petroleum), heavy arom.). Weighted average: 209.03°C (408.3°F) |
| Flash point | : Closed cup: 69°C (156.2°F) |
| Evaporation rate | : 600 (Distillates (petroleum), hydrotreated light) compared with ether (anhydrous) |
| Flammability (solid, gas) | : Not available. |
| Burning time | : Not applicable. |
| Burning rate | : Not applicable. |
| Upper/lower flammability or explosive limits | : Greatest known range: Lower: 0.5% Upper: 8% (Distillates (petroleum), hydrotreated light) |
| Vapour pressure | : Highest known value: 0.1 kPa (0.8 mm Hg) (at 20°C) (Solvent naphtha (petroleum), heavy arom.). Weighted average: 0.07 kPa (0.53 mm Hg) (at 20°C) |
| Vapour density | : Highest known value: >10 (Air = 1) (alcohols, c12-14, propoxylated). Weighted average: 5.94 (Air = 1) |
| Relative density | : Not available. |
| Density | : 0.9088 g/cm ³ [15°C (59°F)] |
| Solubility(ies) | : Insoluble in the following materials: cold water, hot water, methanol, diethyl ether. |
| Partition coefficient: n-octanol/ water | : Not available. |
| Auto-ignition temperature | : Lowest known value: >230°C (>446°F) (Distillates (petroleum), hydrotreated light). |
| Decomposition temperature | : Not available. |
| Viscosity | : Kinematic (40°C (104°F)): 0.1528 cm ² /s (15.28 cSt) |
| Explosive properties | : Not available. |
| Oxidising properties | : Not available. |

9.2 Other information

SECTION 10: Stability and reactivity

| | |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------|
| 10.1 Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | : The product is stable. |
| 10.3 Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| 10.4 Conditions to avoid | : No specific data. |
| 10.5 Incompatible materials | : No specific data. |
| 10.6 Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Test | Species | Result type | Dose |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------|---------|------------------------------|---------------------------|
| Solvent naphtha (petroleum), heavy arom. | - | Rat | LC50 Inhalation Vapour | >590 mg/m ³ - |
| | - | Rabbit | LD50 Dermal | >2 mL/kg - |
| | - | Rabbit | LD50 Dermal | 2000 mg/kg - |
| | - | Rat | LDLo Oral | 5 mL/kg - |
| Amides, C16-18 and C18-unsatd., N,N-bis (hydroxyethyl) | OECD 401 Acute Oral Toxicity | Rat | LD50 Oral | >3000 mg/kg - |
| | OECD 403 Acute Inhalation Toxicity | Rat | LC50 Inhalation Vapour | >5000 mg/m ³ - |
| Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics [Distillates (petroleum), hydrotreated light] | OECD 402 Acute Dermal Toxicity | Rabbit | LD50 Dermal | >5000 mg/kg - |
| | OECD 401 Acute Oral Toxicity | Rat | LD50 Oral | >5000 mg/kg - |
| | - | Rat | LC50 Inhalation Vapour | >340 mg/m ³ - |
| naphthalene | - | Rabbit | LD50 Dermal | >2000 mg/kg - |
| | - | Rat | LD50 Oral | 490 mg/kg - |
| Camphor | OECD 402 Acute Dermal Toxicity | Rat | LD50 Dermal | >2000 mg/kg - |
| | - | Mouse | LD50 Oral | 1310 mg/kg - |

Acute toxicity estimates (ATE)

| Route | ATE value |
|----------------------|--------------|
| Oral | 9392.2 mg/kg |
| Inhalation (vapours) | 710.1 mg/l |

Irritation/Corrosion

| Product/ingredient name | Test | Species | Result |
|--------------------------------------------------------|------|------------------------------|------------------------------|
| Solvent naphtha (petroleum), heavy arom. | - | Rabbit | Skin - Mild irritant - - |
| | - | Mammal - species unspecified | Eyes - Mild irritant - - |
| Amides, C16-18 and C18-unsatd., N,N-bis (hydroxyethyl) | - | Rabbit | Skin - Moderate irritant - - |
| | - | Rabbit | Eyes - Moderate irritant - - |

Sensitisation

| Product/ingredient name | Test | Species | Result |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------|------------|-------------------|
| Amides, C16-18 and C18-unsatd., N,N-bis (hydroxyethyl) | OECD 406 Skin Sensitization | Guinea pig | Not sensitizing - |
| Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics [Distillates (petroleum), hydrotreated light] | - | Rat | Not sensitizing - |

Mutagenicity

SECTION 11: Toxicological information

| Product/ingredient name | Test | Experiment | Result |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------|------------|
| Amides, C16-18 and C18-unsatd., N,N-bis (hydroxyethyl) | OECD 471 Bacterial Reverse Mutation Test | Experiment: In vitro Subject: Bacteria | Negative - |
| | OECD | Experiment: In vitro Subject: Mammalian-Animal | Negative - |
| Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics [Distillates (petroleum), hydrotreated light] | - | Experiment: In vivo Subject: Bacteria | Negative - |

Information on 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.
- Skin contact** : Causes skin irritation.
- 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:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects as well as 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.

- 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.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.

SECTION 11: Toxicological information

Fertility effects : No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Test | Species | Exposure | Result |
|--------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------|----------|-----------------------------------------|
| Solvent naphtha (petroleum), heavy arom. | - | Algae | 72 hours | Acute EC50 1 to 3 mg/l |
| | - | Daphnia | 48 hours | Acute EC50 3 to 10 mg/l |
| | - | Fish | 96 hours | Acute LC50 2 to 5 mg/l |
| Amides, C16-18 and C18-unsatd., N,N-bis (hydroxyethyl) | OECD 202 Daphnia sp. Acute Immobilisation Test | Daphnia | 48 hours | Acute EC50 1 to 10 mg/l |
| | OECD 203 Fish, Acute Toxicity Test | Fish - Trout - Oncorhynchus mykiss | 96 hours | Acute LC50 1 to 10 mg/l |
| | OECD 211 Daphnia Magna Reproduction Test | Daphnia | 21 days | Chronic NOEC 0.01 to 0.1 mg/l |
| naphthalene | - | Daphnia - Water flea - Daphnia magna | 48 hours | Acute EC50 1.96 mg/l |
| | - | Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio | 48 hours | Fresh water Acute LC50 2350 µg/l |
| | - | Fish - Oncorhynchus mykiss | 96 hours | Acute LC50 1.6 mg/l |
| | - | Crustaceans - Fiddler crab - Uca pugnax - Adult | 3 weeks | Chronic NOEC 0.5 mg/l I Marine water |
| | - | Fish - Mozambique tilapia - Oreochromis mossambicus | 60 days | Chronic NOEC 1.5 mg/l I Fresh water |

12.2 Persistence and degradability

| Product/ingredient name | Test | Result |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------|
| Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics [Distillates (petroleum), hydrotreated light] | OECD 301F Ready Biodegradability - Manometric Respirometry Test | 69 % - Readily - 28 days |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------------------------------------------------------------------------------------------------|-------------------|------------|------------------|
| Solvent naphtha (petroleum), heavy arom. | - | - | Inherent |
| Amides, C16-18 and C18-unsatd., N,N-bis (hydroxyethyl) | - | - | Readily |
| Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics [Distillates (petroleum), hydrotreated light] | - | - | Readily |

12.3 Bioaccumulative potential

SECTION 12: Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------------------------------------------------------------------------------------------------|--------------------|------|-----------|
| Solvent naphtha (petroleum), heavy arom. | - | <100 | low |
| Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, <2% aromatics [Distillates (petroleum), hydrotreated light] | 6 to 8 | - | high |
| naphthalene | 3.3 | >100 | low |

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised 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.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging





Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : 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. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|----------------|---------|--------|--------|--------|
| 14.1 UN number | UN3082 | UN3082 | UN3082 | UN3082 |

SECTION 14: Transport information

| | | | | |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 14.2 UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom., Fatty amide derivative.) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom., Fatty amide derivative.) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy arom., Fatty amide derivative.). Marine pollutant (Solvent naphtha (petroleum), heavy arom., Fatty amide derivative.) | Environmentally hazardous substance, liquid, n.o.s. (Solvent naphtha (petroleum), heavy arom., Fatty amide derivative.) |
| 14.3 Transport hazard class(es) | 9  | 9  | 9  | 9  |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. |
| Additional information | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. Hazard identification number 90 Limited quantity 5 L Special provisions 274, 335, 601, 375 | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. Special provisions 274, 335, 375, 601 | This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. Emergency schedules F-A, S-F Special provisions 274, 335, 969 | |

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances of very high concern

None of the components are listed.

**Industrial emissions
(integrated pollution
prevention and control) -
Air** : Not listed

**Industrial emissions
(integrated pollution
prevention and control) -
Water** : Not listed

| Product/ingredient name | Carcinogenic effects | Mutagenic effects | Developmental effects | Fertility effects |
|-------------------------|----------------------|-------------------|-----------------------|-------------------|
| naphthalene | Carc. 2, H351 | - | - | - |

**Chemical Weapons
Convention List Schedule I
Chemicals** : Not listed

**Chemical Weapons
Convention List Schedule II
Chemicals** : Not listed

**Chemical Weapons
Convention List Schedule III
Chemicals** : Not listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|-------------------------|--------------------|
| Skin Irrit. 2, H315 | Calculation method |
| Eye Irrit. 2, H319 | Calculation method |
| Carc. 2, H351 | Calculation method |
| STOT SE 3, H336 | Calculation method |
| Asp. Tox. 1, H304 | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

Full text of abbreviated H statements

: H228 Flammable solid.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H371 May cause damage to organs.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

: Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4
Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4
Aquatic Acute 1, H400 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1, H410 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2, H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1

SECTION 16: Other information

| | |
|---------------------|----------------------------------------------------------------------------------|
| Carc. 2, H351 | CARCINOGENICITY - Category 2 |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| Eye Irrit. 2, H319 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
| Flam. Sol. 2, H228 | FLAMMABLE SOLIDS - Category 2 |
| Skin Irrit. 2, H315 | SKIN CORROSION/IRRITATION - Category 2 |
| STOT SE 2, H371 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 2 |
| STOT SE 3, H336 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3 |

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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.