

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : IN FORCE OW THERM X

1.2. Recommended use and restrictions on use

Recommended use : Wetting Agent, Specialty Surfactant, Corrosion Inhibitor
 Restrictions on use : None known

1.3. Supplier

Valence Drilling Fluids, LLC
 2575 Kelley Pointe, Parkway Suite 120
 Edmond, OK 73013
 Phone: 405.285.6454

1.4. Emergency telephone number

Emergency number : CHEMTREC (7 days a week, 24 hours a day) (800) 424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 4	H227	Combustible liquid and vapor
Asp Hazard, 1	H304	May be fatal if swallowed and enters airways
Skin Corr. 2	H315	Causes severe skin burns and eye damage
STOT, 3	H335	May cause respiratory irritation
STOT, 3	H336	May cause drowsiness or dizziness
Carc. 2	H351	Suspected of causing cancer
Aquatic Acute, 3	H402	Harmful to aquatic life

Full text of hazard classes and H-statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :

- H227 - Combustible liquid and vapour
- H304 - May be fatal if swallowed and enters airways
- H315 - Causes severe skin burns and eye damage
- H335 - May cause respiratory irritation
- H336 - May cause drowsiness or dizziness
- H351 - Suspected of causing cancer
- H402 - Harmful to aquatic life

Precautionary statements (GHS-US) :

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233 - Keep container tightly closed.
- P234 - Keep only in original container.

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P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P302+P352 - If on skin: Wash with plenty of water
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention.
P310 - Immediately call a poison center or doctor
P321 - Specific treatment (see supplemental first aid instruction on this label)
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
P390 - Absorb spillage to prevent material-damage.
P391 - Collect spillage.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Solvent naphtha, petroleum, heavy aromatic	(CAS-No.) 68476-34-6	50 - 75	Flam. Liq. 4, H227 Asp ,1, H304 Skin Irrit. 2, H315 STOT, 3, H335 STOT, 3, H336 Carc. 2, H351 Aquatic Acute 3, H402
Fatty acids, tall-oil, reaction products with diethylenetriamine	(CAS-No.) 61790-69-0	25 - 50	Skin Irrit. 2, H315 Eye Irrit. 2, H319

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

Full text of hazard classes and H-statements : see section 16

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SECTION 4: First-aid measures

4.1. Description of first aid measures

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| First-aid measures general | : If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. |
| First-aid measures after ingestion | : Rinse mouth. Do not induce vomiting. Call a physician immediately. |

4.2. Most important symptoms and effects (acute and delayed)

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|-------------------------------------|---|
| Symptoms/effects after inhalation | : May be harmful if inhaled. |
| Symptoms/effects after skin contact | : Burns and/or irritation. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : Serious damage to eyes. |
| Symptoms/effects after ingestion | : Vomiting and breathing difficulties. |

4.3. Immediate medical attention and special treatment, if necessary

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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| Suitable extinguishing media | : Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : Not determined. |

5.2. Specific hazards arising from the chemical

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| Fire hazard | : Combustible liquid and vapour. |
| Reactivity | : Heating may cause a fire or explosion. |

5.3. Special protective equipment and precautions for fire-fighters

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| Firefighting instructions | : Evacuate area. Eliminate all ignition sources if safe to do so. Exercise caution when fighting any chemical fire. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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| Emergency procedures | : Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. No open flames, no sparks, and no smoking. Evacuate unnecessary personnel. |
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6.1.2. For emergency responders

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| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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| For containment | : Collect spillage. |
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- Methods for cleaning up : Notify authorities if product enters sewers or public waters. Use only explosion-free, grounded electrical equipment. In case of large spillages: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Shovel or sweep up and put in a closed container for disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool. Keep container tightly closed.
- Incompatible materials : Oxidizers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Solvent naphtha, petroleum, heavy aromatic (68476-34-6)

ACGIH	ACGIH TWA (mg/m ³)	100 mg/m ³ (inhalable fraction and vapor)
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Fatty acids, tall-oil, reaction products with diethylenetriamine (61790-69-0)

Not available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Use only explosion-proof equipment. Use non-sparking handtools. Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:

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Protective gloves

Eye protection:

Chemical goggles or safety glasses. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physial state	: Liquid
Appearance	: Liquid
Color	: Red
Odor	: Characteristic
Odor threshold	: No data available
pH	: Not applicable
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 150 °F (65 °C)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.90 – 0.93
Specific gravity / density	: 7.50 - 7.75 lb/gal
Solubility	: Oil soluble
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating may cause a fire or explosion along with pressure increase of container/package/tank.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Oxidizers

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. On combustion, forms: carbon oxides (CO and CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Dermal: Not classified.
Inhalation:dust,mist: May be fatal if swallowed and enters airways.

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Not available

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways
Symptoms/effects after inhalation	: Respiratory irritation, May cause drowsiness or dizziness
Symptoms/effects after skin contact	: Burns, irritation. Cause sever skin burn/irritation.
Symptoms/effects after eye contact	: Burns, irritation. Cause sever skin burn/irritation.
Symptoms/effects after ingestion	: Vomiting, difficulty breathing.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.

Solvent naphtha, petroleum, heavy aromatic (68476-34-6)

LC50 fish 1	35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
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12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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12.4. Mobility in soil

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Ecology - soil	Not established.
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12.5. Other adverse effects

Effect on global warming	Not established
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SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Combustible vapors may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: NA1993 Combustible liquids, n.o.s. (Solvent naphtha, petroleum, heavy aromatic), 3, III
UN-No.(DOT)	: NA1993
Proper Shipping Name (DOT)	: Combustible liquids, n.o.s. (Solvent naphtha, petroleum, heavy aromatic)
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 3 - Combustible liquid
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Symbols	: G - Identifies PSN requiring a technical name



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DOT Special Provisions (49 CFR 172.102)	: B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	: 128
Other information	: No supplementary information available.

Transport by sea

Transport document description (IMDG)	: UN 1993 FLAMMABLE LIQUID, N.O.S. (Solvent naphtha, petroleum, heavy aromatic), 3, III
UN-No. (IMDG)	: UN1993
Proper Shipping Name (IMDG)	: FLAMMABLE LIQUID, N.O.S. (Solvent naphtha, petroleum, heavy aromatic)
Class (IMDG)	: 3 - Flammable liquids
Packing group (IMDG)	: III - substances presenting low danger



Air transport

Transport document description (IATA)	: NA 1993 Combustible liquid, n.o.s. (Solvent naphtha, petroleum, heavy aromatic), 3, III
UN-No. (IATA)	: NA1993
Proper Shipping Name (IATA)	: Combustible liquid, n.o.s. (Solvent naphtha, petroleum, heavy aromatic)
Class (IATA)	: 3 - Flammable liquids
Packing group (IATA)	: III - Minor Danger



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SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Physical hazard - Corrosive to metals Health hazard - Carcinogenicity Health hazard - Respiratory or skin sensitization Health hazard - Serious eye damage or eye irritation Health hazard - Skin corrosion or Irritation Health hazard - Acute toxicity (any route of exposure)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Solvent naphtha, petroleum, heavy aromatic (68476-34-6)
Listed on the Canadian DSL (Domestic Substances List)
Fatty acids, tall-oil, reaction products with diethylenetriamine (61790-69-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Solvent naphtha, petroleum, heavy aromatic (68476-34-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Fatty acids, tall-oil, reaction products with diethylenetriamine (61790-69-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory

Solvent naphtha, petroleum, heavy aromatic (68476-34-6)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)
Fatty acids, tall-oil, reaction products with diethylenetriamine (61790-69-0)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

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15.3. US State regulations

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U.S. - California - Proposition 65 - Other information

California Proposition 65 - This product does contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Solvent naphtha, petroleum, heavy aromatic (68476-34-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Revision date : 08/01/2023

Other information : **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (Oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Dam. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT, 3	Specific target organ toxicity, respiratory tract irritation Category 3
H227	Combustible liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H402	Harmful to aquatic life

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product