

## SAFETY DATA SHEET

2324010 | Varsol 40

[info@deffner-johann.de](mailto:info@deffner-johann.de) | +49 (0)9723 9350-0

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# SAFETY DATA SHEET

<b>SECTION 1</b>	<b>IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING</b>
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As of the revision date above, this SDS meets the regulations in the United Kingdom & Ireland.

## 1.1. PRODUCT IDENTIFIER

**Product Name:** VARSOL™ 40  
**Product Description:** Aliphatic, Cycloparaffinic, Aromatic Hydrocarbons

**Registration Name:**

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

**Identification Number:** (EC #)919-446-0

**Registration Number:**

01-2119458049-33-0004; 01-2119458049-33

## 1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

**Intended Use:** Solvent

**Identified Uses:**

- Manufacture of substance
- Distribution of substance
- Formulation and (re)packing of substances and mixtures
- Use in Coatings - Industrial
- Use in Cleaning Agents - Industrial
- Lubricants - Industrial
- Metal working fluids / rolling oils - Industrial
- Use as a fuel - Industrial
- Functional Fluids - Industrial
- Use in laboratories - Industrial
- Rubber production and processing
- Polymer processing - Industrial
- Water treatment chemicals - Industrial
- Use in Coatings - Professional
- Use in Cleaning Agents - Professional
- Use in oil field drilling and production operations - Professional
- Lubricants - Professional (Low Release)
- Lubricants - Professional (High Release)
- Metal working fluids / rolling oils - Professional
- Agrochemical uses - Professional
- Use as a fuel - Professional
- Functional Fluids - Professional
- Road and construction applications
- Use in laboratories - Professional
- Polymer processing - Professional

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Water treatment chemicals - Professional  
Use in Coatings - Consumer  
Use in Cleaning Agents - Consumer  
Lubricants - Consumer (Low Release)  
Lubricants - Consumer (High Release)  
Agrochemical uses - Consumer  
Use as a fuel - Consumer  
Functional Fluids - Consumer

See Section 16 for list of REACH Use Descriptors for Identified Uses shown above.

**Uses advised against:** The above Identified Uses are specific to the customer for whom this Safety Data Sheet is intended and are uses for which the information in this Safety Data Sheet is applicable. Other uses for this product may be supported/registered. This product is not recommended for any industrial, professional or consumer use other than those which are supported/registered.

### 1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

**Supplier:** Deffner & Johann GmbH  
Mühläckerstr. 13  
DE 97520 Röthlein  
Phone: +49 9723 9350-0

**Local Contact:** ExxonMobil Chemical Ltd.  
MAILPOINT 14  
MARSH LANE  
FAWLEY, SOUTHAMPTON  
SO45 1TX HAMPSHIRE  
Great Britain

**Supplier General Contact:**  
**E-Mail:**

(UK) (+44) (0) 23 8089 3822  
info@deffner-johann.de

### 1.4. EMERGENCY TELEPHONE NUMBER

**24 Hour Emergency Telephone:**  
**National Poison Control Centre:**

+(44)-8708200418 (CHEMTREC)  
(UK) 111 / (IE) (+353)1 809 2166

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1. CLASSIFICATION OF SUBSTANCE OR MIXTURE

#### Classification according to Regulation (EC) No 1272/2008

Flammable liquid: Category 3.

Specific target organ toxicant (central nervous system): Category 3. Specific target organ toxicant (repeated exposure): Category 1. Aspiration toxicant: Category 1.

Chronic aquatic toxicant: Category 2.

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways. H336: May cause drowsiness or dizziness. H372: Causes damage to organs through prolonged or repeated exposure. Central Nervous system

H411: Toxic to aquatic life with long lasting effects.

## 2.2. LABEL ELEMENTS

### Label elements according to Regulation (EC) No 1272/2008

#### Pictograms:



**Signal Word:** Danger

#### Hazard Statements:

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways. H336: May cause drowsiness or dizziness. H372: Causes damage to organs through prolonged or repeated exposure. Central Nervous system

H411: Toxic to aquatic life with long lasting effects.

EUH066: Repeated exposure may cause skin dryness or cracking.

#### Precautionary Statements:

P102: Keep out of reach of children.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P240: Ground and bond container and receiving equipment. P241: Use explosion-proof electrical, ventilating and lighting equipment. P242: Use non-sparking tools. P243: Take action to prevent static discharges. P260: Do not breathe mist / vapours. P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves and eye / face protection.

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P331: Do NOT induce vomiting. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish. P391: Collect spillage.

P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

P501: Dispose of contents and container in accordance with local regulations.

**Contains:** Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

## 2.3. OTHER HAZARDS

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#### Physical / Chemical Hazards:

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited.

#### Health Hazards:

May be irritating to the eyes, nose, throat, and lungs. Repeated exposure may cause skin dryness or cracking. May cause central nervous system depression.

#### Environmental Hazards:

No additional hazards. Material does not meet the criteria for PBT or vPvB in accordance with REACH Annex XIII.

### SECTION 3

### COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1. SUBSTANCES

This material is defined as a substance.

#### Reportable hazardous substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Name	CAS#	EC#	Registration#	Concentration *	GHS/CLP classification
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)		919-446-0	01-2119458049-33	100 %	[Aquatic Acute 2 H401], Aquatic Chronic 2 H411, Asp. Tox. 1 H304, EUH066, Flam. Liq. 3 H226, STOT SE 3 H336, STOT RE 1 H372

Note - any classification in brackets is a GHS building block that was not adopted by the EU in the CLP regulation (No 1272/2008) and therefore is not applicable in the EU or in non-EU countries which have implemented the CLP regulation and is shown for informational purposes only.

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Concentration values may vary.

Note: Any entry in the EC# column that begins with the number "9" is a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance. See Section 15 for additional CAS number information for the substance.

Note: See SDS Section 16 for full text of hazard statements.

**3.2. MIXTURES** Not Applicable. This product is regulated as a substance.

### SECTION 4

### FIRST AID MEASURES

#### 4.1. DESCRIPTION OF FIRST AID MEASURES

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#### **INHALATION**

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

#### **SKIN CONTACT**

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

#### **EYE CONTACT**

Flush thoroughly with water. If irritation occurs, get medical assistance.

#### **INGESTION**

Seek immediate medical attention. Do not induce vomiting.

#### **4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED**

Headache, dizziness, drowsiness, nausea and other CNS effects.

#### **4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED**

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

<b>SECTION 5</b>	<b>FIRE FIGHTING MEASURES</b>
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#### **5.1. EXTINGUISHING MEDIA**

**Suitable Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Unsuitable Extinguishing Media:** Straight streams of water

#### **5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE**

**Hazardous Combustion Products:** Incomplete combustion products, Oxides of carbon, Smoke, Fume

#### **5.3. ADVICE FOR FIRE FIGHTERS**

**Fire Fighting Instructions:** FLAMMABLE. Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Unusual Fire Hazards:** Flammable. Vapour is flammable and heavier than air. Vapour may travel across the ground and reach remote ignition sources, causing a flashback fire danger.

#### **FLAMMABILITY PROPERTIES**

**Flash Point [Method]:** 43°C (109°F) [ASTM D-56]

**Upper/Lower Flammable Limits (Approximate volume % in air):** UEL: 6.0 LEL: 0.7  
[Extrapolated]

**Autoignition Temperature:** 242°C (468°F) [ASTM E659]

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### 6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

#### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

#### PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic vapor and, when applicable, H<sub>2</sub>S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

### 6.2. ENVIRONMENTAL PRECAUTIONS

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

### 6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

**Land Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces. Recover by pumping or with suitable absorbent.

**Water Spill:** Stop leak if you can do so without risk. Eliminate sources of ignition. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 deg C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

### 6.4. REFERENCES TO OTHER SECTIONS

See Sections 8 and 13.

## SECTION 7 HANDLING AND STORAGE

### 7.1. PRECAUTIONS FOR SAFE HANDLING

Avoid contact with skin. Potentially toxic/irritating fumes/vapour may be evolved from heated or agitated material. Use only with adequate ventilation. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

**Loading/Unloading Temperature:** [Ambient]

**Transport Temperature:** [Ambient]

**Transport Pressure:** [Ambient]

**Static Accumulator:** This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

### 7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

The type of container used to store the material may affect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be earthed and bonded to prevent accumulation of static charge.

**Storage Temperature:** [Ambient]

**Storage Pressure:** [Ambient]

**Suitable Containers/Packing:** Tankers; Tank Trucks; Drums; Barges; Tank Cars; Railcars

**Suitable Materials and Coatings (Chemical Compatibility):** Carbon Steel; Stainless Steel; Polyester; Teflon; Polyethylene; Polypropylene

**Unsuitable Materials and Coatings:** Butyl Rubber; Natural Rubber; Ethylene-propylene-diene monomer (EPDM); Polystyrene

### 7.3. SPECIFIC END USES

Section 1 informs about identified end-uses. No industrial or sector specific guidance available.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. CONTROL PARAMETERS

#### EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)



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Substance Name	Form	Limit/Standard			Note	Source
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Vapour.	RCP - TWA	52 ppm	300 mg/m3	Total Hydrocarbons	ExxonMobil
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)		TWA	100 ppm			ACGIH

Note: Information about recommended monitoring procedures can be obtained from the relevant agency(ies)/institute(s):

UK Health and Safety Executive (HSE)

#### DERIVED NO EFFECT LEVEL (DNEL)/DERIVED MINIMAL EFFECT LEVEL (DMEL)

##### Worker

Substance Name	Dermal	Inhalation
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	44 mg/kg bw/day DNEL, Chronic Exposure, Systemic Effects	330 mg/m3 DNEL, Chronic Exposure, Systemic Effects

##### Consumer

Substance Name	Dermal	Inhalation	Oral
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	26 mg/kg bw/day DNEL, Chronic Exposure, Systemic Effects	71 mg/m3 DNEL, Chronic Exposure, Systemic Effects	26 mg/kg bw/day DNEL, Chronic Exposure, Systemic Effects

Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

#### PREDICTED NO EFFECT CONCENTRATION (PNEC)

Substance Name	Aqua (fresh water)	Aqua (marine water)	Aqua (intermittent release)	Sewage treatment plant	Sediment	Soil	Oral (secondary poisoning)
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	NA	NA	NA	NA	NA	NA	NA

For hydrocarbon UVCBs, no single PNEC value is identified for the overall substance or used in risk assessment calculations. Therefore, no PNEC values are disclosed in the above table. For further information, please contact ExxonMobil.

## 8.2. EXPOSURE CONTROLS

### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator Type A filter material, European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves. Nitrile, minimum 0.38 mm thickness or comparable protective barrier material with a high performance level for continuous contact use conditions, permeation breakthrough minimum 480 minutes in accordance with CEN standards EN 420 and EN 374.

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

For Summary of Risk Management Measures across all identified uses, see Annex.

## ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

### 9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid  
**Form:** Clear  
**Colour:** Colorless to Yellow  
**Odour:** Pungent petroleum  
**Odour Threshold:** No data available  
**pH:** Not technically feasible  
**Melting Point:** Not technically feasible  
**Freezing Point:** No data available  
**Initial Boiling Point / and Boiling Range:** 155°C (311°F) - 194°C (381°F) [ASTM D86]  
**Flash Point [Method]:** 43°C (109°F) [ASTM D-56]  
**Evaporation Rate (n-butyl acetate = 1):** 0.2 [In-house method]  
**Flammability (Solid, Gas):** Not technically feasible  
**Upper/Lower Flammable Limits (Approximate volume % in air):** UEL: 6.0 LEL: 0.7  
[Extrapolated]  
**Vapour Pressure:** 0.2 kPa (1.5 mm Hg) at 20 °C [Calculated]  
**Vapour Density (Air = 1):** 4.9 at 101 kPa [In-house method]  
**Relative Density (at 15 °C):** 0.79 [With respect to water] [Calculated]  
**Solubility(ies): water** Negligible  
**Partition coefficient (n-Octanol/Water Partition Coefficient):** > 4 [Estimated]  
**Autoignition Temperature:** 242°C (468°F) [ASTM E659]  
**Decomposition Temperature:** No data available  
**Viscosity:** 0.96 cSt (0.96 mm<sup>2</sup>/sec) at 40°C | 1.26 cSt (1.26 mm<sup>2</sup>/sec) at 20°C [Calculated]  
**Explosive Properties:** None  
**Oxidizing Properties:** None

### 9.2. OTHER INFORMATION

**Density (at 15 °C):** 790 kg/m<sup>3</sup> (6.59 lbs/gal, 0.79 kg/dm<sup>3</sup>) [ISO 12185]  
**Pour Point:** -73°C (-99°F) [ASTM D5950]  
**Molecular Weight:** 143 g/mol [Calculated]  
**Hygroscopic:** No  
**Coefficient of Thermal Expansion:** 0.00096 per Deg C [Calculated]

## SECTION 10 STABILITY AND REACTIVITY

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**10.1. REACTIVITY:** See sub-sections below.

**10.2. CHEMICAL STABILITY:** Material is stable under normal conditions.

**10.3. POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous polymerization will not occur.

**10.4. CONDITIONS TO AVOID:** Avoid heat, sparks, open flames and other ignition sources.

**10.5. INCOMPATIBLE MATERIALS:** Strong oxidisers

**10.6. HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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**11.1. INFORMATION ON TOXICOLOGICAL EFFECTS**

<b>Hazard Class</b>	<b>Conclusion / Remarks</b>
<b>Inhalation</b>	
Acute Toxicity: (Rat) 4 hour(s) LC50 > 13.1 mg/l (Vapour) Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
<b>Ingestion</b>	
Acute Toxicity (Rat): LD50 > 15000 mg/kg Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401
<b>Skin</b>	
Acute Toxicity (Rabbit): LD50 > 3400 ml/kg Test scores or other study results do not meet criteria for classification.	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	May dry the skin leading to discomfort and dermatitis. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404
<b>Eye</b>	
Serious Eye Damage/Irritation: Data available. Test scores or other study results do not meet criteria for classification.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405
<b>Sensitisation</b>	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a skin sensitizer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 406
<b>Aspiration:</b> Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
<b>Germ Cell Mutagenicity:</b> Data available. Test scores or other study results do not meet criteria for classification.	Not expected to be a germ cell mutagen. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 473 474 475 479
<b>Carcinogenicity:</b> Data available. Test scores or other study results do not meet criteria for classification.	Not expected to cause cancer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 453
<b>Reproductive Toxicity:</b> Data available.	Not expected to be a reproductive toxicant. Based on test data for

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Test scores or other study results do not meet criteria for classification.	the material. Test(s) equivalent or similar to OECD Guideline 413 414 415
<b>Lactation:</b> No end point data for material.	Not expected to cause harm to breast-fed children.
<b>Specific Target Organ Toxicity (STOT)</b>	
Single Exposure: No end point data for material.	May cause drowsiness or dizziness.
Repeated Exposure: Data available.	Causes organ damage from prolonged or repeated exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 408 411 413

## OTHER INFORMATION

### For the product itself:

Target Organs Repeated Exposure: Central Nervous system

Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

## SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

### 12.1. TOXICITY

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

### 12.2. PERSISTENCE AND DEGRADABILITY

#### Biodegradation:

Material -- Expected to be readily biodegradable.

#### Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

#### Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

#### Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

### 12.3. BIOACCUMULATIVE POTENTIAL Not determined.

### 12.4. MOBILITY IN SOIL

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

### 12.5. PERSISTENCE, BIOACCUMULATION AND TOXICITY FOR SUBSTANCE(S)

Material does not meet the Reach Annex XIII criteria for PBT or vPvB.

### 12.6. OTHER ADVERSE EFFECTS

No adverse effects are expected.

## ECOLOGICAL DATA

### Ecotoxicity

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	48 hour(s)	Daphnia magna	EL50 10-22 mg/l: data for the material
Aquatic - Acute Toxicity	96 hour(s)	Oncorhynchus mykiss	LL50 10-30 mg/l: data for the material
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	EL50 4.6-10 mg/l: data for the material
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	NOELR 1 mg/l: data for the material
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	NOEC 0.097 mg/l: data for the material
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	LOEC 0.203 mg/l: data for the material

### Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results: Basis
Water	Ready Biodegradability	28 day(s)	Percent Degraded 74.7

## SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

### 13.1. WASTE TREATMENT METHODS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

The European Waste Catalogue (EWC) code is specific to the waste generating process and waste constituents. Determine the EWC according to the criteria provided in the European Waste Catalogue and the hazardous waste list established by Commission Decision 2000/532/EC, as amended.

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

## SECTION 14 TRANSPORT INFORMATION

### LAND (ADR/RID)

14.1. UN Number: 1300

14.2. UN Proper Shipping Name (Technical Name): TURPENTINE SUBSTITUTE

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**14.3. Transport Hazard Class(es):** 3  
**14.4. Packing Group:** III  
**14.5. Environmental Hazards:** Yes  
**14.6. Special Precautions for users:**  
**Classification Code:** F1  
**Label(s) / Mark(s):** 3, EHS  
**Hazard ID Number:** 30  
**Hazchem EAC:** 3Y

#### INLAND WATERWAYS (ADN)

**14.1. UN (or ID) Number:** 1300  
**14.2. UN Proper Shipping Name (Technical Name):** TURPENTINE SUBSTITUTE  
**14.3. Transport Hazard Class(es):** 3  
**14.4. Packing Group:** III  
**14.5. Environmental Hazards:** Yes  
**14.6. Special Precautions for users:**  
**Hazard ID Number:** 30  
**Label(s) / Mark(s):** 3 (N2, F), EHS

#### SEA (IMDG)

**14.1. UN Number:** 1300  
**14.2. UN Proper Shipping Name (Technical Name):** TURPENTINE SUBSTITUTE  
**14.3. Transport Hazard Class(es):** 3  
**14.4. Packing Group:** III  
**14.5. Environmental Hazards:** Marine Pollutant  
**14.6. Special Precautions for users:**  
**Label(s):** 3  
**EMS Number:** F-E, S-E  
**Transport Document Name:** UN1300, TURPENTINE SUBSTITUTE, 3, PG III, (39°C c.c.), MARINE POLLUTANT

#### SEA (MARPOL 73/78 Convention - Annex II):

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
**Substance Name:** NOXIOUS LIQUID, N.F.,(5) N.O.S., (VARSOL 40, contains alkyl (C3-C4) benzenes)  
**Ship type required:** 2  
**Pollution category:** Y

#### AIR (IATA)

**14.1. UN Number:** 1300  
**14.2. UN Proper Shipping Name (Technical Name):** TURPENTINE SUBSTITUTE  
**14.3. Transport Hazard Class(es):** 3  
**14.4. Packing Group:** III  
**14.5. Environmental Hazards:** Yes  
**14.6. Special Precautions for users:**  
**Label(s) / Mark(s):** 3  
**Transport Document Name:** UN1300, TURPENTINE SUBSTITUTE, 3, PG III

Product Name: VARSOL™ 40  
Revision Date: 16 May 2020  
Revision Number: 5.00  
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<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
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### REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA): AIIIC, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

The national inventory listings are based on the CAS number or numbers listed below.

CAS
64742-82-1

### 15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

#### Applicable EU Directives and Regulations:

1907/2006 [... on the Registration, Evaluation, Authorisation and Restriction of Chemicals ... and amendments thereto]

2004/42/CE [on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC.]

96/82/EC as extended by 2003/105/EC [ ... on the control of major-accident hazards involving dangerous substances]. Product contains a substance that falls within the criteria defined in Annex I. Refer to Directive for details of requirements taking into account the volume of product stored on site.

98/24/EC [... on the protection of workers from the risk related to chemical agents at work ...]. Refer to Directive for details of requirements.

1272/2008 [on classification, labelling and packaging of substances and mixtures.. and amendments thereto]

#### REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII):

The following entries of Annex XVII may be considered for this product: 03, 40

### 15.2. CHEMICAL SAFETY ASSESSMENT

**REACH Information:** A Chemical Safety Assessment has been carried out for one or more substances present in the material.

<b>SECTION 16</b>	<b>OTHER INFORMATION</b>
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#### IDENTIFIED USES:

Manufacture of substance (PROC1, PROC15, PROC2, PROC3, PROC4, PROC8a, PROC8b, SU10, SU3, SU8, SU9)  
Distribution of substance (PROC1, PROC15, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, SU3, SU8, SU9)  
Formulation and (re)packing of substances and mixtures (PROC1, PROC14, PROC15, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, SU10, SU3)