



## Solve 2230C

### Safety Data Sheet

Date Issued: 10/022/2019

Date Revised: 10/14/2019

#### 1. IDENTIFICATION OF SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

##### 1.1 Product identifier

PRODUCT NAME: **SOLVE 2230C**

TYPE OF PRODUCT: Mixture

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

IDENTIFIED USES: Processing aid for industrial applications

USES ADVISED AGAINST: None.

##### 1.3 Details of the supplier of the safety data sheet

COMPANY: **WaterSolve, LLC, 5031 68<sup>TH</sup> Street Caledonia, Michigan 49316, USA**  
For Product information call 616-575-8693. [www.gowatersolve.com](http://www.gowatersolve.com)

##### 1.4 Emergency telephone number

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

#### 2. HAZARDS IDENTIFICATION

##### 2.1 Classification of the substance or mixture

Classification according to paragraph (d) of Regulation 29 CFR 1910.1200.

Not classified.

##### 2.2 Label elements

Labeling according to paragraph (f) of Regulation 29 CFR 1910.1200:

Hazard symbol(s): None

Signal word: None

Hazard statement(s): None

Precautionary statement(s): None

##### 2.3 Other hazards

Spills produce extremely slippery surfaces.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

##### 3.1 Substances:

Not applicable, this product is a mixture.

##### 3.2 Mixtures

This product is a mixture.

##### Hazardous components:

**Distillates (petroleum), hydrotreated light**

Concentration/gamme:

20 - 45%

CAS Number:

64742-47-8

Classification according to paragraph (d)

**of Regulation 29 CFR 1910.1200:**

Asp. Tox. 1;H304

**Notes:**

Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm<sup>2</sup> /s measured at 40°C.

**Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched**

**Concentration/gamme:**

< 5%

**CAS Number:**

69011-36-5

**Classification according to paragraph (d)**

**of Regulation 29 CFR 1910.1200:**

Acute Tox. 4; H302, Eye Dam. 1;H318

For explanation of abbreviations see Section 16.

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**Inhalation:** Move to fresh air. No hazards which require special first aid measures.

**Skin Contact:** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

**Eye Contact:** Rinse immediately with plenty of water, also under the eyelids for at least 15 minutes. Alternatively, rinse with Diphoterine®. Get prompt medical attention immediately.

**Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control center immediately.

**4.2 Most important symptoms and effects, both acute and delayed.**

None under normal use.

**4.3 Indication of any immediate medical attention and special treatment needed.**

None reasonably foreseeable.

**Other information:** None

**5. FIRE FIGHTING MEASURES**

**5.1 Extinguished media**

**Suitable extinguishing media:** Water, water spray, foam, carbon dioxide (CO<sub>2</sub>), dry powder.

**WARNING!** Spills produce extremely slippery surfaces.

**Unsuitable extinguishing media:** None known.

**5.2 Special hazards arising from the substance or mixture:**

**Hazardous decomposition products:**

Carbon oxides (COx). Nitrogen oxides (NOx). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

**5.3 Advice for fire-fighters**

**Protective measures:** Wear self-contained breathing apparatus and protective suit.

**Other information:** Spills produce extremely slippery surfaces.

**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures.**

**Personal precautions:** Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

**Protective equipment:** Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

**Emergency procedures:** Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

**6.2 Environmental precautions:** As with all chemical products, do not flush into surface water.

### 6.3 Methods and material for containment and cleaning up

**Small spills:** Do not flush with water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

**Large spills:** Do not flush with water. Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

**Residues:** After cleaning, flush away traces with water.

### 6.4 Reference to other sections

Section 7: Handling and storage; Section 8: Exposure controls/personal protection; Section 13: Disposal considerations

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using do not smoke, drink or eat.

### 7.2 Conditions for safe storage, including any incompatibilities.

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

### 7.3 Specific end uses

This information is not available.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational exposure limits:

Distillates (petroleum), hydrotreated light

ACGIH: 200 mg/m<sup>3</sup> (8-hours) (vapors)

### 8.2 Exposure controls

#### Appropriate engineering controls:

Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

#### Individual protection measures, such as personal protective equipment:

a) **Eye/face protection:** safety glasses with side-shields.

b) **Skin protection:**

i) **Other:** Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur.

ii) **Hand protection:** PVC or other plastic material gloves.

c) **Respiratory protection:** No personal respiratory protective equipment normally required.

d) **Additional advice:** Wash hands and face before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

e)

**Environmental exposure controls:** Do not allow uncontrolled discharge of product into the environment.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

a) Appearance:	Viscous liquid, Milky
b) Odor:	Aliphatic
c) odor threshold:	No data available
d) pH:	5.5 – 8.5 @ 5g/L (See Technical Bulletin or Product Specifications for precise value)
e) Melting point/freezing point:	< 5°C
f) Initial boiling point /boiling range:	> 100°C
g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable
j) Upper/lower flammability/explosive limits:	Not expected to create explosive atmospheres.
k) Vapor pressure:	2.3 kPa @ 20 °C
l) Vapor density:	0.804 g/litre @ 20 °C
m) Relative density:	1.0 – 1.2
n) Solubility:	Completely miscible
o) Partition coefficient:	Not applicable
p) Autoignition temperature:	No data available
q) Decomposition temperature:	>150°C
r) Viscosity:	> 20.5 mm <sup>2</sup> /s @ 40°C
s) Explosive properties:	Not expected to be explosive based on the chemical structure.
t) Oxidizing properties:	Not expected to be oxidizing based on the chemical structure.

**9.2 Other information:** None.

10. **STABILITY AND REACTIVITY**

**10.1 Reactivity:** Stable under recommended storage conditions.

**10.2 Chemical Stability:** Stable under recommended storage conditions.

**10.3 Possibility of Hazardous reactions:** None known.

**10.4 Conditions to avoid:** Protect from frost, heat and sunlight.

**10.5 Incompatible materials:** Incompatible with oxidizing agents.

**10.6 Hazardous decomposition products:** Thermal decomposition may produce: nitrogen oxides (NO<sub>x</sub>), carbon oxides (CO<sub>x</sub>). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

11. **TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Information on the product as supplied:**

<b>Acute Oral toxicity:</b>	LD50/oral/rat > 5,000 mg/kg (Estimated)
<b>Acute Dermal toxicity:</b>	LD50/dermal/rat > 5,000 mg/kg (Estimated)
<b>Acute Inhalation toxicity:</b>	The product is not expected to be toxic by inhalation.
<b>Skin corrosion/irritation:</b>	Non-irritating to skin.
<b>Serious Eye damage/ irritation:</b>	Not irritating. (OECD 437)
<b>Respiratory/skin Sensitization:</b>	Not sensitizing.
<b>Mutagenicity:</b>	Not mutagenic.
<b>Carcinogenicity:</b>	Not carcinogenic.
<b>Reproductive Effects:</b>	Not toxic for reproduction.

**STOT - single exposure:** No known effects.  
**STOT - repeated exposure:** No known effects.  
**Aspiration hazard:** Due to the viscosity, this product does not present an aspiration hazard.

**Relevant information on the hazardous components:**

**Distillates (petroleum), hydrotreated light**

**Acute Oral Toxicity:** LD50/oral/rat > 5000 mg/kg (OECD 401)  
**Acute Dermal Toxicity:** LD50/dermal/rabbit > 5000 mg/kg (OECD 402)  
**Acute Inhalation Toxicity:** LC0/inhalation/4 h/rat = 4951 mg/m<sup>3</sup> (OECD 403)(Based on results obtained from tests from analogous products)  
**Skin corrosion/irritation:** Not irritating. (OECD 404). Repeated exposure may cause skin dryness or cracking.  
**Serious Eye damage/ irritation:** Not irritating (OECD 405).  
**Respiratory/skin Sensitization:** By analogy with similar products, this product is not expected to be sensitizing. (OECD 406).  
**Mutagenicity:** Not mutagenic. (OECD 471,473,474,476,478,479).  
**Carcinogenicity:** Carcinogenicity study in rats (OECD 451): Negative  
**Reproductive toxicity:** By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat=300 ppm (OECD 421).  
**STOT single exposure:** No known effects.  
**STOT- repeated exposure:** NOAEL/oral/rat/90 days >= 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products).  
**Aspiration hazard:** May be fatal if swallowed and enters airways.

**Polv(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched**

**Acute Oral Toxicity:** LD50/oral/rat =500 - 2000 mg/kg  
**Acute Dermal Toxicity:** LD50/dermal/rabbit > 2000 mg/kg  
**Acute Inhalation Toxicity:** No data available.  
**Skin Corrosion/Irritation:** Not irritating. (OECD 404)  
**Serious eye damage/irritation:** Causes serious eye irritation. (OECD 405)  
**Respiratory /skin Sensitization:** The results of testing on guinea pigs showed this material to be non-sensitizing.  
**Mutagenicity:** In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.  
**Carcinogenicity:** Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.  
**Reproductive toxicity:** Two-Generation Reproduction Toxicity (OECD 416)  
-NOAEL/rat >250 mg/kg/day  
Prenatal Development Toxicity Study (OECD 414)  
-NOAEL/Maternal toxicity/rat >50 mg/kg/day  
-NOAEL/Developmental toxicity/rat > 50 mg/kg/day  
**STOT – single exposure:** No known effects.  
**STOT – repeated exposure:** NOAEL/oral/rat/600 days = 50 mg/kg/day  
**Aspiration hazard:** No known effects.

12. **ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Information on the product as supplied:**

**Acute Toxicity to Fish:** LC50/Oncorhynchus mykiss/96 hours >100 mg/L (Estimated)  
LC50/Danio rerio/96 hours >100 mg/L. (Estimated)  
**Acute Toxicity to Invertebrates:** EC50/Daphnia magna/48 hours >100 mg/L (Estimated)  
**Acute Toxicity to Algae:** IC50/Algae/72 hours > 100 mg/L (Estimated)  
**Chronic toxicity to fish:** No data available  
**Chronic toxicity to invertebrates:** No data available  
**Toxicity to microorganisms:** No data available

**Effects on terrestrial organisms:** No data available.  
**Sediment toxicity:** No data available.

**Relevant information on the hazardous components:**

**Distillates (petroleum), hydrotreated light**

**Acute Toxicity to Fish:** LC0/Oncorhynchus mykiss/ 96 hr. > 1000 mg/L (OECD 203)  
**Acute Toxicity to Algae:** IC0/Pseudokirchneriella subcapitata/ 72 hr. > 1000 mg/L (OECD 201)  
**Acute Toxicity to invertebrates:** EC0/Daphnia magna/48 hr = > 1000 mg/L (OECD 202)  
**Chronic toxicity to fish:** NOEC/Oncorhynchus mykiss/28 days >1000mg/l  
**Chronic toxicity to invertebrates:** NOEC/Daphnia magna/21 days >1000 mg/l  
**Toxicity to microorganisms:** EC50/Tetrahymena pyriformis/48 h >1000 mg/l  
**Effects on terrestrial organisms:** No data available  
**Sediment toxicity:** No data available. Readily biodegradable, exposure to sediment is unlikely.

**Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched**

**Acute Toxicity to Fish:** LC50/Cyprinus carpio/ 96 hr. = 1 - 10 mg/L (OECD 203)  
**Acute Toxicity to Algae:** IC50/Desmodesmus subspicatus/ 72 hr= 1 - 10 mg/L (OECD 201)  
**Acute Toxicity to invertebrates:** EC50/Daphnia /48 hr = 1 - 10 mg/L (OECD 202)  
**Chronic toxicity to fish:** No data available  
**Chronic toxicity to invertebrates:** NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)  
**Toxicity to microorganisms:** EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)  
**Effects on terrestrial organisms:** No data available  
**Sediment toxicity:** No data available.

**12.2 Persistence and degradability**

**Information on the product as supplied:**

**Degradation:** Not readily biodegradable.  
**Hydrolysis:** Does not hydrolyse.  
**Photolysis:** No data available

**Relevant information on the hazardous components:**

**Distillates (petroleum), hydrotreated light**

**Degradation:** Readily biodegradable 67.6% / 28 days (OECD 301F); 68.8% / 28 days (OECD 306); 61.2% / 61 days (OECD 304 A)  
**Hydrolysis:** Does not hydrolyse.  
**Photolysis:** No data available

**Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched**

**Degradation:** Readily biodegradable. >60%/28 days (OECD 301B)  
**Hydrolysis:** Does not hydrolyse.  
**Photolysis:** No data available

**12.3 Bioaccumulative potential**

**Information on the product as supplied:**

The product is not expected to bioaccumulate.  
**Partition co-efficient LogPow:** Not applicable  
**Bioconcentration factor (BCF):** No data available

**Relevant information on the hazardous components:**

**Distillates (petroleum), hydrotreated light**

**Partition co-efficient LogPow:** 3 - 6  
**Bioconcentration factor (BCF):** No data available

**Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched**

**Partition co-efficient LogPow:** >3

**Bioconcentration factor (BCF):** No data available

**12.4 Mobility in soil**

**Information on the product as supplied:**

No data available

**Relevant information on the hazardous components:**

**Distillates (petroleum), hydrotreated light:**

Koc: No data available

**Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched:**

Koc: >5000

**12.5 Other adverse effects:** none known.

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Waste from residues /unused products:** Dispose of in accordance with local, state, national and international regulations.

**Contaminated packaging:** Rinse empty containers with water and use the rinse-water to prepare the working solution. Dispose of in compliance with local, state, federal, and international regulations.

**Recycling:** In accordance with local, state, national and international regulations.

**14. TRANSPORT INFORMATION**

Land Transport (DOT) Not classified.

Sea Transport (IMDG) Not classified.

Air Transport (IATA) Not classified.

**15. REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for substances or mixture**

**Information on the product as supplied:**

**TSCA Chemical Substances Inventory:**

All components of this product are either listed as active on the inventory or are exempt from listings.

**US SARA Reporting requirements:**

**SARA (SECTION 311/312) hazard class:**

Not concerned

**SARA Title III Sections**

**Section 302 (TPQ) – Reportable Quantity:**

Not concerned

**Section 304 – Reportable Quantity:**

Not concerned

**Section 313 (De minimis concentration):**

Not concerned

**Clean Water Act**

Section 311 Hazardous Substances (40 CFR 117.3)- Reportable Quantity:

Not concerned

**Clean Air Act**

Section 112(r) Accidental release prevention requirements (40 CFR 68)- Reportable Quantity:  
Not concerned

**CERCLA**

Hazardous Substances List (40 CFR 302.4)- Reportable Quantity:  
Not concerned

**RCRA Status:**

Not RCRA hazardous.

**California Proposition 65 Information:**

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide

**16. OTHER INFORMATION**

**HMIS & NFPA Rating**

**NFPA:**

Health:	0
Flammability:	1
Instability:	0

**HMIS:**

Health:	0
Flammability:	1
Physical Hazard:	0
PPE Code:	B

Key or legend to abbreviations and acronyms used in the safety data sheet:

Acronyms

STOT = Specific target organ toxicity

Abbreviations

Acute Tox. 4= Acute toxicity Category Code 4

Asp. Tox. 1=Aspiration hazard Category Code 1

Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

H-Phrases

H302-Harmful if swallowed

H304-May be fatal if swallowed and enters airways

H318-Causes serious eye damage

Training advice

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulation 29 CFR 1910.1200

**OTHER INFORMATION**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied,



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**List of abbreviations and acronyms that could be, but not necessarily are, used in the safety data sheet:**

ACGIH: American Conference of Industrial Hygienists

BEI: Biological Exposure Index

CAS Chemical: Abstracts Service (Division of the American Chemical Society)

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

CMR: Carcinogenic, Mutagenic or Toxic for Reproduction

DOT: Department of Transportation

FG: Food grade

FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

H-statement: Hazard Statement

HMIRC: Hazardous Materials Information Review Commission

HMIS: Hazardous Materials Identification System

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI (ICAO): Technical Instructions by the "International Civil Aviation Organization"

IMDG: International Maritime Code for Dangerous Goods

ISO: International Organization for Standardization

logPow: octanol-water partition coefficient

LCxx: Lethal Concentration, for xx percent of test population

LDxx: Lethal Dose, for xx percent of test population

ICxx: Inhibitory Concentration for xx of a substance

ECxx: Effective Concentration of xx

N.O.S.: Not otherwise specified

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OECD: Organization for Economic Co-operation and Development

OEL: Occupational Exposure Limit

OSHA: Occupational Safety and Health Administration

P-Statement: Precautionary Statement

PBT: Persistent, Bioaccumulative and Toxic

PMRA: Health Canada Pest Management Regulatory Agency

PPE: Personal Protective Equipment

RTK: Right to Know

SDS: Safety Data Sheet

STEL: Short-term exposure limit

STOT: Specific Target Organ Toxicity

TLV: Threshold Limit Value

TWA: Time-weighted average

VPVB: Very Persistent and Very Bioaccumulative

WEL: Workplace Exposure Level

WHMIS: Workplace Hazardous Materials Information System