


Using P2OASys

P2OASys Walkthrough

Where to find it: <http://p2oasys.turi.org/>



© Toxic Use Reduction Institute, University of Massachusetts Lowell



Welcome to P2OASys
[Get Started](#)

What is P2OASys?

P2OASys is a web-based tool for assessing the potential environmental impact of products. It is designed to be used by scientists, engineers, and other professionals who are involved in the development of new products. The tool provides a structured way to capture and analyze data on the environmental impacts of products, and to generate reports that can be used to inform decision-making. The tool is designed to be used by scientists, engineers, and other professionals who are involved in the development of new products. The tool provides a structured way to capture and analyze data on the environmental impacts of products, and to generate reports that can be used to inform decision-making.



© Toxic Use Reduction Institute, University of Massachusetts Lowell

<http://p2oasys.turi.org/>

Welcome to the P2OASys Tool!

Information P2OASys can be found on the TURI webpage lists.

[Create New Assessment](#) [Load From P2OASys Database](#)

| Name | P2OASys Format | SDS Format | Remove |
|------|----------------|------------|--------|
| | | | |


[Assessment Scores Summary](#) [Compare Entered Data](#)

[Upload A Chemical/Product To the P2OASys Database](#)

[Upload A Mixture To the P2OASys Database](#)

[Export Data to CSV](#) [Import Data from CSV](#)

[Refresh Scores Matrix](#)



© Toxic Use Reduction Institute, University of Massachusetts Lowell

Getting Started

Name of Product: Trichloroethylene 11.17.17
 CAS Number: 79-06-6

Is this a chemical or a product?
 Chemical Product Mixture

Submit

Chemical
 Individual chemical using a single SDS. Must enter chemical name and CAS

Product
 Evaluating a product with multiple chemicals but only using one SDS

Mixture
 Combined previously entered chemicals to create your own product

© Toxics Use Reduction Institute, University of Massachusetts Lowell 4

Majority of Data Found on SDS

Chemical Trichloroethylene 11.17.17 was added

Trichloroethylene 11.17.17
 Click here to add another product

Click here to return to the P20ASys Tool

Click here to enter data using the P20ASys Format

Click here to enter data using the SDS Format

P20ASys Format:
 Enter data in the order of the P20ASys categories

SDS Format:
 Enter data in the order the where values would be likely found on an SDS or external resources

© Toxics Use Reduction Institute, University of Massachusetts Lowell 5

Main Categories

You are currently editing: Sample 100

Save Changes/Expand All Collapse All

- Acute Human Effects
- Chronic Human Effects
- Ecological Hazards
- Environmental Fate & Transport
- Atmospheric Hazard
- Physical Properties
- Process Factors
- Life Cycle Factors

© Toxics Use Reduction Institute, University of Massachusetts Lowell 6

Where to find it- P2OASys Format

| | SDS Format |
|--------------------------------|--|
| Identity | Sections 2, 11 |
| Toxicity | Sections 2, 8, 11, 16 (NFPA Health) |
| Ecotoxicity | Sections 2, 12 |
| Environmental Fate & Transport | Sections 2, 12 (www.ehtprofiler.com) |
| Physical Hazard | Section 2, 12, 15 |
| Properties | Section 2, 5, 9, 10, 16 |
| Assessors | Specific to Process/Expert Judgement (For Activity 1- Use Scenarios) |
| Process | Technical Data Sheet(TDS)/Expert Judgement Scenarios/TDS summarized) (For Activity 1- Use Scenarios) |

© Toxics Use Reduction Institute, University of Massachusetts Lowell 10

Categories By SDS Location

Expanded SDS Collapse All
You are currently editing: Sample Chemical

Save changes

- SECTION 2: Hazards identification
- SECTION 3: Firefighting measures
- SECTION 4: Exposure controls/personal protection
- SECTION 5: Physical and chemical properties
- SECTION 6: Stability and reactivity
- SECTION 7: Ecological information
- SECTION 8: Disposal considerations
- SECTION 9: Regulatory information
- SECTION 10: Other information
- External Resources
- Expert Judgement
- Technical Data Sheet

The 16 sections of the new SDS cover:

1. Identification;
2. Hazard(s) identification;
3. Composition/information on ingredients;
4. First-Aid Measures;
5. Fire-Fighting Measures;
6. Accidental Release Measures;
7. Handling and Storage;
8. Exposure Controls/Personal Protection;
9. Physical and Chemical Properties;
10. Stability and Reactivity;
11. Toxicological information;
12. Ecological information;
13. Disposal Considerations;
14. Transport Information;
15. Regulatory information, and
16. Other information.

© Toxics Use Reduction Institute, University of Massachusetts Lowell 11

Expanded SDS Collapse All
You are currently editing: Sample Chemical

Save changes

- SECTION 2: Hazards identification
- SECTION 3: Firefighting measures
- SECTION 4: Exposure controls/personal protection
- SECTION 5: Physical and chemical properties
- SECTION 6: Stability and reactivity
- SECTION 7: Ecological information
- SECTION 8: Disposal considerations
- SECTION 9: Regulatory information
- SECTION 10: Other information
- External Resources
- Expert Judgement
- Technical Data Sheet

SECTION 5: Physical and chemical properties

| Units | Value | Score |
|--------------------------------------|-------|-------|
| pH | | |
| Comsolubility | | |
| Dose | | |
| Volatile organic compound | | |
| Vapor pressure | | |
| Flash point, liquid | | |
| SECTION 10: Stability and reactivity | | |
| SECTION 11: Ecological information | | |
| SECTION 12: Disposal considerations | | |
| SECTION 13: Regulatory information | | |
| SECTION 14: Other information | | |
| External Resources | | |
| Expert Judgement | | |
| Technical Data Sheet | | |

© Toxics Use Reduction Institute, University of Massachusetts Lowell 12

Select Chemical to Evaluate

| Address | Name | CAS | Date Created/Reviewed | Enrichment Score | AH | ChE | SH | FR | LT | AH | FF | FL | CF |
|--------------------------|---|-----------|-----------------------|------------------|----|-----|----|----|----|----|----|----|----|
| <input type="checkbox"/> | 14 Ethchlorvynol | 79-06-6 | 2007-09-03 | No | 58 | 8.0 | 8 | 0 | 8 | 7 | 6 | 8 | 6 |
| <input type="checkbox"/> | 15 Methylene Chloride | 75-09-2 | 2007-09-03 | No | 48 | 7.3 | 8 | 0 | 2 | 6 | 6 | 8 | 8 |
| <input type="checkbox"/> | 16 Acetone | 67-64-1 | 2007-09-03 | No | 43 | 5.8 | 5 | 7 | 2 | 10 | 2 | 8 | 5 |
| <input type="checkbox"/> | 17 Sodium hydroxide | 1300-58-3 | 2007-09-31 | No | 40 | 6.0 | 10 | 5 | 4 | 3 | 2 | 10 | 6 |
| <input type="checkbox"/> | 18 Sodium hydroxide | 1300-73-2 | 2007-09-31 | No | 38 | 6.3 | 10 | 4 | 6 | 3 | 2 | 10 | 7 |
| <input type="checkbox"/> | 19 1,1,1,3,3-pentafluorobutane | 406-08-6 | 2007-09-31 | No | 43 | 5.8 | 6 | 2 | 2 | 10 | 6 | 10 | 5 |
| <input type="checkbox"/> | 17 Benzyl Alcohol | 100-51-6 | 2007-09-03 | No | 43 | 5.8 | 8 | 4 | 8 | 4 | 2 | 4 | 4 |
| <input type="checkbox"/> | 18 n-Propyl Bromide | 106-94-5 | 2007-09-03 | No | 58 | 8.1 | 8 | 8 | 7 | 10 | 3 | 10 | 10 |
| <input type="checkbox"/> | 19 N-Methyl-2-pyrrolidone | 872-50-4 | 2007-09-03 | No | 47 | 5.8 | 8 | 2 | 5 | 2 | 8 | 5 | 8 |
| <input type="checkbox"/> | 20 Trans,1,2-Dichloroethylene | 156-60-5 | 2007-09-03 | No | 38 | 5.8 | 6 | 6 | 2 | 6 | 2 | 10 | 6 |
| <input type="checkbox"/> | 21 Trans-1-Chloro-3,3,3-trifluoroethane | 2730-43-0 | 2007-09-03 | No | 37 | 5.6 | 4 | 6 | 10 | 4 | 7 | 4 | 6 |
| <input type="checkbox"/> | 22 2-Butanethanol | 11-76-2 | 2007-09-03 | No | 40 | 5.1 | 8 | 6 | 2 | 4 | 3 | 5 | 6 |

© Toxics Use Reduction Institute, University of Massachusetts Lowell 16

Click on Chemical Name and See This:

Back Expand All Collapse All
 You are currently viewing: Trichloroethylene
 145, 79-D-6
 Index 14
 Created on: 2007-09-19
 Add Trichloroethylene To Session

- Acute Human Effects
- Chronic Human Effects
- Ecological Hazards
- Environmental Fate & Transport
- Atmospheric Hazard
- Physical Properties
- Process Factors
- Life Cycle Factors

© Toxics Use Reduction Institute, University of Massachusetts Lowell 17

Side By Side Comparison

| Categories | TURI | |
|--------------------------------|----------------------|-------------------|
| | Trichloroethylene ne | Trichloroethylene |
| Acute Human Effects | 8 | 0 |
| Chronic Human Effects | 8 | 0 |
| Ecological Hazards | 8 | 0 |
| Environmental Fate & Transport | 7 | 0 |
| Atmospheric Hazard | 8 | 0 |
| Physical Properties | 10 | 0 |
| Process Factors | 10 | 0 |
| Life Cycle Factors | 10 | 0 |
| Product Score | 0 | 8 |
| Final Score | 0 | 8 |

© Toxics Use Reduction Institute, University of Massachusetts Lowell 18

Sliders

Each Endpoint Category Score
Export All Scores
Export All Categories All

| Category | Min | Max |
|---------------------------------|----------------------------------|-------------------------|
| Categories | Trichloroethylene ne 10.07.07 | Trichloroethylene ne |
| Acute Human Effects | 8 | 8 |
| Chronic Human Effects | 9 | 9 |
| Sub-Category | Trichloroethylene ne 10.07.07 | Trichloroethylene ne |
| Carcinogen | 10 | 10 |
| Mutagen/Teratogen | 8 | 8 |
| Reproductive/Developmental | 8 | 8 |
| Neurotoxicity | 9 | 9 |
| Respiratory Sensitivity/Disease | 8 | 8 |
| Endocrine System Effects | 8 | 8 |
| Other Chronic Organ Effects | 8 | 8 |
| Ecological Hazards | 8 | 8 |
| Environmental Fate & Transport | 7 | 7 |
| Atmospheric Hazard | 8 | 8 |
| Physical Properties | 10 | 10 |
| Process Factors | 8 | 8 |
| Life Cycle Factors | 10 | 10 |
| Product Score | 0 | 8 |
| Final Score | 0.00 | 7.87 |

Why 17

© Toxics Use Reduction Institute University of Massachusetts Lowell 19

Database Matrix of Endpoints

Endpoints
Hazard Score Database:
Table contains values and endpoints for each of the categories that are used to assess scores to entered data. Maintained by TURI.

| Endpoint | Score |
|--------------------------------|-------|
| Endpoint All | 8 |
| Category All | 8 |
| Acute Human Effects | 8 |
| Chronic Human Effects | 9 |
| Ecological Hazards | 8 |
| Environmental Fate & Transport | 7 |
| Atmospheric Hazard | 8 |
| Physical Properties | 10 |
| Process Factors | 8 |
| Life Cycle Factors | 10 |

© Toxics Use Reduction Institute University of Massachusetts Lowell 20

Database Matrix of Endpoints

| Endpoint | Score | Endpoint | Score | Endpoint | Score | Endpoint | Score | Endpoint | Score |
|---------------------|-------|-----------------------|-------|--------------------|-------|--------------------------------|-------|--------------------|-------|
| Acute Human Effects | 8 | Chronic Human Effects | 9 | Ecological Hazards | 8 | Environmental Fate & Transport | 7 | Atmospheric Hazard | 8 |
| Physical Properties | 10 | Process Factors | 8 | Life Cycle Factors | 10 | Product Score | 0 | Final Score | 7.87 |

© Toxics Use Reduction Institute University of Massachusetts Lowell 21



