



## CHEMVIEW: EPA'S WEB TOOL FOR TSCA CHEMICALS

2014 NATIONAL TRAINING CONFERENCE ON THE TOXICS RELEASE INVENTORY,
ARLINGTON, VA

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May 7, 2014|



- Background
- Purpose of ChemView
- Content
- Who Does ChemView Help?
- Searching the database
- Future Implementation Areas
- Seeking Feedback





# BACKGROUND

- Increasing transparency is a key element of EPA's chemicals management program
- Previously, EPA had multiple databases with various TSCA chemical information
  - Information was difficult to find and use
- Stakeholders indicated a strong interest in viewing EPA's TSCA "file cabinet"
- In 2012 we made the decision to bring together information EPA has received or developed about chemicals regulated under TSCA in one place: ChemView.



# Purpose of ChemView

- To improve and streamline public access to information on TSCA chemicals
- Features of the database
  - Easy to use
    - One screen: search parameters on the left; search results on the right
  - Ability to search with multiple parameters (chemical name, use, category, endpoint)
  - Summary and in-depth levels of detail on TSCA chemicals





## CONTENT

- ChemView reflects four key types of information:
  - Data submitted to EPA under TSCA
    - Test data
    - Health and safety studies
    - Substantial risk reports
  - EPA-developed assessments
    - Hazard Characterizations (HCs), Alternative Assessments, Safer Chemicals Ingredients List (SCIL), IRIS
  - EPA actions
    - Rules (e.g., SNURs) and other actions
  - Manufacturing, Processing, Use and Release Data
    - Chemical Data Reporting, Toxics Release Inventory
- Phased approach to entering data; currently ~1,500 chemicals
  - EPA will add chemicals and functionality regularly



# Who does ChemView Help?

- Chemical Users EPA's target audience
  - Processors, formulators, distributors can compare available data on multiple chemicals
  - Promotes informed decision making and safer chemical choices by chemical user community
- Additional Users
  - Risk Assessors
    - Ready access to publicly available screening level information, as well as source documents
  - Risk Communicators
    - At a glance results on the information EPA has on TSCA chemicals
    - Data provided to EPA on health/environmental effects; EPA assessments of chemicals (e.g., HCs, alternative assessments); regulatory information



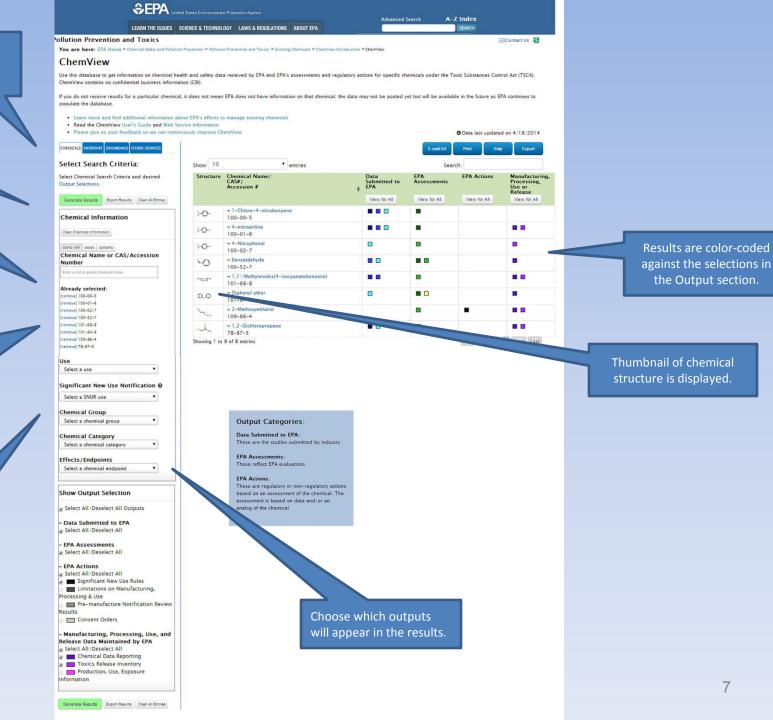
Search Criteria

Note: These are "and" criteria

Chemical groups such as Design for **Environment: Safer Chemical Ingredient** 

> Chemical categories such as anilines or cobalt compounds

Searches by Use or a Significant New



Chemical "home page" describes available info

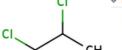
Structure

Output type

Effects and number of endpoint test submissions

Information from other agency collections, such as TRI and CDR

Print



#### ¬ 1,2-Dichloropropane

Propane, 1,2-dichloro-

1,2-Dichloropropane (as impurity only; no longer cleared as inert)

1,2-Dichloropropane, dry weight

Dichloropropane

Dichloropropanes

Octachlorodibenzofuran

Propylene dichloride

Propylenedichloride

CAS #:

78-87-5

#### Data Submitted to EPA

Chemical Test Rule Data

Ecotoxicity

Acute aquatic toxicity (3)

Chronic aquatic toxicity (1)

Human Health

Developmental toxicity (1)

Metabolism and Pharmacokinetics (3)

Mutagenicity/Genetic toxicity (1)

Neurological toxicity (1)

Reproductive toxicity (1)

High Production Volume Information System

**HPVIS** 

#### **EPA Assessments**

Integrated Risk Information System

IRIS

#### Manufacturing, Processing, Use, and Release Data Maintained by EPA

Chemical Data Reporting

DOW CHEMICAL CO

DOW CHEMICAL CO

DOW CHEMICAL CO

Toxics Release Inventory

TI

8

Chemical name and

synonyms

Documentation may be available on the assessment of the chemical's testing

First layer of results include:

Quick view of all results under one type of endpoint

Print | E-mail Url | Export

1,2-Dichloropropane

78-87-5

Metabolism and Pharmacokinetics

Study Type	Type of Testing	Protocol/Guideline	Species	Dose/Concentration	Study Results	Results based on Critical Effect	Agency Adequacy
	Submitted						Review
In Vitro Dermal	Required	OECD 428: Skin	Human	C^14 radiolabel:	Permeability coefficient (Kp) =	The test substance was shown	View
Absorption Rate	Test Rule	Absorption: In Vitro	abdominal	1200 µL/cm2	$4.32 \times 10^{-4}$ cm/h; short-term	to penetrate human skin at a	
Testing	Testing	Method	skin	(permeability	penetration rate = 677.8 μg	rate of 677.8 µg equiv/cm2/h	
			(cadavers)	coefficient	equiv/cm2/h (10-min	(10 min) or 665.8 μg	
				experiment); 20	exposure) or 665.8 μg	equiv/cm2/h (60 min). The	
				μL/cm2 (short-term	equiv/cm2/h (60-min	permeability coefficient is 4.32	
				experiments)	exposure)	x 10^-4 cm/h.	
Pharmacokinetics	Required	40 CFR 795.230	Rat	0, 1, and 100 mg/kg-	Major routes of elimination:	The majority of dichloropropane	
and Metabolism	Test Rule			bw/day (single	urine (37-52%) and expired air	was excreted within 24 hours;	
	Testing			exposure; 14C-	(32-40%); most within 24	major routes of elimination in	
				labeled); 0 and 1	hours. Three of 4 metabolites in	the rat were the urine and	
				mg/kg-bw/day (8	the urine were mercapturic acid	expired air. The urine contained	
				days; 7 days	metabolites.	at least three mercapturic acid	
				unlabeled plus 1 day		metabolites.	
				14C-labeled)			
Pharmacokinetics	Required	40 CFR 795.230	Rat	0, 5, 50, and 100	Major routes of elimination:	The majority of dichloropropane	
and Metabolism	Test Rule			ppm	urine (55-65%) and expired air	was excreted via the urine and	
	Testing				(16-23%); most within 24 hr.	expired air; the urine contained	
					Mercapturic acid metabolites	at least three mercapturic acid	
					were identified in the urine.	metabolites. Peak blood levels	
					Elimination from blood (t1/2):	were seen 4 hours post-dosing;	
					30 (males)and 24 (females)	half-lives for elimiation were 30	
					min; peak plasma	(males) and 24 (females) min.	
					concentrations 4 h post-dosing		

Link to full source document

Print | E-mail Url



# Second layer of

results include:

Chemical information

Short summary and description by effect, endpoint, and testing submission

#### Chemical Test Rule Data

View Full Test

Chemical Name: 1,2-Dichloropropane CAS Number/Accession Number: 78-87-5

Federal Register Citation: 69FR22402; 51FR32079; 52FR37138; Code Federal Regulation: 40 CFR 799.5115; 40 CFR 799.1550;

#### Human health:

- · Metabolism and Pharmacokinetics
  - Study Type: In Vitro Dermal Absorption Rate Testing
  - Type of Testing Submitted: Required Test Rule Testing
  - Protocol/Guideline
    - OECD 428: Skin Absorption: In Vitro Method
  - Good Lab Practices
    - Yes
  - Year Study Performed : November 21, 2005
  - Type of Study
    - Measured
  - . Duration of Study: 10 minutes, 60 minutes, or 8 hours
  - Species
  - Human abdominal skin (cadavers)
  - Sex
    - Female, Male
  - Number of Organisms per Group: 3 donors (1 male and 2 females); 6 skin replicates from 3 donors (permeability coefficient experiment); 12 replicates from 3 donors (short-term experiments)
  - Test Substance Purity/Composition: 99.0%
  - Dose/Concentration: C^14 radiolabel: 1200 μL/cm2 (permeability coefficient experiment); 20 μL/cm2 (short-term experiments)
  - Dose Frequency : Single exposure
  - Route
  - Exposure Period: 8 hours (permeability coefficient experiment); 10 or 60 minutes (short-term penetration rate experiments)
  - Study Results: Permeability coefficient (Kp) = 4.32 x 10^-4 cm/h; short-term penetration rate = 677.8 µg equiv/cm2/h (10-min exposure) or 665.8 µg equiv/cm2/h (60-min exposure)
  - Results based on Critical Effect: The test substance was shown to penetrate human skin at a rate of 677.8 µg equiv/cm2/h (10 min) or 665.8 µg equiv/cm2/h (60 min). The permeability coefficient is 4.32 x 10^-4 cm/h.
  - Agency Adequacy Review

Chemical testing adequacy review

**Source Document** 

p. 1



COPT COU

The Dow Chemical Company Midlan f. Michigan 48674

05 DEC 14 AM 6:48

1803 BUILDING December 8, 2005

#### VIA FEDERAL EXPRESS

Document Control Office (7407)
Office of Pollution Prevention and Toxics (OPPT)
Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460-0001
Attn: TSCA Section 4

RE: DOCKET NO. OPP7-2003-0006; 40 CFR 799.5115 SUBMISSION OF IN VITRO DERMAL ABSORPTION RATE TESTING FOR PROPYLENE DICHLORIDE (CASRN 78-87-5)

In compliance with 40 CFR 790.55(h)(7), as amended, by communication from EPA dated May 26, 2005, enclosed are six copies of the final study report, "Propylene Dichloride: *In Vitro* Dermal Absorption Rate Testing."

If there are questions, please contact me.

Sincerely, Lie Chargest

Linda C. Burgert

EH&S Product Regulatory Management

PH: 989-636-1011 FAX: 989-638-9933

E-MAIL: |burgert@dow.com

jt

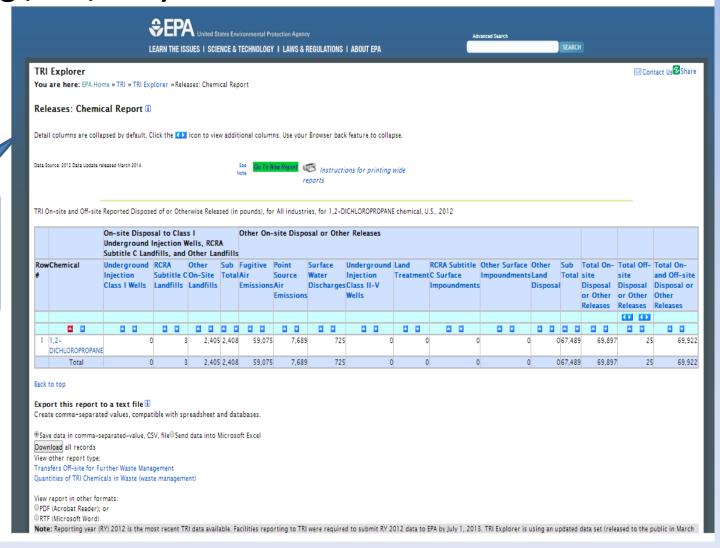
CONTAIN NO CBI



# Incorporating other Agency data collections (e.g., TRI, IRIS)

Data is directly pulled in from the originating source collection.

TRI provides current disposal and release data, enhancing the robust view of chemical information found in ChemView.



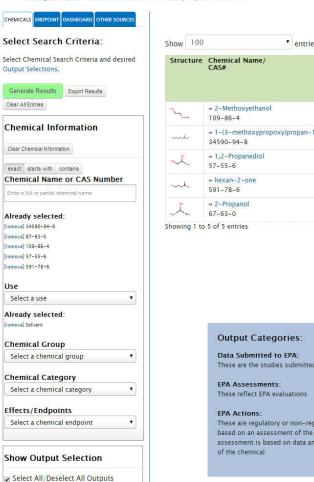
Example of USE selection with across the board results - Solvent

#### ChemView

Use this database to get information on chemical health and safety data received by EPA and EPA's assessments and regulatory actions for specific chemicals under the Toxic Substances Control Act (TSCA). ChemView contains no confidential business information (CBI).

If you do not receive results for a particular chemical, it does not mean EPA does not have information on that chemical; the data may not be posted yet but will be available in the future as EPA continues to populate the database.

- · Learn more and find additional information about EPA's efforts to manage existing chemicals
- · Read the ChemView User's Guide
- · Please give us your feedback so we can continuously improve ChemView







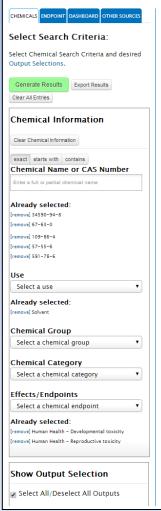
Example of USE (Solvent) and Endpoint selection for developmental/ reproductive selection with across the board results

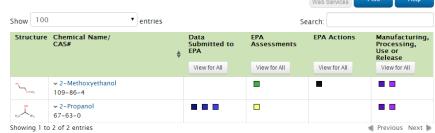
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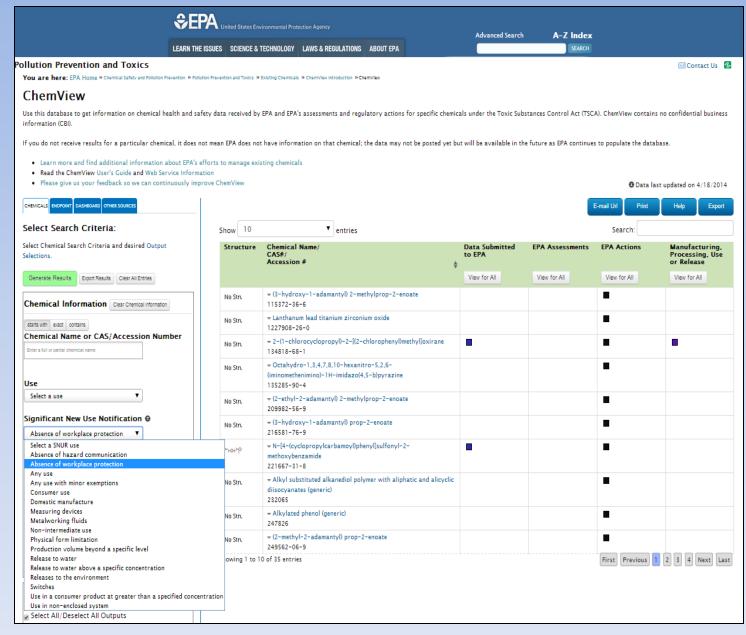
Data Submitted to EPA:
These are the studies submitted by industry

EPA Assessments:
These reflect EPA evaluations

EPA Actions:
These are regulatory or non-regulatory actions based on an assessment of the chemical. The assessment is based on data and/or an analog of the chemical

**Output Categories:** 

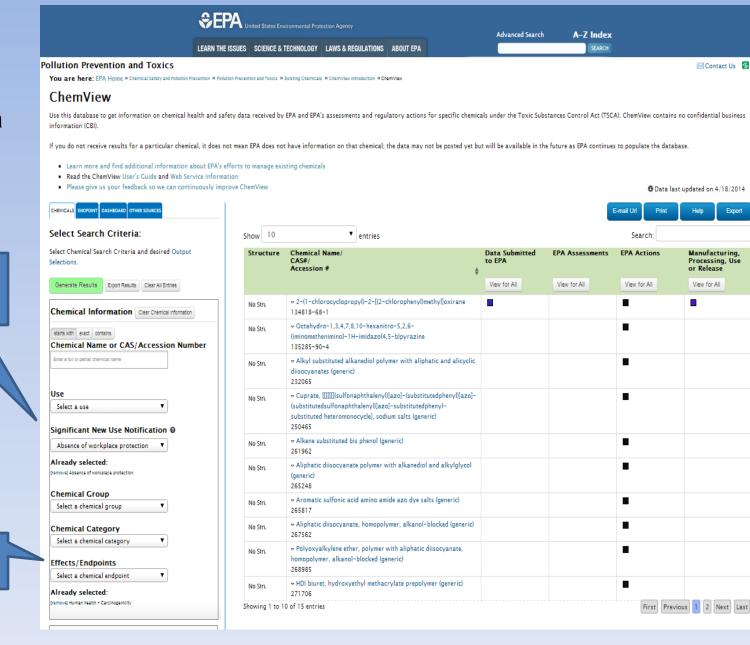
Example of SIGNIFICANT NEW USE (Absence of workplace protection) selection with across the board results



Example of cross referencing output criteria for specific results

Significant New Use – Absence of workplace protection

Effect/ Endpoints – Carcinogenicity



# **FUTURE IMPLEMENTATION AREAS**

- Add content
- Enhance search capabilities for specific audiences
- Enhance scope through tabs to related chemical information (EPA, Federal, International)
- Continue outreach and solicit feedback
- Infrastructure enhancements
  - One EPA portal for chemical safety.





# **SEEKING FEEDBACK**

- Planned survey to seek feedback from users later this Spring.
- Comment feature built into the web site. EPA encourages comments/suggestions for improvements.

www.epa.gov/chemview

Thank you!

