

Paint Thinners (o-DCB) Acute Full Analysis Results

Chemical: o-DCB
Product/Article: Paint thinners
Use Environment: Residence - Utility room
Scenario Description/Notes: Not provided

Paint Thinners (o-DCB) Acute: Combined Analysis Results

Receptor	Inhalation		Ingestion		Dermal		Total	
	Acute Dose Rate (mg/kg/d)	Chronic Average Daily Dose (mg/kg/d)	Acute Dose Rate (mg/kg/d)	Chronic Average Daily Dose (mg/kg/d)	Acute Dose Rate (mg/kg/d)	Chronic Average Daily Dose (mg/kg/d)	Acute Dose Rate (mg/kg/d)	Chronic Average Daily Dose (mg/kg/d)
Lifetime_LADD	0.00E+00	4.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-05
Adult	3.04E-03	5.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-03	5.00E-05
Youth2	3.52E-03	5.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-03	5.50E-05
Youth1	4.47E-03	7.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E-03	7.41E-05
Child2	7.70E-03	1.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-03	1.19E-05
Child1	9.10E-03	1.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-03	1.61E-05
Infant2	1.12E-02	1.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-02	1.98E-05
Infant1	1.19E-02	2.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-02	2.11E-05

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Paint Thinners (o-DCB) Acute: Inhalation Results

Chronic Inhalation Results:

Receptor	Background Chronic Dose (mg/kg/d)	Chronic Dose (mg/day)	Chronic ADD (mg/kg/d)	Chronic ADC Zone 1 (mg/m3)	Chronic
Adult	0.00E+00				
Youth2	0.00E+00				
Youth1	0.00E+00				
Child2	0.00E+00				
Child1	0.00E+00				
Infant2	0.00E+00				
Infant1	0.00E+00				

Time to background concentration- chronic (hr):

Acute Inhalation Results:

Receptor	Background ADR (mg/kg/d)	Peak Dose (mg/day)	ADR (mg/kg/d)	Peak Conc. (mg/m3)
Adult				
Youth2				
Youth1				
Child2				
Child1				
Infant2				
Infant1				

Time to background concentration- acute (hr):

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Paint Thinners (o-DCB) Acute: Ingestion Results

Chronic Ingestion Results:

Receptor	Chronic ADD (mg/kg/d)
Adult	0.00E+00
Youth2	0.00E+00
Youth1	0.00E+00
Child2	0.00E+00
Child1	0.00E+00
Infant2	0.00E+00
Infant1	0.00E+00

Acute Ingestion Results:

Receptor	ADR (mg/kg/d)
Adult	0.00E+00
Youth2	0.00E+00
Youth1	0.00E+00
Child2	0.00E+00
Child1	0.00E+00
Infant2	0.00E+00
Infant1	0.00E+00

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Paint Thinners (o-DCB) Acute: Dermal Results

Chronic Dermal Results:

Receptor	Applied to Skin Chronic ADD (mg/kg/d)	Skin Contact Chronic ADD (mg/kg/d)	Vapor to Skin Chronic ADD (mg/kg/d)	Total Chronic Dermal ADD (mg/kg/d)
Adult	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Youth2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Youth1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Infant2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Infant1	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Acute Dermal Results:

Receptor	Applied to Skin ADR (mg/kg/d)	Skin Contact ADR (mg/kg/d)	Vapor to Skin ADR (mg/kg/d)	Total Acute Dermal ADR (mg/kg/d)
Adult	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Youth2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Youth1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Child1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Infant2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Infant1	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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CEM Scenario Summary

Scenario Name and Definition

Scenario: Paint Thinners (o-DCB) Acute
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Scenario Description/notes:

Models

Models for the Selected Product or Article:	VOC	E1: Emission from Product Applied to a Surface Indoors Incremental Source Model
		P_INH1: Calculation of Inhalation Dose from Product Usage
		P_INH2: Calculation of Inhalation Dose from Product Usage: Near-field Option
	SVOC/VOC	P_DER2a: Dermal Dose from Product Applied to Skin, Fraction Absorbed Model
	SVOC/VOC	P_DER2b: Dermal Dose from Product Applied to Skin, Permeability Model

Additional Product Options

Product Users: ☒ Adult ☒ Youth ☐ Child
Activity Pattern: ☒ SAH ☐ Part-time ☐ Full-time
Use a User Defined Emission Rate? ☐ Let CEM Define Emission Rate ☒ Use a User-Defined Emission Rate
Dermal Absorption or Permeability? ☐ Absorption Fraction Method ☒ Permeability Method
Use Near Field Zone? ☐ Do Not Use Near Field in Zone 1 ☒ Use Near Field in Zone 1

Inputs

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Location	Required Input	Value
1. Scenario	Background Air Concentration (mg/m3)	0.00E+00
1. Scenario	Weight Fraction of Chemical (-)	3.00E-01
2. Inputs; a. Chemical Properties	Log Octanol-water partition coefficient (-)	1.10E+00
2. Inputs; a. Chemical Properties	Molecular Weight (g/mol)	1.47E+02
2. Inputs; a. Chemical Properties	Saturation Concentration in Air (mg/m3)	1.07E+04
2. Inputs; a. Chemical Properties	Vapor Pressure (torr)	1.35E+00
2. Inputs; b. Product/Article Properties	Density of Product/Article (g/cm3)	7.80E-01
2. Inputs; b. Product/Article Properties	Duration of Use - Acute (min)	1.80E+02
2. Inputs; b. Product/Article Properties	Duration of Use - Chronic (min)	1.00E+01
2. Inputs; b. Product/Article Properties	Frequency of Use - Acute (events/day)	1.00E+00
2. Inputs; b. Product/Article Properties	Frequency of Use - Chronic (events/year)	2.30E+01
2. Inputs; b. Product/Article Properties	Mass of product used - acute (g/use)	1.79E+01
2. Inputs; b. Product/Article Properties	Mass of product used - chronic (g/use)	1.79E+01
2. Inputs; b. Product/Article Properties	Product Dilution Fraction (-)	1.00E+00
2. Inputs; b. Product/Article Properties	Skin Permeability Coefficient (cm/hr)	3.41E-03
2. Inputs; c. Environment Inputs	Air Exchange Rate, Zone 1 (per hour)	4.50E-01
2. Inputs; c. Environment Inputs	Air Exchange Rate, Zone 2 (per hour)	4.50E-01
2. Inputs; c. Environment Inputs	Building Volume (m3)	4.92E+02
2. Inputs; c. Environment Inputs	Interzone Ventilation Rate (m3/hr)	7.25E+01
2. Inputs; c. Environment Inputs	Use Environment Volume (m3)	2.00E+01

Exposure Factors				
Receptor	Body Weight	Inhalation After Use	Inhalation During Use	Surface Area to Body Weight
Adult (≥21 years)	80	0.61	0.74	6.19
Youth (16-20 years)	71.6	0.68	0.72	5.8
Youth (11-15 years)	56.8	0.63	0.78	6.34
Child (6-10 years)	31.8	0.5	0.66	8.02

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Receptor	Body Weight	Inhalation After Use	Inhalation During Use	Surface Area to Body Weight
Small Child (3-5 years)	18.6	0.42	0.66	9.95
Infant (1-2 years)	12.6	0.35	0.72	11.51
Infant (<1 year)	7.8	0.23	0.46	13.46

Notes: body weight = kg; dust ingestion rate = mg/day; inhalation rate after use = m3/hr; inhalation rate during use = m3/hr; surface area to body weight ratio = m2/kg; transfer coefficient = cm2/hr

Receptor	Exposure Duration - Chronic	Exposure Duration - Acute	Avg Time - Chronic	Avg Time - Acute
Adult (≥21 years)	1	1	1	1
Youth (16-20 years)	1	1	1	1
Youth (11-15 years)	1	1	1	1
Child (6-10 years)	1	1	1	1
Small Child (3-5 years)	1	1	1	1
Infant (1-2 years)	1	1	1	1
Infant (<1 year)	1	1	1	1

Notes: averaging time - chronic = years; averaging time - acute = days; exposure duration - chronic = years; averaging time - acute = days