

# Proposed Amended Rule 102 – Definition of Terms

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*Board Assistant Briefing  
September 3, 2009*



# *Dimethyl Carbonate (DMC)*

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- Working closely with OEHHA & CARB
  - OEHHA forwarded a draft interim Acute REL
  - No Chronic REL issued yet
  - Supports approach of analyzing risks from metabolite
  - Anticipates low environmental exposures

# *Health Risk Assessment for DMC*

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- Used Tier 1 screening level for methanol
  - Reported usage levels at 4 different-sized commercial/industrial facilities
  - Area Source/Consumer application
- Used different conservative scenarios using acute and chronic risk factors for methanol

## Methanol Health Risk Evaluation from Usage at Permitted Facilities (Commercial/Industrial)

Component	DMC Usage gallons/yr	DMC Emissions lb/yr	Methanol Equivalent Emissions lb/yr	Methanol Chronic Screening Emissions lb/yr	Methanol Equivalent Emissions lb/hr	Methanol Acute Screening Emissions lb/hr
Facility A	75	669	476	132,000	0.23	14
Facility B	420	3,747	2,666	132,000	1.28	14
Facility C	1,274	11,365	8,087	132,000	3.89	14
Facility D	100	892	635	132,000	0.31	14

## Methanol Health Risk Evaluation from Non-Permitted Fugitive Use (Residential/Architectural)

DMC Usage gallons/home	DMC Emissions lb/day	Methanol Equivalent Emissions lb/day	Methanol Equivalent Emissions lb/hr	Methanol Acute Screening Emissions lb/hr	Methanol Equivalent Emissions lb/yr	Methanol Chronic Screening Emissions lb/yr
7.7	68.7	49	6.1	14	684	132,000

# Properties of DMC vs. Currently Used Compounds

Currently Used Compounds						Proposed Compound
	Ethylene Glycol	Isopropanol	Methyl Acetate	Acetone	Methyl Ethyl Ketone	Dimethyl Carbonate
Flash Point	111 °C	12 °C	-10 °C	-20 °C	-9 °C	18 °C
OSHA PEL	None	400 ppm	200 ppm	1000 ppm	200 ppm	200 ppm <sup>B</sup>
Acute REL <sup>A</sup>	None	3,200 ug/m <sup>3</sup>	None	None	13,000 ug/m <sup>3</sup>	28,000 <sup>B</sup> ug/m <sup>3</sup>
Chronic REL <sup>A</sup>	400 ug/m <sup>3</sup>	7,000 ug/m <sup>3</sup>	None	None	None	4,000 <sup>B</sup> ug/m <sup>3</sup>
Carcinogenic	No	No	No	No	No	No

<sup>A</sup> OEHHA/ARB Approved Risk Assessment Health Values

<sup>B</sup> Based on Methanol as surrogate