Proposed Amended Rule 102 – Definition of Terms

Board Assistant Briefing
September 3, 2009

Dimethyl Carbonate (DMC)

- 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

- 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[B]
Acute REL[A]	None	3,200 ug/m^3	None	None	13,000 ug/m^3	28,000[B] ug/m^3
Chronic REL[A]	400 ug/m^3	7,000 ug/m^3	None	None	None	4,000[B] ug/m^3
Carcinogenic	No	No	No	No	No	No

[A] OEHHA/ARB Approved Risk Assessment Health Values
[B] Based on Methanol as surrogate