

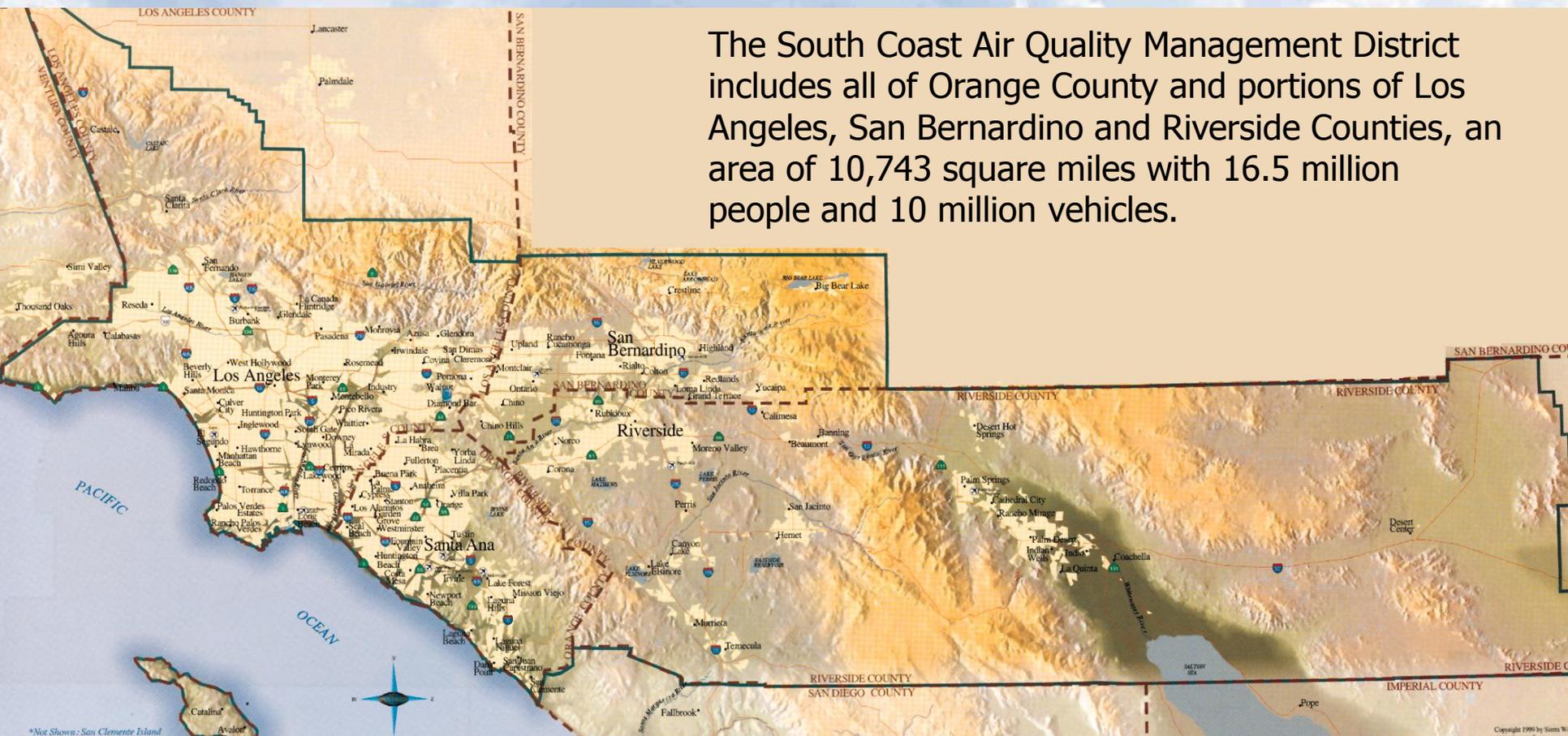
VOC Emissions from Metalworking Fluids

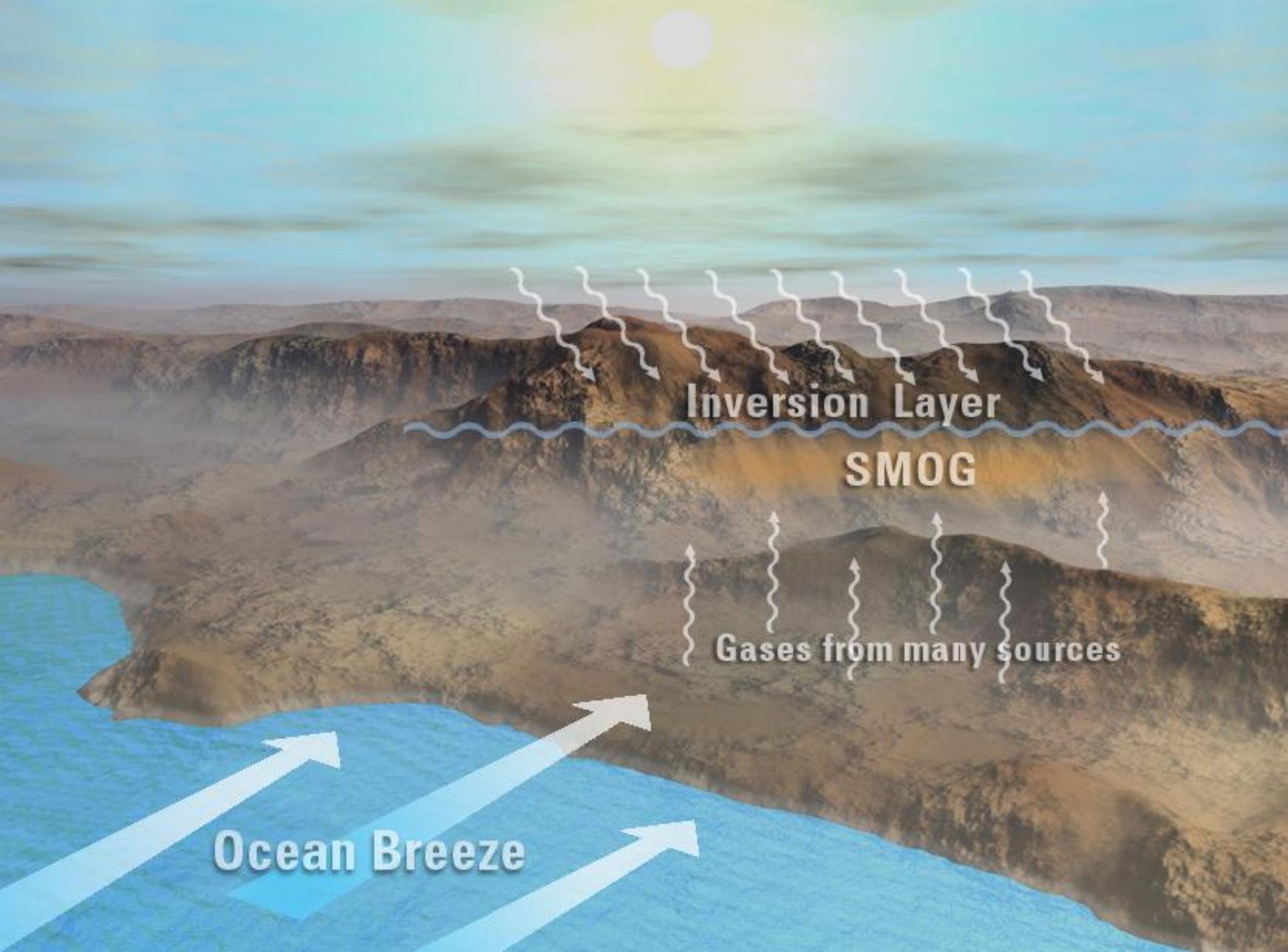


March 8, 2012

South Coast Air Quality Management District

The South Coast Air Quality Management District includes all of Orange County and portions of Los Angeles, San Bernardino and Riverside Counties, an area of 10,743 square miles with 16.5 million people and 10 million vehicles.





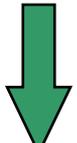
Inversion Layer

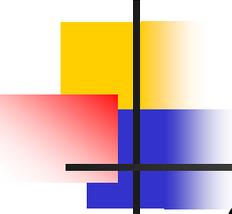
SMOG

Gases from many sources

Ocean Breeze

Since 1950s

- Population -
 - 4.8 Million  16.5 Million
- Vehicles -
 - 2.3 Million  10.5 Million
- Manufacturing
 - \$10.5 Billion  \$203.8 Billion
- Peak Ozone Levels -
 - 0.68 ppm  0.18 ppm

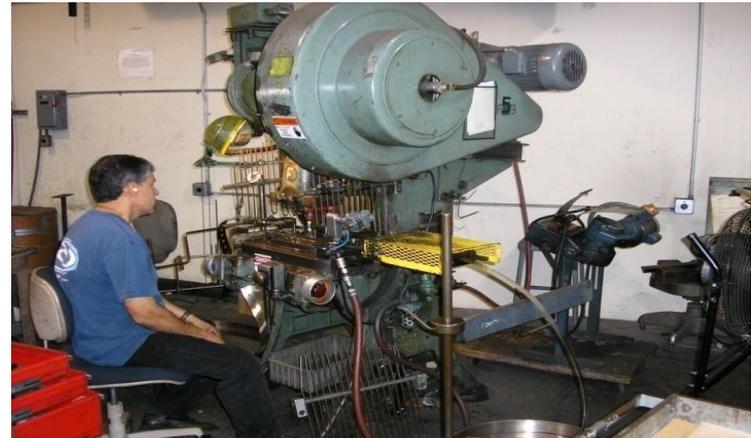


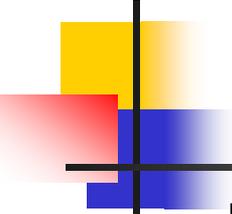
Background

- Southern California is the largest manufacturing site in U.S.
- Over 12,000 machining shops
 - Mostly small businesses
- SCAQMD surveyed local manufacturers and distributors
 - 4.2 million gallons of metalworking fluids sold in South Coast (2007)
 - Over 300,000 gallons were high VOC products
- Majority of products sold – No VOC information

Purpose

- Reduce VOC emissions
- Establish a test method to determine VOC content for metalworking fluids
- Minimize impacts on shops
- Prohibit sale of non-compliant materials





Rule Development Process

- Regular working group meetings
 - 200+ stakeholders participating/following meetings
- Laboratory committee to work on test method
- Collaborative effort to create a “smarter” rule
 - Open exchange of ideas
- Working towards common goal

Reduce air pollution

&

Minimize burden on industry

Applicability

- Manufacturing and Assembly operations
- &
- Direct-contact with products made for sale

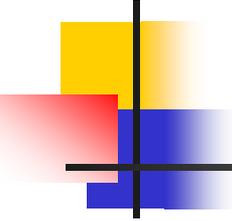


What Does the Rule Not Cover?

Rule does not apply to:

- Repair
- Maintenance
- Research
- Household
- Commercial
- Indirect/Accidental contact





Rule 1144 Shop Requirements

- Establish Volatile Organic Compound (VOC) content limits
 - Use of solvents and light oils (C12-C16) heavily restricted
 - VOC content limits “as used”
 - Use-Through allows inventory to be exhausted until June 30, 2012
- Streamlined record keeping
 - No record keeping for Super-Compliant products
 - Monthly purchase records

**DRAFT SAMPLE
FOR DISCUSSION PURPOSES ONLY**



South Coast Air Quality
Management District
P.O. Box 4944
Diamond Bar, CA
91765

RULE 1144 VOC LISTING

Legal Name of Manufacturer: > Machine It All	Manufacturer's ID Number: > 9999999
Street Address: > 21333 Painted Road	City: > Rancho Cucamonga
State: > CA	ZIP Code: > 90111
Responsible Party: > Jiminy Crickett	Position: > Supreme Commander

Manufacturer	Manufacturer's Product Code	Working Fluid Category	VOC Content (g/l)
Big Oil	ABC 123	Metalworking fluid	75
Cool It	XYZ 911	Metalworking fluid	20
ACME	RR44XY	Rust Inhibitor	250
MilShield	US 2010	Military Spec. Pres.	325
Slick	9876768-12	Direct-contact lube	10
Electrocut	ZAP-711	EDM	650

DRAFT SAMPLE
FOR DISCUSSION PURPOSES ONLY



South Coast Air Quality
Management District
P.O. Box 4944
Diamond Bar, CA
91765

RULE 1144 Usage Log - Jan 2011

Date of Data Entry:

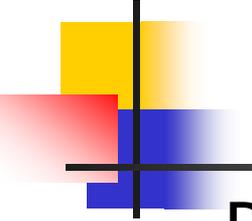
Legal Name of Manufacturer: > Machine It All	Manufacturer's ID Number: > 9999999
Street Address: > 21333 Painted Road	City: > Rancho Cucamonga
State: > CA	ZIP Code: > 90111
Responsible Party: > Jiminy Crickett	Position: > Supreme Commander

Manufacturer	Manufacturer's Product Code	Amount (gallons)	Initials
Big Oil	ABC 123	100	MM
Cool It	XYZ 911	5000	MM
ACME	RR44XY	250	MM
MilShield	US 2010	20	MM
Slick	9876768-12	50	MM
Electrocut	ZAP-711	400	MM

VOC Limits

FLUID	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2011	EFFECTIVE 1/1/2012
	VOC (g/L)	VOC (g/L)	VOC (g/L)
(A) Vanishing Oil	50		
(B) Metalworking Fluid			
(i) Metal Forming			75
(ii) Metal Removal			
(a) General			75
(b) Precision Metal Removal			130
(iii) Metal Treating			75
(iv) Metal Protecting			
(a) General	300		50
(b) Military Specified Preservative		340	
(C) Direct-Contact Lubricant			50

Manufacturer and Distributor Requirements



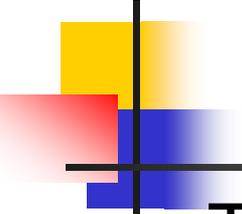
- Prohibition of Sale

- May inform distributors (in writing) not to sell certain products into SCAQMD
- Six month sell-through period
 - Products formulated before 1/1/2012

- Container labeling

- Manufacture date
- VOC content as shipped (undiluted) per ASTM E 1868
 - May be calculated
- Optional to include diluted VOC and Super-Compliant status

Annual Quantity and Emission Report



- Three year SCAQMD sales report
 - Report annually beginning in 2012 (for 2011 sales)
 - First report due April 1, 2012
- Report must include:
 - Product
 - Volume of sales in SCAQMD
 - VOC content
- May use AQMD/ILMA recommended format
- Data provided will be confidential
 - Only released in aggregate form

AQER (Recommended Format)

		South Coast Air Quality Management District P.O. Box 4944 Diamond Bar, CA 91765 959) 296-2000	RULE 1144 METALWORKING FLUID AND DIRECT-CONTACT ANNUAL QUANTITY AND EMISSION REPORT
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Section I - Administrative Information

Slidz Lubricants, Inc.

January 1, Dec. 31, 2011

5211 S. Laguna Street

Los Angeles

CA

90210

W.S. Pavton

President

909-296-2282

www.slidz.com

Section II - Product Information

Line Number	Name of product/manufacture AS LISTED ON THE LABEL	Brand Name	Product Name	Number of Products Grouped ¹	Base Stock Technology ²	Rule 1144 Category ³	VOC Content (g/L, unless dilution with water is indicated by "Dilution with water" or "Dilution with water" or "Dilution with water") ⁴	Dilution with water (%)	Dilution with water (%)	Quantity (gallons)
1	Slidz	Slidz-Quartz	SLIDZQUARTZ 200 Series	1	N	371	1			100
2	Slidz	Slidz-Arc	Slidz-Arc	1	N	342	1		1	100
3	Slidz	Slidz-Micro	Slidz-Micro	1	N	342	1			100
4	Slidz	Slidz-Cut	Slidz-Cut	1	N	342	1			100
5	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
6	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
7	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
8	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
9	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
10	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
11	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
12	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
13	Slidz	Slidz-300	Slidz-300	1	N	342	1			100
14	Slidz	Slidz-300	Slidz-300	1	N	342	1			100

¹ Number of Products Grouped: Products can be reported either individually or as a group. All grouped products are required to have the same value for columns E through G. Enter "1" if you are reporting one product individually.

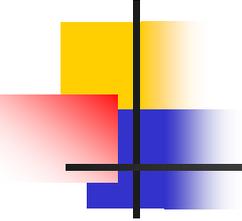
² Base Stock Technology: N = Naphthenic, P = Paraffinic, S = Synthetic (PAO, PAG, DE, etc.), VB = Vegetable-based, SWD = Petroleum oil-free synthetic water dilutable fluid, O = Other. For blends, use base stock with highest concentration.

³ Rule 1144 Category: VO = Varnishing Oil, MF = Metal Forming, MR = Metal Removal, PMR = Precision Metal Removal, MT = Metal Treating, MP = Metal Protecting.

⁴ VOC Content: Provide VOC content AS SOLD (same as listed on product label). For water-diluted materials, please list the lowest recommended dilution by % concentrate in water in the appropriate column.

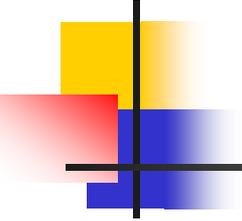
How did you determine AQMD Annual Sales Volume? Direct sales/Distributor sales/Other? Please list or explain.

If sold to a distributor or distributors, please include their name(s), address(es), and phone number(s):



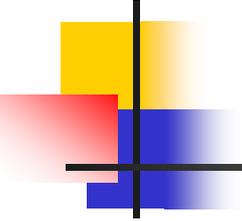
AQER - Administrative Information

- Company Name
- Address
- Responsible Party
 - Position
 - Phone number
 - E-mail address



AQER - Products

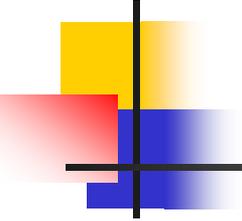
Line Number	Name of product manufacturer AS LISTED ON THE LABEL	Brand Name	Product Name
1	Slide	Slide-Quench	Quenching Oil 200 Series
2	Slide	Slide-Kool	Basic Soluble Oil
3	Slide	Slide-Anticorode	Rust Inhibitors 300 Series
4	Slide	Slide-Kut	Light duty Cutting
5	Slide	Slide-Kut	Heavy duty cutting
6	Slide	Slide-Draw	Stamping Lubricant
7	Slide	Slide-Hammer	Forging Compound



AQER – Product Grouping

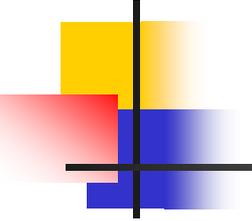
Product Name	Number of Products Grouped ¹	Base Stock Technology ² :	Rule 1144 Category ³	VOC Content in g/L (before dilution with water) ⁴
Quenching Oil 200 Series	3	N	MT	40
Basic Soluble Oil	1	N	MR	10
Rust Inhibitors 300 Series	12	P	MP	300
Light duty Cutting	4	N	MF	55
Heavy duty cutting	1	N	PMR	125
Stamping Lubricant	14	N	VO	650
Forging Compound	1	S	MF	22

All grouped products are required to have same base stock technology, rule category and VOC content



AQER – Base Stock Technology

- Metalworking fluid technology type
 - Naphthenic
 - Paraffinic
 - Synthetic
 - Vegetable
 - Petroleum oil-free synthetic water-dilutable
 - Other
- For blends, use base stock with highest concentration



AQER – Rule 1144 Category

- Applicable rule category
 - Vanishing Oil
 - Metal forming
 - Metal Removal
 - Precision Metal Removal
 - Metal Treating
 - Metal Protecting
- For products used in multiple rule categories, list each category

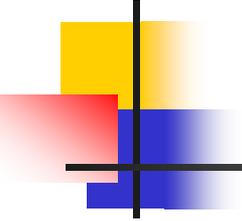
AQER – Emission Data

Product Name	VOC Content in g/L (before dilution with water)⁴	Intended for dilution with water? Indicate with a "Y" if yes	For water dilutable: list maximum recommended use concentration (lowest dilution ratio) by % concentrate in water	Quantity (gallons)
Quenching Oil 200 Series	40			160
Basic Soluble Oil	10	Y	7	30,800
Rust Inhibitors 300 Series	300	Y	50	400
Light duty Cutting	55			400
Heavy duty cutting	125			6,810
Stamping Lubricant	650			550
Forging Compound	22			4,479

Benefits/Costs

- Establishes VOC content test method for metalworking fluids
- 3.57 ton per day VOC emission reduction





Future Actions

- Compliance review
 - Verify labeling
 - Testing VOC content
- Explore feasibility of establishing lower VOC content limits for metalworking fluids
 - Reduce air pollution
 - &
 - Minimize burden on industry
- Continue dialogue with interested stakeholders

Questions or Comments?

Mike Morris - Air Quality Specialist

(909) 396-3282

mmorris@aqmd.gov

