Metalworking Fluid Committee Meeting

September 22, 2019
2:30-4:00 PM MST
Topics

- EPA Activities
  - SNURs
  - Test program on MCCP
  - Existing CP Substances

- International Issues
  - SCCP POPs
  - REACH Update
  - Australian review of MCCP
Status of CP SNURs

- All CP PMNs were approved subject to TSCA Section 5(e) consent orders (COs), this has resulted in SNURs for each substance
  - February 12, 2016 – SNUR for 3 vLCCPs
  - September 18, 2019 – SNUR for 10 CP substances (3 MCCPs, 7 LCCP/vLCCPs)

- EPA has included responses to comments in both SNURs, including:
  - Use of existing (EPA calls them “old”) CP CAS RN
  - 5-year testing/review period
  - Notification requirements
  - Environmental levels/PBT issues, etc.
EPA Response on PBT Policy

Comment

“the PMN substances have been manufactured, processed and used for the uses described in the PMN[s] for more than 40 years, manufacture, processing, distribution in commerce, use and disposal of the PMN substances in accordance with the provisions of the TSCA section 5(e) order do not create an unreasonable risk of injury to health or the environment.” [emphasis added]
EPA Response on “Old” CAS

- “Those CPs [PMN chemicals*] were not properly listed on the TSCA Inventory, and thus remained ‘new chemical’ substances as defined under TSCA.”
- “EPA determined it was more appropriate to manage them [MCCP and LCCP] under the TSCA New Chemicals Program.”
- “EPA is finalizing these SNURs to ensure that other manufacturers, importers and processors of these CPs are held to the same standards as the original PMN submitters.”
- “EPA notes that suppliers have been on notice of this issue for over 10 years and would have an additional 5 years to come into compliance under the terms of this SNUR.”

* It should be noted that the PMNs include MCCP and just about every common commercial variation of LCCP and vLCCP.
EPA Comments on 5-Year Period

- “The five-year time-trigger notification requirement is consistent with the underlying TSCA section 5(e) Orders for the CPs.”
- “Processors (who are not also manufacturers/importers) are exempt from this notification requirement.”
- Note: this 5-year period was established by EPA in order to generate and review data. During this period EPA is expected to make a data-based decision regarding the disposition of the CO/SNURs and may modify or revoke CO/SNURs. EPA may also issue SNUNs (to suppliers) to go beyond this period.
Status of Testing Program

- Formed new testing consortium
- Synthesized test materials
  - Developed method for radiolabel using tritium ($^3$H)
- Identified testing lab
- Working on analytical method development
- OECD 225 testing starting
- In regular communication with EPA on testing program and testing status.
Original EPA MCCP Testing Program

- **Biodegradation**
  - OECD 308 sediment simulation studies on C14, 56% Cl (wt.) and C16, 56% Cl (wt.)

- **Aquatic Toxicity**
  - OECD 225 sediment-water Lumbriculus and OECD 211 chronic daphnia studies on C14, 30% Cl (wt.)
  - If adverse effects are observed in C14 studies above the triggers, run same tests with C16, 56% Cl (wt.)

- **Bioaccumulation Testing**
  - Only if adverse effects are seen in toxicity studies
  - OECD 315: Bioaccumulation in Sediment-dwelling Benthic Oligochaetes and OECD 305: Bioaccumulation in Fish in C16, 56% Cl (wt.)
Modified Testing Program

- **Biodegradation**
  - EPA waived the OECD 308 sediment simulation studies given poor suitability of the test system to CPs (recently complete study in EU)

- **Sediment Toxicity**
  - Moving forward with OECD 225 sediment-water Lumbriculus study on C14, 30% Cl (wt.)
  - If adverse effects are observed in C14 study above, run same test with C16, 56% Cl (wt.)
  - Requesting that EPA waive the OECD 211 studies based on existing data and poor suitability of the test system to CPs

- **Bioaccumulation Testing**
  - Only if adverse effects are seen in toxicity studies
  - OECD 315: Bioaccumulation in Sediment-dwelling Benthic Oligochaetes and OECD 305: Bioaccumulation in Fish in C16, 56% Cl (wt.)
Legacy CP Substances

- Legacy = existing CP substances prior to recent PMN listings
- While all legacy CP substances remain on the TSCA inventory and several are on the active list, EPA:
  - Has previously called these legacy substances “illegal” for use with current CP products;
  - Has taken enforcement action on several suppliers using these legacy CAS numbers;
  - Indicated in the recent SNUR that it expects all CP suppliers (including importers) to use the new CAS numbers and to comply with the provisions of the SNUR/COs.
- EPA stated in a recent discussion that it is not going to issue a SNUR or a separate enforcement policy statement on these legacy substances but believes that its policy is clearly stated in the recent SNUR.
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS RN</th>
<th>TSCA Inventory Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraffin waxes and Hydrocarbon waxes chlorinated</td>
<td>63449-39-8</td>
<td>UVCB, Active</td>
</tr>
<tr>
<td>Alkanes, C12-13, chloro</td>
<td>71011-12-6</td>
<td>S</td>
</tr>
<tr>
<td>Alkenes, C12-24, chloro</td>
<td>68527-02-6</td>
<td>UVCB, T, Active</td>
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<tr>
<td>Alkenes, polymerized, chlorinated</td>
<td>68410-99-1</td>
<td>UVCB, XU, Active</td>
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<tr>
<td>Alkanes, C6-18, chloro</td>
<td>68920-70-7</td>
<td>UVCB, Active</td>
</tr>
<tr>
<td>Alkanes, chloro</td>
<td>61788-76-9</td>
<td>UVCB, Active</td>
</tr>
</tbody>
</table>
SCCP POPs

- SCCP added to the POPs list officially
- SCCP is no longer manufactured in North America or Europe (this has been the case for almost 10 years now)
  - Importation is also not allowed; EU is aggressively analyzing products for possible SCCP content
- China and India, which are Stockholm Convention signatories, appear to be considering options for restricting SCCP
  - Unclear if either are likely to prohibit SCCP manufacture or use in the near future, though some regulatory efforts appear underway
REACH - EU

- MCCP still under active review under REACH;
  - Final substance evaluation assessment expected soon.
- LCCP dossier recently updated to better define substance
  - No indication that ECHA has specific plans or concerns on LCCP beyond updating the substance description
- European Food Safety Authority (EFSA) just released draft review of CPs in dietary sources (including fish/wildlife) and found exposures/risks to be very low.
Australia

- NICNAS just started review of MCCP
- CPs are not manufactured in Australia and unclear how much is used
- A copy of the currently MCCP IUCLID dossier was provided to NICNAS for their evaluation
Thank You!

Andrew Jaques
Chlorinated Paraffins Industry Association
1250 Connecticut Avenue, NW, Suite 850
Washington, DC 20036
Phone: +1.202.419.1504
Email: ajaques@regnet.com
New York court invalidated NY program on August 27, 2019

Significant victory for industry

Held Disclosure Program was established in violation of State Administrative Procedures Act and the NY State Constitution

NYDEC had argued that its program was “guidance” and not a “rule”

Court rebuked agency for abuse of process

NYDEC can appeal decision or seek legislative endorsement of HCPIDP
NY Cleaner Ingredients Disclosure

- January 2019 - Governor Cuomo’s budget proposal
  - Included language granting sweeping authority to NYDEC commissioner
  - Online Ingredient Reporting
  - Ingredient Reporting to DEC
  - Labeling - On “consumer products”
- Large coalition worked to remove language from the budget
California SB 258

**Who must disclose?**

- **Manufacturer** of Designated Product Sold in California
  - Person or entity who manufacturers the designated products and whose name appears on the product label
  - OR a person or entity who the product is manufactured for or distributed by, as identified on the product pursuant to the federal Fair Packaging and Labeling Act.
California SB 258 - What Products Must Be Disclosed

- Chemically Formulated Consumer Product™ sold in California
  - Household
  - Institutional
  - Commercial
  - Concentrates
  - Ready to use
  - NOT industrial use

- Designated Products
  - Air care products
  - Automotive products
  - General cleaning products
  - Polish or floor maintenance products
  - Used primarily for janitorial, domestic, or institutional cleaning purposes
California SB 258 - Designated Lists

- Lists are 23 authoritative lists, individually codified and largely inclusive of those on the California Department of Toxic substances Control Safer Consumer Products Candidate Chemicals list.
- The lists are not static - subsequent revisions to these lists are incorporated into SB 258.
California SB 258 - When to Disclose

- January 1, 2020: Online disclosure requirements trigger
- January 1, 2021: On-label disclosure requirements trigger
- January 1, 2023: Intentionally added Prop. 65 ingredients must be listed on-label and online
All intentionally added ingredients, listed in order of predominance by weight, except ingredients present at a weight below one percent may be listed in any order.

A list of all nonfunctional constituents present in a product at a concentration at or above 0.01 percent (100 ppm).

1,4 dioxane must be disclosed at 0.001 percent (10 ppm).
California SB 258 - On-Label Disclosure

Option 1
- List each intentionally added ingredient that is included on a designated list
- List each fragrance allergen present at or above 0.01 percent (100 ppm)

Option 2
- List all intentionally added ingredients in a product
- Include a predetermined statement the product contain fragrance allergens
Federal Labeling Language

- Coalition headed by Grocery Manufacturers Association exploring federal legislation
  - Mirrors California SB 258, but with notable details
  - Empowers FTC with regulatory authority
  - No citation to hazard lists
  - Only in product scope of California SB 258
  - Preemption over all states, except California
- Congress not likely to address before 2020 elections
Metalworking Fluid Conference Update
Hydrocarbon GHS Aspiration Cat 1 Issues

- Original research\(^1\) shows three petroleum distillates (83, 109, 156 SUS) produced no deaths in an aspiration experiment while one of 73 SUS produced 1 death in 10.

- ILMA suggests that the GHS Subcommittee consider redefining the “bright line” from \(< 20.5 \text{ mm}^2/\text{sec} \) at 40°C to \(< 17.6 \text{ mm}^2/\text{sec} \) at 40°C based on Gerarde research (see GHS 3.10).

Hydrocarbon GHS Aspiration Cat 1 Issues

- ILMA Engage: “work with API to present Dr. Gerarde’s research on aspiration toxicity to UN GHS Subcommittee meeting. Goal is to establish a Category 1: bright line” at 75 SUS, which should result in changes to members health hazard pictograms.”

- Other organizations now involved:
  - American Petroleum Institute (Derek Swick, Ph.D.)
  - International Paint and Printing Inks Council (IPPIC)
  - Hydrocarbon Solvents Producers Association (CEFIC, Cornelia Tietz)
  - UEIL (Stephan Baumgärtel, Ph.D.)
Hydrocarbon GHS Aspiration Cat 1 Issues

- June meeting with German Federal Institute of Risk Assessment: opinion of Dr. Desel: it would be easier to change bright line cut off point based on data than to change pictogram

- GHS Chapter 3.10 origins: OECD Review Document No. 37 on Classification Systems for Substances which pose Aspiration Hazard
  - Canada, EU, US CPSC
  - US: 16 CFR 1700(a)(15) Prepackaged liquid solvents...that contain 10% or more...toluene, xylene, petroleum distillates...that have a viscosity < 100 SUS shall be packaged in accordance with 1700.15(a) and (b). **Question: based on what data did CPSC write this regulation?**
Hydrocarbon GHS Aspiration Cat 1

Issues: Possible Action Steps

- ILMA to ask CPSC (via FOIA, “blind submission?”) for data which justified 16 CFR 1700(a)(15)?

- Organizations including HSPA, UEIL, ILMA organize a workshop for UN GHS parties (most of whom are in EU) plus other interested stakeholders to:
  - Explain current situation
  - Market misinterpretation issues
  - Poison Centre issues
  - Data review or steps to obtain new data

- Develop updated aspiration toxicity methodology (ILMA lead): preliminary cost estimate: $2,000/product + method development

  Discussion: Is this important to you? Should ILMA stay engaged?
MWF: ASTM Update

- E34.50: Health & Safety Standards for Metalworking Fluids
- E37.01: Calorimetry & Mass Loss
- D02.L01: Metal Removal Fluids & Lubricants
MWF: E34.50 Update

- E34.50, H&S for Metalworking Fluids:
  - E2693, Practice for Prevention of Dermatitis in the Wet Metal Removal Fluid Environment: ballot to reapprove with minor changes closed September 20th
  - WK 68411: development of new standard agreed in May
  - Actions needed, if any?
ASTM WK68411

New Practice for Practice for minimizing heavy metal accumulation in metalworking fluids.

(What is a Work Item?)

Developed by Subcommittee: E34.50 | Committee E34 | Contact Staff Manager

1. Scope

This practice will describe the health risks associated with heavy metal accumulation in recirculating metalworking fluids (MWFs). It will address the health risks and waste discharge issues caused by such heavy metal accumulation. The practice will recommend strategies for minimizing heavy metal accumulation in MWFs.

Keywords

metal removal fluids, metal forming fluids, heavy metals, metalworking fluids, health and safety

Rationale

Long-life recirculating MWFs experience cycles of concentration that cause dissolved heavy metals and other non-volatile, soluble compound to accumulate to potentially toxic levels. This proposed new Practice will review the mechanisms that contribute to this accumulation and recommend means for controlling it.

The title and scope are in draft form and are under development within this ASTM Committee.
E1868-10 (2015), Method for Loss on Drying via Thermogravimetry

- Re-approval needed in 2020
- Next meeting, April 2, 2020, Boston, MA (coincides with ILMA Engage)
- Actions needed, if any?
  - Name task group?
Significance and Use

5.1 These test methods are used to estimate the amount of volatile materials present in a material.

5.2 These test methods are useful for design purposes, service evaluation, regulatory statutes, manufacturing control, quality control, specification acceptance, development, and research.

5.3 The results obtained by these test methods may be equivalent to those obtained by other test methods and may be known by other terms in their respective fields. Other tests and terms encountered include loss-on-heating (see Footnote 5 and Test Methods D6, D2288, and E359); heating loss (see Test Method D1509); evaporative loss (see Test Method D2595); volatile organic carbon, moisture, or water (see Test Methods D2216 and D3175); volatility (see Test Method D4893); highly volatile matter (see Test Method E897); and volatile content (see Guide D2832).

1. Scope

1.1 These test methods describe a procedure for determining the amount of volatile matter of any kind that is driven off from a test specimen under a specific set of temperature and time conditions. These test methods determine only the mass of material lost, not its identity.

1.2 These test methods are applicable to a wide variety of solid or liquid materials, mixtures, or blends where the major component is stable at the test temperature.

NOTE 1: These test methods can be applied to the analysis of volatile organic compounds (VOC) content in metalworking fluids and direct contact lubricants subject to South Coast Air Quality Management District (SCAQMD) Rule144.

1.3 The applicable temperature range for these test methods are generally between ambient temperature and 1000°C.

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 There is no ISO method equivalent to this test standard.

1.6 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.
MWF: D02.L01 Update

- WK 59484, Test Method for Comparison of Metalworking Fluids Using a Tapping Torque Test Machine
  - Draft 3 currently being balloted, with ballot close September 26th, 2019
  - Actions needed, if any?
Subcommittee D02.L0.01 on Metal Removal Fluids and Lubricants

Showing results 1-7 of 7 matching ACTIVE standards under the jurisdiction of D02.L0.01


See also WK66557 proposed revision

D2711-17 Standard Test Method for Demulsibility Characteristics of Lubricating Oils

See also WK68452 proposed revision

D2881-19 Standard Classification for Metalworking Fluids and Related Materials

D3705-14 Standard Test Method for Mist Properties of Lubricating Fluids


D6203-17 Standard Test Method for Thermal Stability of Way Lubricants


Showing results 1-1 of 1 matching Proposed New Standards under the jurisdiction of D02.L0.01

WK59484 Comparison of Metal Removal Fluids Using a Tapping Torque Test Machine

Showing Results 1-3 of 3 matching WITHDRAWN standards under the jurisdiction of D02.L0.01


Discussion: Are you participating in any of these ASTM committees/subcommittee?
If not, why not?
TSCA & Animal Chemical Toxicity Test Reduction

- EPA is halving funding for Mammalian testing by 2025, elimination by 2035
  - Part of TSCA Section 4(h)(2)(C)

- Looking to expand and identify New Approach Methodologies (NAMs) for TSCA decisions
Strategic Plan

- **2018** - EPA Publishes Strategic plan with 3 objectives:
  - Identify, develop, integrate NAMs for TSCA decisions;
  - Build confidence that NAMs are scientifically reliable/relevant for TSCA;
  - Implement NAMs that are reliable/relevant for TSCA

- **2021** - EPA reports to Congress on implementation

Strategic Plan - NAMs Implementation

- EPA's stated goal is to update implemented NAMs once per year (next due fall 2019)
- Draft rule in Fall 2019 on the process for selecting NAMs
- Catalogue of received NAMs under TSCA will be published, compliant with info claimed as CBI
  - Keep in mind - EPA will not warn if you fail to properly file CBI under TSCA!
  - John Howell will be talking more about TSCA & CBI at the SHERA meeting
EPA is considering using NAMs in the TSCA prioritization process

EPA partnered with PETA and the Physicians for Responsible Medicine (PCRM) to inform and get ideas about NAMs

EPA also incorporating testing and research from Tox21 Consortium

EPA is looking for industry stakeholders to discuss the best way to reduce animal testing
“Any technology, methodology, approach, or combination thereof that can be used to provide information on chemical hazard and risk assessment”

This includes:
- computational (*in silico*) models
- Analogue/read across approaches

EPA’s first NAMs list was published in 2018, including tools for TSCA evaluation of aquatic hazard, carcinogenic potential, and bioaccumulation predictive models

Questions & Discussion?
TSCA Priority Lists

- EPA is required to prioritize 40 chemicals by December 2019
  - 20 high, 20 low
- 20 High priority chemicals will have further risk evaluation to determine regulations and standards
- 20 Low priority chemicals are not immune from future risk evaluation, only that it is not happening now
- Priority lists are published in the Federal Register, and open to public comment.
Should ILMA comment?
Questions & Discussion?

- Should ILMA comment on Formaldehyde Prioritization?

- Public comments due by Nov. 21
Committee Elections - Vice Chair

**Rex Curtis (TROY Corporation)**

Currently serving as the Global MWF Business Unit Manager for Troy Corporation, Rex Curtis has been involved in the Lubricants and MWF industry for 25 years. He also has 10 years of experience in Adhesives and coatings formulation. Rex and his wife Kathleen have been married for 33 years and have 4 children. Rex is excited to have the opportunity to serve the Metalworking Fluids Committee and ILMA.

**Joe Leistikow (US Lubricants)**

Joe Leistikow is a Technical Manager for US Lubricants. He has worked in the industry for 13 years, focused on various aspects of chemistry. Joe started as a production chemist for a specialty chemical company then eventually moving into project management focusing on commercializing research compounds. For the past 5 years the focus of chemistry changed from specialty to industrial, first managing fluids at OEM facility and finally to finished fluid formulation. He received a degree in Chemistry from Ripon College, Class of 2007. Currently MLT and MLA certified and formulating water dilutable/straight oil product lines serving the PCMO, Commercial, and Industrial customer segments.
Meredith Perkins (Sasol Performance Chemicals)

Meredith Perkins joined Sasol in July as the Market Developer for metalworking and lubricants. She has worked in the lubricants industry for thirteen (13) years where she has held roles in both research and technical sales. She graduated with a degree in Chemistry from Case Western Reserve University. She has participated in the metalworking committee of ILMA for the past 2 years and would be honored to serve as secretary for the upcoming term.