



Proposed Acceptability for Continuing Registration

PACR2004-25

Re-evaluation of Sodium Dichloro-s-triazinetrione and Trichloro-s-triazinetrione

The purpose of this document is to inform registrants, pesticide regulatory officials and the Canadian public that the Pest Management Regulatory Agency (PMRA) has completed a re-evaluation of the anhydrous and dihydrate forms of sodium dichloro-s-triazinetrione (SDT) and trichloro-s-triazinetrione (TST). The PMRA has determined that SDT and TST are acceptable for continued registration provided that the proposed mitigation measures are adopted.

This Proposed Acceptability for Continuing Registration (PACR) document provides a rationale for the proposed regulatory decision for SDT and TST. The PMRA will accept written comments on this proposal up to 45 days from the date of publication of this document. Please forward all comments to the Publications Coordinator at the address below.

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1.0 Background

The PMRA is re-evaluating all pesticides, both active ingredients and formulated end-use products (EPs), that were registered prior to 31 December 1994 to ensure that their continued acceptability is examined using current scientific approaches. Regulatory Directive [DIR2001-03](#), *PMRA Re-evaluation Program*, presents the details of the re-evaluation activities and program structure.

SDT and TST have been re-evaluated by the PMRA under Re-evaluation Program 1 as described in [DIR2001-03](#). Under Program 1, the PMRA relies as much as possible on foreign reviews, typically United States Environmental Protection Agency (USEPA) Reregistration Eligibility Decision (RED) documents, to assess Canadian pest control products. For products to be re-evaluated under Program 1, there must exist a suitable foreign review that meets the following conditions:

- it covers the main science areas, such as human health and the environment, that are necessary for Canadian regulatory decisions;
- it addresses the active ingredient and the main formulation types registered in Canada; and
- it is relevant to registered Canadian uses.

Based on the outcome of foreign reviews, the PMRA will propose, under Program 1, a regulatory decision and appropriate mitigation measures for Canadian uses of an active ingredient.

The USEPA conducted a re-evaluation of chlorinated isocyanurates, which included SDT and TST, and concluded that, on the basis of health and environmental risk assessments, it was eligible for reregistration with implementation of mitigation measures. These conclusions were published in a 1992 RED document for chlorinated isocyanurates. In its re-evaluation of SDT and TST, the PMRA based its conclusions on this 1992 RED document, taking into account the Canadian use pattern and Canadian issues (e.g., the federal Toxic Substances Management Policy [TSMP]). A review of the chemistry of Canadian products was also conducted.

2.0 Re-evaluation of SDT and TST

Active substance: Sodium dichloro-s-triazinetrione (anhydrous form)
Common names: Sodium dichloroisocyanurate (SDT)
CAS number: 2893-78-9

Active substance: Sodium dichloro-s-triazinetrione (dihydrate form)
Common names: Sodium dichloroisocyanurate dihydrate (SDT)
CAS number: 51580-86-0

Active substance: Trichloro-s-triazinetrione
Common names: Trichloroisocyanuric acid (TST)
CAS number: 87-90-1

In Canada, SDT and TST were first registered in 1973. According to current EP labels, it is registered in Canada for use as an antimicrobial for the following:

- commercial/industrial sites (e.g., cooling systems, industrial scrubbing systems, lagoons, etc.);
- swimming pools/hot tubs/spas; and
- indoor food/non-food sites (e.g., milk shake/soft serve ice cream machines, kitchen utensils, etc.).

Currently registered Canadian products containing SDT and TST are listed in appendices I and II, respectively.

Based on the comparison of American and Canadian use patterns, the USEPA assessment described in the RED document for chlorinated isocyanurates, which included SDT and TST, is considered to be an adequate basis for the proposed Canadian re-evaluation decision. The details of the assessments conducted by the USEPA are presented in the USEPA RED for chlorinated isocyanurates.

Additional environmental fate data are required to assess whether SDT and TST meet the Track 1 substances criteria identified in the federal TSMP and Regulatory Directive [DIR99-03](#).

3.0 Proposed re-evaluation decision

The USEPA published a RED document for chlorinated isocyanurates, which included SDT and TST. This document addressed the main science areas that are necessary for Canadian regulatory decisions, i.e., human health and the environment, as well as uses of SDT and TST that are also registered in Canada. Based on the USEPA RED and Canadian use pattern, the PMRA has determined that SDT and TST are acceptable for continued registration provided that the mitigation measures specified in Section 4.0 are adopted. Additional data requirements are identified in Section 5.0.

It should be noted that for EPs that contain more than one active ingredient under re-evaluation, registration status might change as a result of the re-evaluation of the remaining affected active ingredients.

The PMRA will accept written comments on this proposal up to 45 days from the date of publication of this document to allow interested parties an opportunity to provide input into the proposed re-evaluation decision.

4.0 Proposed regulatory actions

Based on the USEPA RED, Canadian use pattern and good hygiene practices, Canadian EP labels should be amended to include the following statements to further protect workers and the environment.

For commercial products used in industrial processes (registration numbers 25822, 27275, 14039, 22096, 25930 and 27391), the following statement must appear in the “**Environmental Hazards**” section:

- “This product is toxic to fish and other aquatic organisms. It is not to be used in circumstances that would cause or allow it to enter lakes, streams, ponds, estuaries, oceans or other waters in contravention of federal or provincial regulatory requirements. The requirements of applicable laws should be determined before using the product.”

For all domestic products, the following statement must appear in the “**Precautions**” section:

- “It is recommended to wear rubber gloves when handling this product.”

For all commercial products, considering that quantities handled are higher than for residential products, the following statement must appear in the “**Precautions**” section:

- “Wear chemical-resistant gloves, long pants, a long-sleeved shirt and shoes when handling this product.”

The label amendments presented above do not include all label requirements for individual EPs, such as first aid statements, disposal statements, precautionary statements, and supplementary protective equipment. Additional information on labels of currently registered products should not be removed unless it contradicts the above label statements.

A submission to request label revisions is required within 90 days of finalization of the re-evaluation decision.

5.0 Additional data requirements

The technical grade active ingredient (TGAI) registrants of SDT and TST are required to submit the following within 24 months of finalization of the re-evaluation decision:

- all data (as they relate to the Canadian use pattern) submitted to the USEPA in response to the data call-in prior to the reregistration in the United States and USEPA Data Evaluation Reports (DERs);

- all data (as they relate to the Canadian use pattern) that were required by the USEPA as a condition of reregistration of chlorinated isocyanurates (which included SDT and TST);
- a commitment and schedule to address Canadian requirements that are not addressed through submission of the data outlined above. These are outlined in the PMRA's data code (DACO) tables: for SDT, in use-site categories (USC) #15, #17 and #29; and for TST, in USCs #2, #17 and #29. The registrant is required to address the following sections of the DACO tables:
 - for the TGAI: DACOs 2 through 9, inclusive
 - for the EP: DACOs 5 through 9, inclusive

The above data and additional data may be required sooner if expansion of current uses of SDT and TST is requested.

The PMRA is currently undertaking initiatives to address the labelling deficiencies for certain kinds of antimicrobial products, especially with respect to the "Directions for Use" section of product labels. The PMRA will announce in the near future the nature of these initiatives and any requirements to be addressed by registrants.

6.0 Supporting documentation

PMRA documents, such as [DIR2001-03](#), and DACO tables can be found on our website at www.hc-sc.gc.ca/pmra-arla. PMRA documents are also available through the Pest Management Information Service. Phone: 1 800 267-6315 within Canada or 1 (613) 736-3799 outside Canada (long distance charges apply); Fax: (613) 736-3798; E-mail: pmra_infoserv@hc-sc.gc.ca.

The federal TSMP is available through Environment Canada's website at www.ec.gc.ca/toxics.

The USEPA RED document (*Chlorinated Isocyanurates*) is available on the Office of Pesticide Programs' website at www.epa.gov/pesticides/reregistration under Chemical Status.

Appendix I Products containing SDT registered in Canada as of 31 December 2003

Product name	Registrant	Registration number	Guarantee (%)		Class
			SDT	Available chlorine	
Spaguard Sanitizer Brominating Concentrate for Spa & Hot Tubs	Bio-Lab Canada Inc.	25299	85	52.7	Domestic
Omni Brominating Concentrate for Spa & Hot Tubs	Asepsis Inc.	26562	85	52.7	Domestic
Spa Essentials Sanitizing Brominating Concentrate	Hydrotech Chemical Corp.	26563	85	52.7	Domestic
Easy Brome Sanitizer for Spas	Perfect Logic	26579	85	52.7	Domestic
Power Brome Sanitizer for Spas	Calypso Enr.	27197	85	52.7	Domestic
Bromo Blast	Beachcomber Hot Tubs Plus Inc.	27308	85	52.7	Domestic
Aquapro Spa Easy Brome	IPG	27329	85	52.7	Domestic
Spa-Chlor Stabilized Chlorinating Granules	Mursatt Chemicals Ltd.	18998	50	N/A	Domestic
Rona Pool Starter	Rona Inc.	26481	44	27	Domestic
Pace Olin Start-up Shock	Olin Corp.	25827	44	N/A	Domestic
Sani-Marc Inc. Twice-a-Season Algiban Gran Granular Algicide	Sani-Marc Inc.	21957	40.6	25	Domestic
Aqua Chem Brominating Concentrate	Recreational Water Products Inc.	26561	85	52.7	Domestic
Effersan Concentrated Effervescent Tablets	Activon Inc.	25087	50	30	Domestic
Spaboss Brominating Granules	Capo Industries Ltd.	27589	85	52.7	Domestic
Halobriq NDC	Klenzoid Co. Ltd.	27276	100	56	Commercial
MB-60 C	Chem Aqua Division of NCH Canada Inc.	27439	100	56	Commercial
Towerchlor 56 Granules Microbiocide	Occidental Chemical Corp.	25822	100	56	Commercial
Towerbrom 60M Granules	Occidental Chemical Corp.	27275	93	57	Commercial
Deep Crystal	Diverseylever Canada Inc.	19173	99	56	Commercial
MB-60C	Chem Aqua Division of NCH Canada Inc.	27543	100	56	Commercial
KAY-5 Sanitizer	KAY Chemical International Inc.	25029	6	N/A	Commercial

Product name	Registrant	Registration number	Guarantee (%)		Class
			SDT	Available chlorine	
MCD Sanitizer	KAY Chemical International Inc.	25030	6	N/A	Commercial
Sani-Marc DCCNA Microbiocide	Sani-Marc Inc.	26667	100	62	Technical
NEO Chlor 60 Stabilized Chlorinating Granules	Shikoku Chemicals Corp.	19500	100	62	Technical
NEO Chlor 55 Stabilized Chlorinating Granules	Shikoku Chemicals Corp.	19503	100	56	Technical
Clearon CDB-63 Medium Granular	Clearon Corp.	18231	100	62	Technical
CDB Clearon Chlorinating Granules	Clearon Corp.	12149	100	56	Technical
ACL-60 Chlorinating Composition Stabilized Chlorinating Granules	Occidental Chemical Corp.	18227	100	62	Technical
ACL-56 Chlorinating Composition (Technical)	Occidental Chemical Corp.	18229	100	56	Technical
Poolboss Granular Stabilized Chlorinating Granules	Capo Industries Ltd.	26412	100	62	Technical

Appendix II Products containing TST registered in Canada as of 31 December 2003

Product name	Registrant	Registration number	Guarantee (%)		Class
			TST	Available chlorine	
Spa/Hot Tub Spa Tabs (Chlorinating Tablets)	Capo Industries Ltd.	23395	100	90	Domestic
Spachem Spa-Tabs Stabilized Chlorinating Tablets	Pool Chemical Industries	23395.01	100	90	Domestic
Spa/Hot Tub Spa Tabs	Arctic Spas	23395.03	100	90	Domestic
Calypso Action #18	Calypso Enr.	27396	100	90	Domestic
Spa Sticks	Calypso Enr.	27398	100	90	Domestic
Aquarius Tabs	Canadian Tire Corp. Ltd.	27314	100	90	Domestic
Spa Life Mini Pucks	Lawrason's Pool Products Inc.	27455	100	90	Domestic
Spa Pure Mini Pucks	Pool and Spa Chemical Co.	27454	100	90	Domestic
Perfect Logic Extra	Perfect Logic	27401	100	90	Domestic
Bioguard Smart Sticks	Bio-Lab Canada Inc.	22943	97.5	85	Domestic
Spaguard Smart Tabs Chlorinating Tabs	Bio-Lab Canada Inc.	23456	97.5	85	Domestic
Power Z-Pucks Stabilized Chlorinating Tablets	Beachcomber Hot Tubs Plus Inc.	26411	99.5	89.6	Domestic
Mini Discs	Beachcomber Hot Tubs Plus Inc.	27563	100	90	Domestic
Aquapro Spa Extra	IPG	27565	100	90	Domestic
Tri Tabs	Clearwater Enr.	27578	100	90	Domestic
Aqua Foot Stabilized Chlorinating Tablets	Sani-Marc Inc.	26680	99.5	89.6	Domestic
Super "Z" Pucks Stabilized Chlorinating Tablets	Sani-Marc Inc.	25115	99.5	89.6	Domestic
Bioguard Power Chlor	Bio-Lab Canada Inc.	27257	72.5	65	Domestic
Bioguard Power Sticks Sanitizer	Bio-Lab Canada Inc.	26899	72.3	65.1	Domestic
Bioguard Power Pucks Stabilized Chlorinating Tablets	Bio-Lab Canada Inc.	25209	72.3	65.1	Domestic
Guardex Advantage Pucks (Chlorinating Tablets)	Hydrotech Chemical Corp.	25210	72.3	65.1	Domestic

Product name	Registrant	Registration number	Guarantee (%)		Class
			TST	Available chlorine	
Synergy Tabs Stabilized Chlorinating Tablets	Hydrotech Chemical Corp.	23633	91.5	80	Domestic
SPA Synergy Tabs	Hydrotech Chemical Corp.	26666	91.5	80	Domestic
Guardex Advantage Chlor	Hydrotech Chemical Corp.	27310	72.5	65	Domestic
Proguard Super Pucks – Stabilized Chlorinating Tablets	Asepsis Inc.	25387	72.3	65.1	Domestic
Omni Swim Clear Pucks	Asepsis Inc.	25388	72.3	65.1	Domestic
Aqua Select Performance Pucks	Asepsis Inc.	25452	72.3	65.1	Domestic
Aqua Chem Pucks Plus	Recreational Water Products Inc	25759	72.3	65.1	Domestic
Aquachem Chlorinating Granules Plus	Recreational Water Products Inc	27311	72.5	65	Domestic
Omni Swim Clear Granules	Asepsis Inc.	27309	72.5	65	Domestic
CB 9099	Chem-Aqua, Division of NCH Canada Inc.	27391	100	90	Commercial
Biosperse 231 Tablets for Control of Algae and Bacteria	Drew Canada, Division of Ashland Corp.	14039	100	N/A	Commercial
Stabilized Chlorine Tablets	Bio-Lab Canada Inc.	22156	100	90	Commercial
Towerchlor 90 Stabilized Chlorinating Tablets (7.6 cm)	Occidental Chemical Corp.	22096	100	90	Commercial
Oxychem Towerbrom 90M Tablets	Occidental Chemical Corp.	25930	93	83	Commercial
Clearon CDB-90 Tablets	Clearon Corp.	22830	100	90	Manufacturing concentrate
Clearon CDB-90 Chlorinating Granules	Clearon Corp.	12883	100	90	Technical
NEO Chlor 90 Stabilized Chlorinating Granules	Shikoku Chemical Corp.	19501	100	90	Technical
NEO Chlor Tablet	Shikoku Chemical Corp.	19502	100	90	Technical
Sani-Marc TTCA	Sani-Marc Inc.	26668	100	90	Technical
Hilite 90 G (for Manufacturing)	Nissan Chemicals Industries Ltd.	26839	100	90	Technical
BLC-90 Technical	Bio-Lab Canada Inc.	26629	100	90	Technical

Product name	Registrant	Registration number	Guarantee (%)		Class
			TST	Available chlorine	
Oxychem ACL-90 Chlorinating Tablets	Occidental Chemical Corp.	22097	100	90	Technical
ACL-90 Plus Chlorinating Composition (Technical)	Occidental Chemical Corp.	18228	100	90	Technical