Outline of JAMP Activities and
Hitachi's Approach Toward REACH

August 18, 2008
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Chief Engineer
Corporate Environmental Policy Division
Hitachi, Ltd.

Contents

1. REACH Influence Over Businesses Outside Europe
2. How JAMP Can Help
3. Hitachi’s Policy for REACH Compliance
Core Requirements of Our Concern in REACH

Registration, Evaluation, Authorisation, and restriction of Chemicals (REGULATION (EC) No 1907/2006)

Supply-chain information sharing
(even outside EU)

“Article” in the scope

Phase-in substances in the scope

Downstream user obligations

Scope of Regulated Chemicals in REACH

(Pre-) Registration is needed to use Chemicals on EINECS List

Existing Substances (Phase-in Substances)

New Substances (Non-phase-in Substances)

Hazardous Substances

SVHC; Substances of Very High Concern
CMR: Carcinogen, Mutagen, Repro Toxic
PBT (Persistent, Bioaccumulative, Toxic)
vPvB (Very Persistent, Very Bioaccumulative)
EDs (Endocrine Disrupters)

100?-1500?

Chemicals in Articles

Articles

Chemicals and Preparation

SVHC
"Preparation" in REACH (Raw Materials or Chemicals)

- Ingots
- Bulk materials
- Plastic pellets
- Refill oil
- Powder
- Maintenance chemicals
- Ink in Cartridge
- Ink in Ball-point Pen

"Article" in REACH (Finished Products)

Article: means an object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition;

- Electrical appliances
- Batteries
- Designed surface
- Sheet
- Packaging
- Brake lining
REACH Requirements Map - Preparation

1. Registration *Art 6*
   - Only Representative (OR) *Art# 8*
   - Pre-registration *Art# 28*
   - SIEF *Art# 29*

   **Exchange Information**
   - SDS *Art# 31*
   - Information without SDS *Art# 32*

   **Restriction** *Art# 67*
   - Annex XVII list
     - Almost the same as RoHS in nature

   **Authorisation** *Art# 56*
   - Annex XIV list
     - Relatively rare cases and not immediate yet

   **Documentation & Record keeping** *Art# 33*
   - To be implemented through all the processes

REACH Requirements Map - Articles

1. Notify Substances *Art 7(1)*
   - Intended release to register
     - Same as registration
   - Notification on SVHC *Art# 7(2)*

2. Exchange Information
   - Information on SVHC *Art# 33*
   - Candidate list *Art# 59(1)*

3. Restriction *Art# 67*
   - Annex XVII list
     - Almost the same as RoHS in nature

   **Authorisation** *Art# 56*
   - Annex XIV list
Obligations for Exchange Information

Downstream User of Preparations and Substances

- Your product needs SDS?
  - Yes: #32(1)
  - No: Provide downstream
    - Reg. number
    - Identified Use
    - RMM

Article Producer

- Your product contains SVHC > 0.1%?
  - Yes: Inform your customers
    - Name of the substances
  - No: Provide downstream
    - Reg. number
    - Identified Use
    - RMM

Substances under Authorisation?

- Yes: #65
  - Reg. number
  - Identified Use
  - RMM
- No: Provide downstream

Note: SVHC (Substances of Very High Concern)
Substances meet the criteria in Article 57 and are identified in accordance with Article 59(1), which are also called substances in the “candidate list”

Obligations for Notification

Article Producer or importer

- >1ton/year?
  - Yes: Article 7(1)
  - No: Intentional release?
    - No: Article 7(2)b
    - Yes: SVHC >0.1%?
      - Yes: Exposure deniable?
      - No: End
        - Yes: Already registered for the IU
          - No: Notify to the Agency
            - Company
            - Substance ID
            - Categorization
            - Use
            - Article 7(5)
      - Yes: Article 7(3)
    - No: End
      - Yes: Article 7(4)
      - No: Article 7(6)

Within six month after the candidate list updated
## Summary for Requirements

<table>
<thead>
<tr>
<th>Registration</th>
<th>Notification</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 6</td>
<td>Article 7(1)</td>
<td>Article 7(2)</td>
</tr>
</tbody>
</table>

### Polymer Monomer
- (Component of Polymer)
- >=2% & >=1 ton/y
- >1 ton/y

### Chem. in Article
- SVHC
- >0.1% * & >1 ton/y

**Note:** 0.1% SVHC applicable to the article

### SVHC Addressed in REACH

- SDS
- Dangerous substances 67/548/EEC 1999/45/EC
- 59(1) SVHC
- ANNEX XIII PBT, vPvB

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### Recommendations of Priority Substances for Annex XIV (Article 57)
- CMR category 1 and 2, PBTs and vPvBs, Endocrine Disruptors etc.

#### Authorization Candidate List
- For information communication on substances in articles (Article 33)

#### Annex XIV Substances
- for Authorization

#### Annex XVII Substances
- for Restrictions (Article 67)

So called SVHC
# First Consultation for SVHC (candidate list)

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS number</th>
<th>EC number</th>
<th>Authority</th>
<th>Reason for proposing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td>204-371-1</td>
<td>Germany</td>
<td>PBT</td>
</tr>
<tr>
<td>4,4'-Diaminodiphenylmethane</td>
<td>101-77-9</td>
<td>202-974-4</td>
<td>Germany</td>
<td>CMR</td>
</tr>
<tr>
<td>Dibutyl phthalate</td>
<td>84-74-2</td>
<td>201-557-4</td>
<td>Austria</td>
<td>CMR</td>
</tr>
<tr>
<td>Cyclododecane</td>
<td>294-62-2</td>
<td>206-33-9</td>
<td>France</td>
<td>PBT</td>
</tr>
<tr>
<td>Cobalt dichloride</td>
<td>7640-79-9</td>
<td>231-589-4</td>
<td>France</td>
<td>CMR</td>
</tr>
<tr>
<td>Diarsenic pentoxide</td>
<td>1303-28-2</td>
<td>215-110-6</td>
<td>France</td>
<td>CMR</td>
</tr>
<tr>
<td>Diarsenic trioxide</td>
<td>1327-53-3</td>
<td>215-481-4</td>
<td>France</td>
<td>CMR</td>
</tr>
<tr>
<td>Sodium dichromate, dihydrate</td>
<td>7789-12-0</td>
<td></td>
<td>France</td>
<td>CMR</td>
</tr>
<tr>
<td>5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)</td>
<td>81-15-2</td>
<td>201-329-4</td>
<td>Netherlands</td>
<td>vPvB</td>
</tr>
<tr>
<td>Bis (2-ethyl(hexyl) phthalate) (DEHP)</td>
<td>117-81-7</td>
<td>204-211-0</td>
<td>Sweden</td>
<td>CMR</td>
</tr>
<tr>
<td>Hexabromocyclododecane (HBCDD)</td>
<td>25637-99-4</td>
<td>247-148-4</td>
<td>Sweden</td>
<td>PBT</td>
</tr>
<tr>
<td>Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)</td>
<td>85535-84-8</td>
<td>287-476-5</td>
<td>United Kingdom</td>
<td>PBT</td>
</tr>
<tr>
<td>Bis(tributyl)tin oxide</td>
<td>56-35-9</td>
<td>200-268-0</td>
<td>Norway</td>
<td>PBT</td>
</tr>
<tr>
<td>Lead hydrogen arsenate</td>
<td>7784-40-9</td>
<td>232-064-2</td>
<td>Norway</td>
<td>CMR</td>
</tr>
<tr>
<td>Tin ethyl arsenate</td>
<td>15606-95-8</td>
<td>427-700-2</td>
<td>Norway</td>
<td>CMR</td>
</tr>
<tr>
<td>Benzyl butyl phthalate</td>
<td>85-68-7</td>
<td>201-622-7</td>
<td>Austria</td>
<td>CMR</td>
</tr>
</tbody>
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**Inquiries from Customers Have Already Come**

<table>
<thead>
<tr>
<th>Substances Of Very High Concern Data Reporting Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier Code</td>
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</tbody>
</table>

**Report Substance Information Below**

<table>
<thead>
<tr>
<th>CAS #* (where available)</th>
<th>Weight (g) * (up to 3 decimal places)</th>
<th>Description of Use (max field length: 60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>119-17-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-15-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85535-84-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>132-12-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56-25-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7546-79-0</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>Bis (2-ethyl(hexyl) phthalate) (DEHP)</td>
<td>117-81-7</td>
<td></td>
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<tr>
<td>Butylhydroxytoluene (BHT)</td>
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What Happens in Asian Supply Chain?

Asian market

Company D
Domestic business

Article D
No data?

Company C
No data?

Sub. B (SVHC)

Company B
Domestic business

No data?

Sub. A (SVHC)

Company A

Notify, or Information
Article E
Export

•Containing Sub. A
•Containing Sub. B

Prep. C

Company E

Article E

Notify, or Information
Export

•Dossier on Sub. A

Sub. A

Large Difference in EU and Asia

EU

Register
Notify and/or Information provision on SVHC

Legally ensured information exchange along the supply chain

Export

Asia

Products are transferred but no information accompanied

Impossible?
Contents

1. REACH Influence Over Businesses Outside Europe
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What JAMP Envisions

Legally ensured information exchange along the supply chain

EU

Notify and/or Information provision on SVHC

Register

Export

Legally ensured information exchange along the supply chain

Asia

Information is exchanged under JAMP voluntary initiative

JAMP: A Cross-sectoral Industry Initiative

JAMP: Joint Article Management Promotion-consortium

Upstream industry

Information transfer with SDS

Middlestream industry

Information transfer with AIS (Article Information Sheet)

Downstream industry

Since Sept 2006 members have been going for a new scheme of supply chain management
JAMP Way of Information Transfer

(Joint Article Management Promotion-consortium)

Chemicals Producers  Raw Material Producers  Component Manufacturers  Final Product Fabricators

MSDSplus  AIS (Article Information Sheet)

Publicly available ('08.7)  Customer format (e.g. IMDS)

Seamless Data Transfer along The Supply Chains

JAMP Growing Membership

Asahi Kasei Corporation  Kao CORPORATION  Sumitomo Chemical Co., Ltd.  Mitsubishi Chemical Corporation  Lion Corporation  FUJIFILM Corporation  Murata Manufacturing Company, Ltd.  DAINIPPON INK AND CHEMICALS, INCORPORATED  TDK Corporation  TOSHIBA Corporation  Hitachi, Ltd.  FUJITSU LIMITED  Ricoh Co., Ltd.  Matsushita Electric Industrial Co., Ltd.  Mitsubishi Electric Corporation  SEIKO EPSON CORPORATION  Mizuho Information & Research Institute, Inc.


Currently over 280 members and still growing
JAMP Main Activities

1) Development and promotion of the "JAMP Guidelines for the Information Management of Chemical Substances Contained in the Products"

2) Development and promotion of two types of format sheets for the transfer of chemical substance information
   (1) JAMP MSDSplus (Material Safety Data Sheet Plus)
   (2) JAMP AIS (Article Information Sheet)

3) Promoting the international standardization regarding on information management of chemical substances contained in the articles (e.g. JAMP Guidelines, JAMP MSDSplus and JAMP AIS)

4) Promoting the development of an information infrastructure for the smooth communication of chemical substance information etc…

The Mechanism of Information Exchange (1)

Declaration style is much simpler

**Declaration Style**

![Diagram](https://via.placeholder.com/150)

Transactions = 2

**Survey Style**

![Diagram](https://via.placeholder.com/150)

Transactions \(20^2 = 40\)
Contents

1. REACH Influence Over Businesses Outside Europe
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Hitachi Group Business Overview - Segment-

Group Revenue by Industry Segment

- Information & Telecommunication Systems: 22%
- Electronic Devices: 10%
- Financial Services: 3%
- Power & Industrial Systems: 28%
- Digital Media & Consumer Products: 12%
- Logistics, Services & Others: 15%
- High Functional Materials: 10%

Total Revenue: 100 Billion US$

All figures are included Eliminations and Corporate items, FY2007/Consolidated basis

Hitachi Group Business Overview - Region-

Europe
- 106 Companies
- 9,468 Employees
- 10 B$

Japan
- 419 Companies
- 251,702 Employees
- 60 B$

North America
- 75 Companies
- 16,242 Employees
- 9 B$

Asia
- 271 Companies
- 105,645 Employees
- 20 B$

Others
- 40 Companies
- 6,695 Employees
- 5 B$

(FY 2007)
Hitachi Group Strategy for REACH Compliance

- Revise company's standard, Green Procurement Guideline, and related documents
  (Continual update of substance list, Rules for information provision, etc.)
- Compile REACH Compliance Manual for EU operation

Hitachi REACH Compliance

Rules

Structure

Information Systems

- Group Horizontal Committee
- Human network

- IT systems adaptation to REACH
- Connecting to JAMP IT network

Hitachi Group REACH Compliance Policy

1. Policy for Information Exchange
   A) Collect information from suppliers which is available at the moment and provide information to customers available to us.
   B) Update the information timely when any important change or additional data obtained.

2. Information Exchange Format
   A) Hitachi's standard format is JAMP AIS / MSDSplus
      (Upon customer's request or other exceptional situations we may report or receive other formats).

3. Timeline
   A) 2008/11 Start accepting JAMP formats through Hitachi Unified Chemical Management System.
   B) 2009/01 Workability Evaluation Testing using EDI Infrastructure (TWX 21).
   C) 2009/07 Connect to JAMP IT network (Global Portal) and increase flexibility for reporting and collecting.
1. Any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

Establish Internal Structure for REACH Compliance

Any legal entity within Hitachi Group selling goods in EU

This team may be integrated within an existing compliance team for other regulations

REACH Compliance Team

REACH Manager

Sales Div.

Procurement Div.
B. Compliance Process for Articles (finished products) Businesses

2. Exchange Information

1. Receive inquiry from customers or consumers
2. Receive information from suppliers
3. Compile your information
4. Provide information to customers

PDCA Cycle
Record keeping

(Mainly) Sales Div.
(Mainly) Sales Div.
(Mainly) REACH Manager

END

Thank you very much for your attention