

Hercules Breakthru R-D Root Destroyer HCC Holdings, Inc. an Oatey Affiliate

Version No: 1.4 Safety Data Sheet according to OSHA HazCom Standard (2012) requirements Issue Date: **02/11/2022**Print Date: **02/11/2022**S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Hercules Breakthru R-D Root Destroyer
ProductRegistration Number	7687-1
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (contains copper sulfate, pentahydrate)
Other means of identification	20602, 20610

Recommended use of the chemical and restrictions on use

Relevant identified uses	Drain opener. Never pour product into sinks or tub drains
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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	HCC Holdings, Inc. an Oatey Affiliate
Address	4700 West 160th Street Cleveland, OH 44135 United States
Telephone	216-267-7100
Fax	Not Available
Website	Not Available
Email	info@oatey.com

Emergency phone number

Association / Organisation	Chemtrec	
Emergency telephone numbers	1-800-424-9300 (Outside the US 1-703-527-3887)	
Other emergency telephone numbers	Emergency First Aid: 1-877-740-5015	

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

Classification	Serious Eye Damage/Eye Irritation Category 2A, Hazardous to the Aquatic Environment Acute Hazard Category 1, Acute Toxicity (Oral) Category 4, Hazardous to the Aquatic Environment Long-Term Hazard Category 1
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Label elements

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Hazard pictogram(s)



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Signal word

Warning

Hazard statement(s)

Causes serious eye irritation.
Harmful if swallowed.
Very toxic to aquatic life with long lasting effects.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

Wash all exposed external body areas thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves, eye protection and face protection.
Avoid release to the environment.

Precautionary statement(s) Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
IF ON SKIN: Wash with plenty of water.
Rinse mouth.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Collect spillage.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
7758-99-8	99	copper sulfate, pentahydrate

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	Rinse hands thoroughly before touching eyes Hold eyes open and rinse slowly and gently with water for 15-20 minutes. After the first five minutes, remove contact lenses if present and easy todo, and continue rinsing. Call poison control center or doctor for treatment advice.	
Skin Contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.	

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Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then, give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Immediately call a poison control center or doctor for treatment advice. A person should sip a glass of water if able to swallow. Do not induce vomiting unless directed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Probable mucosal damage my contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsions may be needed.

SECTION 5 Fire-fighting measures

Extinguishing media

- ► Water spray or fog.
- ► Foam.
- Dry chemical powder.
- ▶ BCF (where regulations permit).
- ► Carbon dioxide

Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
Special protective equipr	nent and precautions for fire-fighters
Fire Fighting	 Alert Fire Department and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	sulfur oxides (SOx) metal oxides

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

	<u> </u>
Minor Spills	Sweep up into dustpan and then refer to Pesticide Disposal section.
Major Spills	Sweep up into dustpan and then refer to Pesticide Disposal section.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

- ► Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

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- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- ▶ DO NOT enter confined spaces until atmosphere has been checked.
- ▶ **DO NOT** allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- ▶ When handling, **DO NOT** eat, drink or smoke.
- ▶ Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- ▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other information

Store in original container and keep in a locked storage area.

Do not contaminate water, food, or feed by storage or disposal.

Conditions for safe storage, including any incompatibilities

Suitable container

Container Handling: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Then offer for recycling, if available or puncture and dispose of it in a sanitary landfill.

Storage incompatibility

Store in original container and keep in a locked storage area. Copper sulfate

- reacts violently with strong bases, hydroxylamine.(with ignition), magnesium (producing hydrogen gas)
- ▶ in contact with potassium chlorate is potentially explosive
- solutions are acidic and can react with metals to evolve flammable hydrogen gas. corrosive to some metals including steel.
- is incompatible with sulfuric acid, caustics, ammonia, aliphatic amines, alkanolamines, amides, alkylene oxides, epichlorohydrin, organic anhydrides, isocyanates, vinyl acetate
- b dusts or mists may react with acetylene to form shock-sensitive copper acetylides
- Avoid strong bases.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Exposure controls

Appropriate engineering

controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:
- (a): particle dust respirators, if necessary, combined with an absorption cartridge;
- (b): filter respirators with absorption cartridge or canister of the right type;
- (c): fresh-air hoods or masks
- ▶ Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

Air contaminants generated in the workplace possess varying 'escape' velocities which, in turn, determine the 'capture velocities' of fresh circulating air required to efficiently remove the contaminant.

Air Speed:

Type of Contaminant:

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direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas 1-2.5 m/s (200-500 discharge (active generation into zone of rapid air motion) ft/min) grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial 2.5-10 m/s (500-2000 velocity into zone of very high rapid air motion). ft/min)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 4-10 m/s (800-2000 ft/min) for extraction of crusher dusts generated 2 metres distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are

Personal protection











Eye and face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).		
Skin protection	See Hand protection below		
Hands/feet protection	Wear appropriate chemical resistant gloves.		
Body protection	See Other protection below		
Other protection	Wear appropriate chemical resistant clothing.		

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

- · Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- · The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- · Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- · Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- · Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- · Use approved positive flow mask if significant quantities of dust becomes airborne.
- · Try to avoid creating dust conditions.

Class P2 particulate filters are used for protection against mechanically and thermally generated particulates or both.

P2 is a respiratory filter rating under various international standards, Filters at least 94% of airborne particles Suitable for:

- · Relatively small particles generated by mechanical processes eg. grinding, cutting, sanding, drilling, sawing.
- · Sub-micron thermally generated particles e.g. welding fumes, fertilizer and bushfire smoke.
- · Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Blue Solid Flakes		
Physical state	Solid	Relative density (Water = 1)	Not Available
Odour	None	Partition coefficient n-octanol / water	Not Available

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Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
рН	4 (10% solution)	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	>100	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (%) (Not Available%) (Not Available%) (Not Available%)	Not Available
	1		1

SECTION 10 Stability and reactivity

Not Available

Vapour density (Air = 1)

Reactivity	See section 7
Chemical stability	The product is hygroscopic and will absorb water by contact with the moisture in the air.
Possibility of hazardous reactions	None expected under normal conditions of storage and use.
Conditions to avoid	Avoid contact with water and moisture. Contact with incompatible materials.
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

VOC g/L

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.
Ingestion	Harmful if swallowed.
Skin Contact	May cause redness and pain. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. This material can cause inflammation of the skin on contact in some persons.
Eye	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Chronic	Prolonged inhalation may be harmful. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Acute Toxicity	*	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×

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Serious Eye Damage/Irritation	~	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend: ★ - Data either not available or does not fill the criteria for classification

✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

Hercules Breakthru R-D	Endpoint	Test Duration (hr)		Species	Value	Sou	rce
Root Destroyer	Not Available	Not Available		Not Available	Not Available	Not A	Available
	Endpoint	Test Duration (hr)	Speci	es		Value	Source
copper sulfate, pentahydrate	EC50(ECx)	96h	Crusta	ustacea		0.001mg/L	5
	LC50	96h	Fish	Fish 0.073mg		0.073mg/L	4
	EC50	72h	Algae	Algae or other aquatic plants 0.8mg/L		0.8mg/L	5
	EC50	48h	Crusta	acea		0.003mg/L	5

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water except as specified on the labeling. **DO NOT** discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
copper sulfate, pentahydrate	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
copper sulfate, pentahydrate	LOW (LogKOW = -2.2002)

Mobility in soil

Ingredient	Mobility
copper sulfate, pentahydrate	LOW (KOC = 6.124)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal

Pesticide Disposal: Pesticides waste may be hazardous. Improper disposal of excess pesticide is a violation of Federal Law. If this waste cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste Representative at the nearest EPA Regional Office for guidance. If partially filled: call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain except as specified by the label.

Container Handling: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Then offer for recycling, if available or puncture and dispose of it in a sanitary landfill.

SECTION 14 Transport information

Labels Required

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Land transport (DOT)

UN number	3077			
UN proper shipping name	Environmentally haza	Environmentally hazardous substance, solid, n.o.s. (contains copper sulfate, pentahydrate)		
Transport hazard class(es)	Class 9 Subrisk Not App	licable		
Packing group	III			
Environmental hazard	Yes			
Special precautions for user	Hazard Label Special provisions	9 8, 146, 335, 384, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33		

For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain LESS THAN the reportable quantity (5000 lbs) - Not Regulated

For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain MORE THAN the reportable quantity (5000 lbs) - Regulated and classified as below:

Air transport (ICAO-IATA / DGR)

UN number	3077			
UN proper shipping name	Environmentally hazard	Environmentally hazardous substance, solid, n.o.s. * (contains copper sulfate, pentahydrate)		
	ICAO/IATA Class	9		
Transport hazard class(es)	ICAO / IATA Subrisk	Not Applicable		
	ERG Code	9L		
Packing group	III			
Environmental hazard	Yes			
	Special provisions		A97 A158 A179 A197 A215	
	Cargo Only Packing Ir	nstructions	956	
Special precautions for user	Cargo Only Maximum Qty / Pack		400 kg	
	Passenger and Cargo Packing Instructions		956	
	Passenger and Cargo Maximum Qty / Pack		400 kg	
	Passenger and Cargo	Limited Quantity Packing Instructions	Y956	

Sea transport (IMDG-Code / GGVSee)

UN number	3077		
UN proper shipping name	ENVIRONMENTALL	Y HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains copper sulfate, pentahydrate)	
Transport hazard class(es)	IMDG Class IMDG Subrisk	Not Applicable	
Packing group	III		
Environmental hazard	Yes		
Special precautions for user	EMS Number Special provisions Limited Quantities		

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Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
copper sulfate, pentahydrate	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
copper sulfate, pentahydrate	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

copper sulfate, pentahydrate is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals	US DOE Temporary Emergency Exposure Limits (TEELs)
US CWA (Clean Water Act) - List of Hazardous Substances	US EPCRA Section 313 Chemical List
US CWA (Clean Water Act) - Priority Pollutants	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US CWA (Clean Water Act) - Toxic Pollutants	US TSCA Chemical Substance Inventory - Interim List of Active Substances

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
n contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	Yes
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg	
copper sulfate, pentahydrate	10	4.54	

FIFRA Information:

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subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

Signal Word: Danger

Hazard Statement: KEEP OUT OF REACH OF CHILDREN.

PRECAUTIONARY STATEMENTS - HAZARDS TO HUMAN AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Do not get in eyes, on skin or clothing. Wear goggles or face shield. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water except as specified on the labeling. State Regulations

US. California Proposition 65

None Reported

National Inventory Status

National Inventory	Status
USA - TSCA	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

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Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection

OTV: Odour Threshold Value BCF: BioConcentration Factors

BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List

NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

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TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances