	Page: 1
SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Ceraphyl™ 424 ester
 ™ Trademark, Ashland or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Personal care

<p>Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America (USA) 1-614-790-3333</p> <p>EHSProductSafety@ashland.com</p>	<p>Emergency telephone number 1-800-ASHLAND (1-800-274-5263)</p> <p>Regulatory information 1-614-790-3333 (customer service)</p> <p>Product Information 1-614-790-3333</p>
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : organic

Hazardous components

**SAFETY DATA SHEET**

Revision Date: 07/03/2020

Print Date: 11/24/2020

SDS Number: R0717832

Version: 1.5

Ceraphyl™ 424 ester
™ Trademark, Ashland or its subsidiaries, registered
in various countries
826792

Chemical name	CAS-No.	Classification	Concentration (%)
MYRISTYL ALCOHOL	112-72-1	Comb Dust Eye Irrit. 2A; H319	6.00

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or Section 11.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion : Carbon dioxide (CO₂)



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

products	Carbon monoxide carbon dioxide and carbon monoxide
Specific extinguishing methods	: Product is compatible with standard fire-fighting agents.
Further information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Avoid dust formation. Avoid breathing dust. Material can create slippery conditions. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.
Other information	: Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	: Take measures to prevent the build up of electrostatic charge. Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	: Avoid dust formation. Ensure all equipment is electrically grounded and bonded before beginning transfer operations. The material can accumulate static charge and can therefore cause electrical ignition of flammable atmospheres. Container hazardous when empty.



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

Smoking, eating and drinking should be prohibited in the application area.

For personal protection see section 8.

Maintain good housekeeping. Do not permit dust layers to accumulate, for example, on floors, ledges, and equipment, in order to avoid any potential for dust explosion hazards.

For further guidance on prevention of dust explosions, refer to National Fire Protection Association (NFPA) 654: "Standard for the Prevention of Fire and Dust Explosions, from the Manufacturing, Processing and Handling of Combustible Particulate Solids".

- Conditions for safe storage : Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Materials to avoid : No materials to be especially mentioned.
- Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
MYRISTYL ALCOHOL	112-72-1

- Engineering measures** : Provide appropriate exhaust ventilation at places where dust is formed.
General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter within the capabilities of the respirator/filter combination.
Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator.



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

Hand protection

Material : butyl-rubber
Break through time : 480 min
Glove thickness : > 0.5 mm

Remarks : The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Safety glasses

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Avoid breathing dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid
Physical state : solid
Colour : yellow, white
Odour : characteristic
Odour Threshold : No data available
pH : Not applicable
Melting point/freezing point : 97 - 102 °F / 36 - 39 °C
Boiling point/boiling range : not determined
Flash point : 226.1 °C
Evaporation rate : Not applicable
Flammability (solid, gas) : not determined
Upper explosion limit : Upper explosion limit
not determined



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

Lower explosion limit	: Lower explosion limit not determined
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Relative density	: No data available
Density	: 1 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: not determined
Solubility in other solvents	: No data available
Partition coefficient: n- octanol/water	: not determined
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Oxidizing properties	: Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.
Conditions to avoid	: Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	: strong bases Strong oxidizing agents
Hazardous decomposition products	Carbon monoxide Carbon dioxide (CO ₂)



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

carbon dioxide and carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Components:

MYRISTYL ALCOHOL:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute oral toxicity tests.

Acute inhalation toxicity : LC50 (Rat): > 1.5 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 8,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Species: Rabbit

Result: No skin irritation

Components:

MYRISTYL ALCOHOL:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species: Rabbit

Result: No eye irritation



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

Remarks: Unlikely to cause eye irritation or injury., Product dust may be irritating to eyes, skin and respiratory system.

Components:

MYRISTYL ALCOHOL:
Result: Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Product:

Assessment: Did not cause sensitisation on laboratory animals.
Result: Did not cause sensitisation on laboratory animals.

Components:

MYRISTYL ALCOHOL:
Test Type: Maximisation Test
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Germ cell mutagenicity
Not classified based on available information.

Components:

MYRISTYL ALCOHOL:
Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

Carcinogenicity:



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified based on available information.

Long-term (chronic) aquatic hazard : Chronic aquatic toxicity Category 2; Toxic to aquatic life with long lasting effects.

Components:

MYRISTYL ALCOHOL:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 1 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.2 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 10 mg/l
End point: Growth inhibition
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.0016 mg/l



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

aquatic invertebrates
(Chronic toxicity)

Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

M-Factor (Long-term
(chronic) aquatic hazard) : 1

Persistence and degradability

Product:

Biodegradability : Result: Readily biodegradable.
Remarks: Expert judgement

Components:

MYRISTYL ALCOHOL:

Biodegradability : aerobic
Result: Readily biodegradable.
Biodegradation: 92 %
Exposure time: 28 d

No data available

Bioaccumulative potential

Components:

MYRISTYL ALCOHOL:

Partition coefficient: n-
octanol/water : log Pow: 6.03

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological
information : An environmental hazard cannot be excluded in the event of
unprofessional handling or disposal., Toxic to aquatic life with
long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water
courses or the soil.

Dispose of in accordance with all applicable local, state and
federal regulations.



SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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U.S. DOT - ROAD

Not dangerous goods	MARINE POLLUTANT:(MYRISTYL ALCOHOL)
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CFR_RAIL_C

Not dangerous goods	MARINE POLLUTANT:(MYRISTYL ALCOHOL)
---------------------	--

U.S. DOT - INLAND WATERWAYS

Not dangerous goods	MARINE POLLUTANT:(MYRISTYL ALCOHOL)
---------------------	--

TDG_ROAD_C

Not dangerous goods	
---------------------	--

TDG_RAIL_C

Not dangerous goods	
---------------------	--

TDG_INWT_C

**SAFETY DATA SHEET**

Revision Date: 07/03/2020

Print Date: 11/24/2020

SDS Number: R0717832

Version: 1.5

Ceraphyl™ 424 ester
 ™ Trademark, Ashland or its subsidiaries, registered
 in various countries
 826792

Not dangerous goods

MARINE
 POLLUTANT:(
 MYRISTYL
 ALCOHOL)

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MYRISTYL ALCOHOL)	9	III	MARINE POLLUTANT:(MYRISTYL ALCOHOL)
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	3077	Environmentally hazardous substance, solid, n.o.s. (MYRISTYL ALCOHOL)	9	III	
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	3077	Environmentally hazardous substance, solid, n.o.s. (MYRISTYL ALCOHOL)	9	III	
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MX DG

UN	3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MYRISTYL ALCOHOL)	9	III	
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***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	yes
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity

	Page: 13
SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

MYRISTYL MYRISTATE	3234-85-3
Dodecanoic acid, tetradecyl ester	22412-97-1
MYRISTYL ALCOHOL	112-72-1

New Jersey Right To Know

MYRISTYL MYRISTATE	3234-85-3
Dodecanoic acid, tetradecyl ester	22412-97-1
MYRISTYL ALCOHOL	112-72-1

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- TCSI : On the inventory, or in compliance with the inventory

**SAFETY DATA SHEET**

Revision Date: 07/03/2020

Print Date: 11/24/2020

SDS Number: R0717832

Version: 1.5

Ceraphyl™ 424 ester
 ™ Trademark, Ashland or its subsidiaries, registered
 in various countries
 826792

TSCA : On or in compliance with the active portion of the TSCA inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)
 - On or in compliance with the active portion of the TSCA inventory

SECTION 16. OTHER INFORMATION**Further information**

Revision Date: 07/03/2020

NFPA:	HMIS III:						
<p style="text-align: center;">Flammability</p> <p style="text-align: center;">Health 1 Instability</p> <p style="text-align: center;">Special hazard</p>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: blue; color: white;">HEALTH</td> <td style="text-align: center;">0/</td> </tr> <tr> <td style="background-color: red; color: white;">FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: yellow;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	0/	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0/						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						


NFPA Flammable and Combustible Liquids Classification

Not applicable

Full text of H-Statements

H319 Causes serious eye irritation.

Sources of key data used to compile the Safety Data Sheet
 Ashland internal data including own and sponsored test reports
 The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

	Page: 15
SAFETY DATA SHEET	Revision Date: 07/03/2020
	Print Date: 11/24/2020
	SDS Number: R0717832
Ceraphyl™ 424 ester ™ Trademark, Ashland or its subsidiaries, registered in various countries 826792	Version: 1.5

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative