according to the Hazardous Products Regulations



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SECTION 1. IDENTIFICATION

Trade name : APS

Other means of identification : No data available

CAS-No. : 7727-54-0

Manufacturer or supplier's details

Company name of supplier : United Initiators, Inc.

Address : 555 Garden Street

Elyria OH 44035 USA

United Initiators Canada Ltd. 2147 PG Pulp Mill Road

Prince George, BC-V2N 2S6 CANADA

Telephone : +1-440-323-3112

Telefax : +1-440-323-2659

Emergency telephone : CHEMTREC US (24h): +1-800-424-9300

CHEMTREC WORLD (24h): +1-703-527-3887 CANUTEC (24h): 1-613-996-6666

For Transportation Incidents : TERRAPURE EMERGENCY RESPONSE SERVICES (24h):

1-800-567-7455

E-mail address of person

responsible for the SDS

cs-initiators.nafta@united-in.com

Recommended use of the chemical and restrictions on use

Recommended use : Oxidizing agents

polymerization initiators

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Oxidizing solids : Category 3

Acute toxicity (Oral) : Category 4

Skin irritation : Category 2

according to the Hazardous Products Regulations



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Eye irritation Category 2A

Respiratory sensitization Category 1

Skin sensitization Category 1

Specific target organ toxicity

- single exposure

Category 3 (Respiratory system)

GHS label elements

Hazard pictograms







Signal Word Danger

Hazard Statements H272 May intensify fire; oxidizer.

> H302 Harmful if swallowed. H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing

difficulties if inhaled.

H335 May cause respiratory irritation.

Precautionary Statements Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames

and other ignition sources. No smoking.

P220 Keep/Store away from clothing/ combustible materials.

P261 Avoid breathing dust.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of

the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection/ hearing protection. P284 Wear respiratory protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON

CENTER/ doctor if you feel unwell. Rinse mouth. P302 + P352 IF ON SKIN: Wash with plenty of water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air

doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

and keep comfortable for breathing. Call a POISON CENTER/

according to the Hazardous Products Regulations



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to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P337 + P313 If eye irritation persists: Get medical advice/ atten-

tion.

P342 + P311 If experiencing respiratory symptoms: Call a

POISON CENTER/ doctor.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

P370 + P378 In case of fire: Use water spray to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

May cause fire or explosion; strong oxidizer.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical nature : Persulphate

Solid

Substance name : Ammonium Persulfate

CAS-No. : 7727-54-0

Common Name/Synonym : No data available

Components

 Common Name/Synonym	CAS-No.	Concentration (% w/w)
Ammonium persulphate	7727-54-0	<= 100 *

Actual concentration or concentration range is withheld as a trade secret

according to the Hazardous Products Regulations



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General advice : Take off contaminated clothing and shoes immediately.

Call a physician immediately.

Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical

advice.

Move out of dangerous area.

Show this material safety data sheet to the doctor in

attendance.

Do not leave the victim unattended.

Symptoms of poisoning may appear several hours later.

If inhaled : Administer oxygen if breathing is difficult or cyanosis is

observed.

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Call a physician or poison control center immediately.

If unconscious, place in recovery position and seek medical

advice.

Keep respiratory tract clear.

In case of skin contact : If symptoms persist, call a physician.

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing

and shoes.

Wash contaminated clothing before re-use.

If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible

tissue damage and blindness.

In the case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed : Call a physician immediately.

Rinse mouth thoroughly with water.

Keep respiratory tract clear.

If symptoms persist, call a physician.

Most important symptoms and effects, both acute and

delayed

Harmful if swallowed.
Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

May cause respiratory irritation.

sensitizing effects

Protection of first-aiders : First Aid responders should pay attention to self-protection

according to the Hazardous Products Regulations



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and use the recommended protective clothing

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Foam

Water spray jet

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-

accelerating decomposition reaction with release of flammable

vapors which may auto-ignite.

Do not allow run-off from fire fighting to enter drains or water

courses.

Cool closed containers exposed to fire with water spray.

Specific extinguishing meth-

ods

Do not use a solid water stream as it may scatter and spread

fire.

Remove undamaged containers from fire area if it is safe to do

SO.

Use water spray to cool unopened containers.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

Further information : Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment. Use a water spray to cool fully closed containers.

Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

Special protective equipment

for fire-fighters

Wear self-contained breathing apparatus for firefighting if

necessary.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Follow safe handling advice and personal protective

equipment recommendations.
Use personal protective equipment.

Avoid dust formation.

Avoid breathing dust.

Ensure adequate ventilation.

Remove all sources of ignition.

according to the Hazardous Products Regulations



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Never return spills in original containers for re-use.

Treat recovered material as described in the section "Disposal

considerations".

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

Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-

accelerating decomposition reaction with release of flammable

vapors which may auto-ignite.

Clear spills immediately.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

To clean the floor and all objects contaminated by this

material, use plenty of water.

Soak up with inert absorbent material. Isolate waste and do not reuse. Non-sparking tools should be used.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

employed in the cleanup of releases. You will need to

determine which regulations are applicable.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Advice on protection against

fire and explosion

Keep away from combustible material.

Avoid dust formation.

Provide appropriate exhaust ventilation at places where dust

is formed.

Advice on safe handling : Avoid formation of respirable particles.

Protect from contamination. Protect from moisture.

Do not swallow.

Do not breathe vapors/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes.

Take precautionary measures against static discharges. Never return any product to the container from which it was

originally removed.

Provide sufficient air exchange and/or exhaust in work rooms.

Avoid confinement.

Keep away from heat, hot surfaces, sparks, open flames and

according to the Hazardous Products Regulations



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other ignition sources. No smoking.

Smoking, eating and drinking should be prohibited in the

application area.

Wash thoroughly after handling.

For personal protection see section 8.

Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being

used.

Conditions for safe storage : Store in original container.

Keep containers tightly closed in a cool, well-ventilated place.

Keep in a dry place.

Observe label precautions.

Store in accordance with the particular national regulations. Avoid impurities (e.g. rust, dust, ash), risk of decomposition. Electrical installations / working materials must comply with

the technological safety standards.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Materials to avoid : Never allow product to get in contact with water during

storage.

Keep away from combustible materials.

Keep away from strong acids, bases, heavy metal salts and

other reducing substances.

Recommended storage tem- :

perature

< 30 °C

Further information on stor-

age stability

: Stable under recommended storage conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ammonium persulphate	7727-54-0	TWA	0.1 mg/m3	CA AB OEL
		TWA	0.1 mg/m3	CA BC OEL
			(Persulphate)	
		TWA	0.1 mg/m3	ACGIH
			(Persulphate)	

Engineering measures : Minimize workplace exposure concentrations.

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Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an

approved filter.

Filter type : Filter type P

Use NIOSH approved respiratory protection.

Hand protection

Material : butyl-rubber
Break through time : <= 480 min
Glove thickness : 0.47 mm

Material : Nitrile rubber
Break through time : <= 480 min
Glove thickness : 0.40 mm

Remarks : The data about break through time/strength of material are

standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove. Choose gloves to protect hands against chemicals depending on the concentration and quantity of the

hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before

breaks and at the end of workday.

Eye protection : Ensure that eyewash stations and safety showers are close

to the workstation location.

Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.

Always wear eye protection when the potential for inadvertent

eye contact with the product cannot be excluded.

Tightly fitting safety goggles

Please wear suitable protective goggles. Also wear face

protection if there is a splash hazard.

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets,

disposable suits) to avoid exposed skin surfaces.

Wear as appropriate:

Flame retardant antistatic protective clothing.

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Protective measures : The type of protective equipment must be selected according

to the concentration and amount of the dangerous substance

at the specific workplace.

Hygiene measures : Avoid contact with skin, eyes and clothing.

Keep away from food and drink. When using do not eat or drink. When using do not smoke.

Wash hands before breaks and immediately after handling

the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : crystalline

Color : white

Odor : odorless

Odor Threshold : not determined

pH : 4

Concentration: ca. 10 g/l

Melting point/freezing point : Decomposition: Decomposes below the melting point.

Initial boiling point and boiling

range

Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Not expected to form explosive dust-air mixtures.

Self-ignition : The substance or mixture is not classified as pyrophoric.

Upper explosion limit / Upper

flammability limit

Upper explosion limit No data available

Lower explosion limit / Lower

flammability limit

Lower explosion limit No data available

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Vapor pressure : < 0.001 hPa (25 °C)

Relative vapor density : not determined

Relative density : not determined

Density : not determined

Bulk density : 1,100 kg/m3 (20 °C)

Solubility(ies)

Water solubility : 850 g/l soluble (25 °C)

Partition coefficient: n-

octanol/water

Not applicable

Autoignition temperature : Not applicable Decomposition

Self-Accelerating decomposi-

tion temperature (SADT)

130 °C

Method: UN-Test H.4

SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a

self-accelerating decomposition reaction.

Viscosity

Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is classified as oxidizing with the

category 3.

Self-heating substances : The substance or mixture is not classified as self heating.

Particle size : not determined

Particle Size Distribution : $D10 = 183 \mu m$

Type of distribution: volume distribution Measurement technique: laser diffraction

SECTION 10. STABILITY AND REACTIVITY

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Reactivity : Stable under recommended storage conditions.

May intensify fire; oxidizer.

Chemical stability : Stable under recommended storage conditions.

No decomposition if stored normally.

Possibility of hazardous reac-

tions

Avoid moisture.

Even small amounts of moisture or impurities can noticably reduce the self-accelerating decomposition temperature

(SADT).

Conditions to avoid : Protect from contamination.

Protect from moisture.

Contact with incompatible substances can cause

decomposition at or below SADT.

Even small amounts of moisture or impurities can noticably reduce the self-accelerating decomposition temperature

(SADT).

Incompatible materials : Accelerators, strong acids and bases, heavy metals and

heavy metal salts, reducing agents

Hazardous decomposition

products

Irritant, caustic, flammable, noxious/toxic gases and vapours

can develop in the case of fire and decomposition

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : LD50 (Rat, male): 742 mg/kg

Method: OECD Test Guideline 401

Components:

Ammonium persulphate:

Acute oral toxicity : LD50 (Rat, male): 742 mg/kg

Method: OECD Test Guideline 401

Assessment: The component/mixture is moderately toxic after

single ingestion.

Remarks: Based on test data

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Expert judgment

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Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Expert judgment

Skin corrosion/irritation

Causes skin irritation.

Product:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

Remarks : May cause skin irritation in susceptible persons.

Components:

Ammonium persulphate:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species : Rabbit

Result : Irritating to eyes.

Method : OECD Test Guideline 405

Remarks : May cause irreversible eye damage.

Components:

Ammonium persulphate:

Species : Rabbit

Result : Irritating to eyes.

Method : OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Product:

Routes of exposure : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406

Result : May cause sensitization by skin contact.

Routes of exposure : inhalation (dust/mist/fume)

Result : May cause sensitization by inhalation.

Remarks : Causes sensitization.

Components:

Ammonium persulphate:

Routes of exposure : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406

Result : May cause sensitization by skin contact.

Routes of exposure : inhalation (dust/mist/fume)

Result : May cause sensitization by inhalation.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Ammonium persulphate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Genotoxicity in vivo : Species: Mouse

Application Route: Intraperitoneal Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Not classified due to lack of data.

Components:

Ammonium persulphate:

Species : Mouse
Application Route : Skin contact
Exposure time : 52 weeks

Method : OECD Test Guideline 451

Result : negative

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Reproductive toxicity

Not classified due to lack of data.

Components:

Ammonium persulphate:

Effects on fertility : Species: Rat

Application Route: Ingestion

General Toxicity Parent: NOAEL: >= 250 mg/kg body weight General Toxicity F1: NOAEL: >= 250 mg/kg body weight

Method: OECD Test Guideline 421

STOT-single exposure

May cause respiratory irritation.

Product:

Assessment : May cause respiratory irritation.

Components:

Ammonium persulphate:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Components:

Ammonium persulphate:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Ammonium persulphate:

Species : Rat

NOAEL : 1,000 mg/kg
LOAEL : 3,000 mg/kg
Application Route : Ingestion
Exposure time : 90 d

Method : OECD Test Guideline 408

Species : Rat

NOAEL : 41.1 mg/kg

Application Route : oral (feed)

Exposure time : 28 d

Method : OECD Test Guideline 407

according to the Hazardous Products Regulations



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Species : Rat

NOAEL : 0.0103 mg/l

Application Route : inhalation (dust/mist/fume)
Method : OECD Test Guideline 413

Species : Rat

: 0.005 mg/l

Application Route : inhalation (dust/mist/fume)
Method : OECD Test Guideline 413

Aspiration toxicity

Not classified due to lack of data.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Ammonium persulphate:

Toxicity to fish : LC50 (Scophthalmus maximus (turbot)): 107.6 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 120 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EC50 (Phaeodactylum): 320 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Phaeodactylum): 32 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 (Pseudomonas putida): 36 mg/l

Exposure time: 18 h

according to the Hazardous Products Regulations



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Persistence and degradability

Components:

Ammonium persulphate:

Biodegradability : Remarks: The methods for determining biodegradability are

not applicable to inorganic substances.

Bioaccumulative potential

Components:

Ammonium persulphate:

Partition coefficient: n-

octanol/water

: Remarks: Not applicable

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological infor-

mation

: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of wastes in an approved waste disposal facility.

The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Contaminated packaging : Dispose of in accordance with local regulations.

Clean container with water.

Dispose of contents/ container to an approved waste disposal

plant.

Empty remaining contents.

Dispose of as unused product.

Do not re-use empty containers.

Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

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UN number : UN 1444

Proper shipping name : AMMONIUM PERSULPHATE

Class : 5.1
Packing group : III
Labels : 5.1
Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 1444

Proper shipping name : Ammonium persulphate

Class : 5.1
Packing group : III
Labels : Oxidizer
Packing instruction (cargo : 563

aircraft)

Packing instruction (passen: 559

ger aircraft)

IMDG-Code

UN number : UN 1444

Proper shipping name : AMMONIUM PERSULPHATE

Class : 5.1
Packing group : III
Labels : 5.1
EmS Code : F-A, S-Q
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

TDG

UN number : UN 1444

Proper shipping name : AMMONIUM PERSULFATE

Class : 5.1
Packing group : III
Labels : 5.1
ERG Code : 140
Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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SECTION 15. REGULATORY INFORMATION

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

TCSI (TW) : On the inventory, or in compliance with the inventory

TSCA (US) : All substances listed as active on the TSCA inventory

AllC (AU) : All components are listed on the inventory, regulatory

obligations/restrictions apply

DSL (CA) : All components of this product are on the Canadian DSL

ENCS (JP) : On the inventory, or in compliance with the inventory

ISHL (JP) : On the inventory, or in compliance with the inventory

KECI (KR) : On the inventory, or in compliance with the inventory

PICCS (PH) : On the inventory, or in compliance with the inventory

IECSC (CN) : On the inventory, or in compliance with the inventory

NZIoC (NZ) : On the inventory, or in compliance with the inventory

TECI (TH) : On the inventory, or in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Further information

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

These safety instructions also apply to empty packaging which may still contain product residues. The hazards on the label also apply to residues in the container.

Sources of key data used to compile the Material Safety

Data Sheet

: Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

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Date format : mm/dd/yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table

2: OEL)

CA BC OEL : Canada. British Columbia OEL
ACGIH / TWA : 8-hour, time-weighted average
CA AB OEL / TWA : 8-hour Occupational exposure limit
CA BC OEL / TWA : 8-hour time weighted average

AllC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals 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; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

CA / Z8

according to the Hazardous Products Regulations



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