This SDS packet was issued with item:

078945813

N/A



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SECTION 1. IDENTIFICATION

1.1 Product identifier

BUDESONIDE / FORMOTEROL FUMARATE DIHYDRATE pMDI

Phone (24 hr.) Medical: Details of the supplier of the **ASTRAZENECA**

safety data sheet P.O. Box 15437 (800) 236-9933

Wilmington, DE 19850-5437 (24 hr.) Chemical / Spill Emergency: USA

INFOTRAC - (800) 535-5053

SafetyDataSheets.AlderleyPark@astrazeneca.com

Alternative Names

Budesonide 80 mcg / formoterol fumarate dihydrate 4.5 mcg pMDI Budesonide 160 mcg / formoterol fumarate dihydrate 4.5 mcg pMDI

CAS No. : Not applicable

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

Use of the Substance/Mixture : Treatment of asthma

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Gases under pressure Liquefied gas

Skin sensitization Category 1

Reproductive toxicity Category 2

Long-term (chronic) aquatic

hazard

Category 1

GHS label elements

Hazard pictograms









Signal Word Warning

Hazard Statements H280 Contains gas under pressure; may explode if heated.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child. H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.



P272 Contaminated work clothing must not be allowed out of

the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P308 + P313 IF exposed or concerned: Get medical advice/

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

attention.

P391 Collect spillage.

Disposal:

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

Other hazards

SUSPENSION IN DELIVERY DEVICE:

As a result of the physical presentation of the product, the risk to health in the normal handling of the product is expected to be low.

Exposure to the content of crushed container may cause adverse health effects.

Liquid splashes or spray may cause freeze burns to skin and eyes.

High exposures by inhalation may produce anesthetic effects.

Higher concentrations may cause asphyxiation due to the reduced oxygen content of the atmosphere.

Can be absorbed through skin causing systemic toxic effects.

See Section 11.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

-		
Chemical name	CAS-No.	Concentration (% w/w)
1,1,1,2,3,3,3-heptafluoropropane	431-89-0	98 - <= 100
(HFC 227)		
Budesonide	51333-22-3	0.06 - 0.243
Formoterol fumarate dihydrate	43229-80-7	0.007

SECTION 4. FIRST AID MEASURES

If inhaled : Remove patient from exposure, keep warm and at rest.

Obtain medical attention.

In case of skin contact : Thaw affected areas with water.

Remove contaminated clothing.

Caution: clothing may adhere to the skin in the case of freeze

burns

After contact with skin, wash immediately with plenty of

warm water

Obtain medical attention if ill effects occur.

In case of eye contact : Immediately irrigate with eyewash solution or clean water,

holding the eyelids apart, for at least 10 minutes.

Obtain immediate medical attention.



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If swallowed Unlikely route of exposure.

Wash out mouth with water and give 200-300ml of water to

drink.

Do NOT induce vomiting.

Refer to sections 2 and 11

Obtain immediate medical attention.

Most important symptoms

and effects, both acute and

delaved

May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child.

Notes to physician Symptomatic treatment and supportive therapy as indicated.

Do not use water jet.

For further detail consult the prescribing information.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media water spray, foam, dry chemical or CO2.

Water spray should be used to cool containers.

Unsuitable extinguishing

Specific hazards during fire

fighting

Thermal decomposition will evolve toxic and corrosive

vapours.

Heating of containers may cause pressure rise with risk of

explosion.

Special protective equipment:

for fire-fighters

A self contained breathing apparatus and suitable protective

clothing should be worn in fire conditions.

Prevent fire extinguishing water from contaminating surface

water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Do not breathe vapor.

Ensure suitable personal protection during removal of

spillages. See Section 8.

Environmental precautions

Avoid release of gas to the environment.

Collect spillage.

Methods and materials for containment and cleaning up Isolate the source of the leak if safe to do so.

Ventilate area.

Allow small spillages to evaporate provided there is adequate

ventilation.

Take care to avoid broken containers.

Transfer spilled containers to a suitable container for disposal.

See section 13.

SECTION 7. HANDLING AND STORAGE

Avoid contact with skin and eyes. Advice on safe handling

Avoid inhalation.

Liquid splashes or spray may cause freeze burns to skin and

eves.

See Section 8.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or



burn, even after use.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated

place.

Do not freeze.

Keep away from heat and direct sunlight.

Store away from incompatible materials (see Section 10).

Recommended storage

temperature

< 77 °F / < 77 °F

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Budesonide	51333-22-3	TWA	0.01 mg/m3	COM; HYG; Sk
Formoterol fumarate dihydrate	43229-80-7	TWA	0.0002 mg/m3	COM; HYG

Engineering measures : The specific controls will depend on local circumstances and

should be based on the risk assessment. Appropriate controls to reduce exposure may include engineering controls, for example ventilation, procedural controls and the

use of personal protection equipment.

Prevent entry into drains, sewers or watercourses. See Section 6 for environmental precautions.

Personal protective equipment

Respiratory protection : As necessary, use NIOSH approved respiratory protection

device consistent with the work place risk assessment.

Eye protection : Wear appropriate eye protection.

Skin and body protection : Use impervious clothing to protect against direct contact with

the liquid or for repeated, excessive handling use full chemical protective suit if the risk assessment does not support the selection of other protection. Use chemical protective gloves with a permeation time greater than the activity duration. Take note of the information given by the PPE producer/supplier concerning permeability and breakthrough times and special workplace conditions.

Protective measures : Decisions about whether the use of personal protective

equipment (PPE) is appropriate as part of the control strategy should be based on the workplace risk assessment and should take account of local legislative requirements for selection and use. There are multiple factors that will affect the specific requirements such as amount and concentration of the material, duration of exposure, frequency of exposure, external environmental conditions, the task, the user etc. All the information above should not be used in isolation and should be considered in the context of the workplace risk

assessment on a case by case basis.



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Appearance : Liquefied gas

Color : colorless

Odor : odorless

Odor Threshold : No data available

pH : No data available

Melting point/range : No data available

Initial boiling point and boiling

range

Flash point

and boiling : 2.30 °F / 2.30 °F

Evaporation rate : No data available

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit / Upper

flammability limit

No data available

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : 390 hPa (68 °F / 68 °F)

Relative vapor density : No data available

Relative density : 1.41 (77 °F / 77 °F)

Solubility(ies)

Water solubility : 0.23 g/l (77 °F / 77 °F)

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

log Pow: 2.3

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No known reactivity hazard under normal conditions.

Chemical stability : Stable under normal conditions.



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Possibility of hazardous

reactions

: Can react with

strong oxidizing agents

alkali metals

alkaline earth metals

Conditions to avoid Incompatible materials

: Contains gas under pressure; may explode if heated.

: Light metals Alkali metals

> Alkaline earth metals Powdered metals Oxidizing agents

Hazardous decomposition

products

Hydrogen fluoride

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

Not classified based on available information.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Acute oral toxicity : Remarks: Low acute oral toxicity.

Acute inhalation toxicity : Remarks: High atmospheric concentrations may lead to

anesthetic effects.

Acute dermal toxicity : Remarks: Spray may cause freeze burns.

Budesonide:

Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg

Assessment: The component/mixture is moderately toxic after

single ingestion.

Acute inhalation toxicity : Remarks: May cause effects as described under single

exposure.(STOT)

Acute dermal toxicity : Remarks: Can be absorbed through skin causing systemic

toxic effects.

Formoterol fumarate dihydrate:

Acute oral toxicity : Remarks: May cause effects as described under single

exposure.(STOT)

Acute inhalation toxicity : LC50 (Rat): 1.35 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : Remarks: No information available.

11.2 Skin corrosion/irritation

Not classified based on available information.



Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Remarks : Spray may cause freeze burns.

Budesonide:

Remarks : May cause slight skin irritation.

Formoterol fumarate dihydrate:

Remarks : No information available.

11.3 Serious eye damage/eye irritation

Not classified based on available information.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Remarks : Spray may cause freeze burns.

Budesonide:

Remarks : May cause slight eye irritation.

May cause corneal ulcers and reduced visual function.

May cause cataracts and viral infection.

Formoterol fumarate dihydrate:

Remarks : No information available.

11.4 Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Remarks : No information available.

Budesonide:

Result : May cause sensitization by skin contact.

Formoterol fumarate dihydrate:

Remarks : No information available.

11.5 Germ cell mutagenicity

Not classified based on available information.



Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Germ cell mutagenicity - : There is no evidence of mutagenic potential in in vitro tests.

Assessment

Budesonide:

Germ cell mutagenicity - : There is no evidence of genotoxic potential in in vitro and in

Assessment vivo tests.

Formoterol fumarate dihydrate:

Germ cell mutagenicity - : There is no evidence of genotoxic potential in in vitro and in

Assessment vivo tests.

11.6 Carcinogenicity

Not classified based on available information.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Carcinogenicity - : No information available.

Assessment

Budesonide:

Carcinogenicity - : No evidence of carcinogenicity in animal studies.

Assessment

Formoterol fumarate dihydrate:

Carcinogenicity - : The substance is not considered to be carcinogenic.

Assessment

IARC No ingredient 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 ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

11.7 Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Reproductive toxicity - : No toxicity to reproduction

Assessment

Budesonide:

Reproductive toxicity - : Some evidence of adverse effects on development, based on

Assessment animal experiments.

Formoterol fumarate dihydrate:

Reproductive toxicity - : Some embryofetal development effects in rats and rabbits at

Assessment high doses.



11.8 STOT-single exposure

Not classified based on available information.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Remarks : No specific effects reported.

Budesonide:

Routes of exposure : Inhalation

Remarks : May cause Candida infections and mild irritation in the throat,

coughing and hoarseness.

May cause effects as described under repeated

exposure.(STOT)

Routes of exposure : Dermal

Remarks : May cause eruption-like acne.

May cause effects as described under repeated

exposure.(STOT)

Formoterol fumarate dihydrate:

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

Target Organs : Heart

Assessment : Causes damage to organs.

Routes of exposure : Oral Target Organs : Heart

Assessment : Causes damage to organs.

Remarks : These effects are derived from studies in animals.

Dust, if inhaled even in small amounts, can cause violent palpitation, trembling, headache and widening of the bronchii. Rare cases of hypersensitivity reactions have been reported.

11.9 STOT-repeated exposure

Not classified based on available information.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

Remarks : No information available.

Budesonide:

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

Target Organs : Adrenal gland

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Routes of exposure : Oral

Target Organs : Adrenal gland

Assessment : Causes damage to organs through prolonged or repeated

exposure.



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Routes of exposure : Dermal Target Organs : Adrenal gland

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Remarks : Repeated exposure may produce oedema (water retention),

high blood pressure, blurred vision, peptic ulcers,

demineralization of bone, fatigue and suppression of adrenal

gland function.

Formoterol fumarate dihydrate:

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

Target Organs : Heart

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Routes of exposure : Oral Target Organs : Heart

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Remarks : Tachycardia and musculoskeletal and connective tissue

disorders and muscle cramps have been reported. Common side effects reported from patients include

palpitations, headache and tremor.

11.10 Aspiration toxicity

Not classified based on available information.

Components:

1,1,1,2,3,3,3-heptafluoropropane (HFC 227):

No information available.

Budesonide:

No data available

Formoterol fumarate dihydrate:

No information available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Budesonide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 13 mg/l

End point: mortality Exposure time: 96 h

Method: OECD Test Guideline 203



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Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 14 mg/l

End point: Immobilization Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EC50 (green algae): > 7.9 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (green algae): 7.9 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic

toxicity)

NOEC (Danio rerio (zebra fish)): 0.000032 mg/l

End point: mortality Exposure time: 28 d

Method: OECD Test Guideline 210

Toxicity to daphnia and other :

aquatic invertebrates (Chronic toxicity)

NOEC (Daphnia magna (Water flea)): 3.4 mg/l

Exposure time: 21 d

Test Type: Reproduction Test Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

,

1,000

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Formoterol fumarate dihydrate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)); > 120 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 114 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

ErC50 (Selenastrum capricornutum (green algae)): 94 mg/l

Exposure time: 72 h

Test Type: Growth inhibition

Method: OECD Test Guideline 201

Persistence and degradability

Components:

Budesonide:

Biodegradability : aerobic

Biodegradation: < 5 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

Result: not rapidly degradable



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BOD/ThOD < 50 %

Formoterol fumarate dihydrate:

Biodegradability Result: Not readily biodegradable.

> Biodegradation: 20.5 % Exposure time: 28 d

Bioaccumulative potential

Components:

Budesonide:

Bioaccumulation Remarks: The substance has low potential for

bioaccumulation.

Formoterol fumarate dihydrate:

Bioaccumulation Remarks: The substance has low potential for

bioaccumulation.

Mobility in soil

Components:

Budesonide:

Mobility Remarks: Water solubility >= 1 mg/l.

Distribution among

environmental compartments

Remarks: No information available.

Formoterol fumarate dihydrate:

Mobility Remarks: Water solubility >= 1 mg/l.

Distribution among

environmental compartments

Remarks: No information available.

Other adverse effects

Product:

Ozone-Depletion Potential Regulation: 40 CFR Protection of Environment; Part 82

Protection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was

manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +

B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues Disposal should be in accordance with local, state or national

legislation.

Waste, even small quantities, should never be poured down

drains, sewers or water courses.



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Dispose of contents/ container to an approved incineration

plant.

Contaminated packaging : Empty container will retain product residue. Observe all

hazard precautions.

SECTION 14. TRANSPORT INFORMATION

International Air Transport (IATA Requirements): See IATA Special Provision A98. International Maritime Transport (IMDG Requirements): See IMDG Special Provision 190. U.S. Transport (49 CFR Requirements): See 49 CFR 173.306.

ICAO/IATA

UN No. 1950

Proper Shipping Name : Aerosols, non-flammable

Class : 2.2

IMO/IMDG

UN No. 1950

Proper Shipping Name : AEROSOLS

Class : 2.2

Marine pollutant : Marine pollutant

DOT (Department of Transport)

UN No. 1950
Proper Shipping Name : Aerosols
Class : 2.2

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

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 302 Extremely Hazardous Substances Threshold Planning Quantity

Components CAS-No. Component TPQ (lbs)

SARA 311/312 Hazards : No SARA Hazards

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.



Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

1,1,1,2,3,3,3-heptafluoropropane (HFC 227) 431-89-0

Maine Chemicals of High Concern

This product does not contain any chemicals that are listed as Maine Chemicals of High Concern.

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California Prop. 65

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

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

REACH : Not in compliance with the inventory

DSL : This product contains the following components that are not

on the Canadian DSL nor NDSL. Formoterol fumarate dihydrate

Budesonide

AICS : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory



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IECSC : Not in compliance with the inventory

TCSI : Not in compliance with the inventory

TSCA : Not On TSCA Inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

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; CHINV - China Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; COM - In-house occupational exposure limit; 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; HYG – Analytical method for occupational exposure monitoring; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; 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; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); 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; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT -Persistent, Bioaccumulative and Toxic substance; (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; Sen - Capable of causing respiratory sensitization; Sk - Can be absorbed through skin, thus contributing to systemic effects; STEL - Short-term exposure limit 15-minutes time-weighted average; TLV - Threshold Limit Value (ACGIH); TLV-C - Threshold Limit Value Ceiling limit (ACGIH); TRINV - Turkey Inventory; TSCA - Toxic Substances Control Act (United States); TWA - Long-term exposure limit 8h time-weighted average; UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB -Very Persistent and Very Bioaccumulative

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The information provided in this Material 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.

US / Z2