according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

**SECTION 1. IDENTIFICATION** 

Product name : CRACK DETECTION SYSTEM – PENETRANT, 259 g

Product code : 890.80010

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited/Limitée

Address : 345 Hanlon Creek Blvd

GUELPH, ON N1C 0A1

Telephone : 1-800-263-5002

Telefax : 1-905-564-3671

Emergency telephone : Emergencies involving a spill, fire, explosion or exposure:

CHEMTREC (24/7): 1-800-424-9300

Urgences impliquant un déversement, incendie, explosion ou

exposition: CHEMTREC (24/7): 1-800-424-9300

E-mail address : prodsafe@wurth.ca

Recommended use of the chemical and restrictions on use

Recommended use : Industrial use

Crack detection substance

Restrictions on use : Not applicable

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS classification in accordance with the Hazardous Products Regulations

Aerosols : Category 1

Specific target organ toxicity : Category 3

- single exposure

**GHS** label elements

Hazard pictograms :





Signal Word : Danger

**Precautionary Statements** 

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

Hazard Statements : H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated. H336 May cause drowsiness or dizziness.

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

and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing spray.

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

Response:

Prevention:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel

unwell.

Storage:

P405 Store locked up.

P410 + P412 Protect from sunlight. Do not expose to tempera-

tures exceeding 50 °C (122 °F).

Disposal:

P501 Dispose of contents and container to an approved waste

disposal plant.

#### Other hazards

Repeated exposure may cause skin dryness or cracking.

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

#### Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Hydrocarbons, C3-4- rich, petroleum distil- late	_ , ,	68512-91-4	>= 60 - < 80 *
Hydrocarbons, C12- C15, n-alkanes, isoal- kanes, cyclics, < 2% aromatics	Naphtha (petro- leum), hy- drotreated heavy	Not Assigned	>= 30 - < 60 *

<sup>\*</sup> Actual concentration or concentration range is withheld as a trade secret

#### **SECTION 4. FIRST AID MEASURES**

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM - PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

11493361-00001 1.0 12/17/2024 Date of first issue: 12/17/2024

General advice In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact In case of contact, immediately flush skin with plenty of water.

Get medical attention if symptoms occur.

In case of eye contact Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed If swallowed, DO NOT induce vomiting.

> Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and

delayed

Prolonged or repeated contact may dry skin and cause irrita-

tion.

May cause drowsiness or dizziness.

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

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician Treat symptomatically and supportively.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire

fighting

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

If the temperature rises there is danger of the vessels bursting

due to the high vapor pressure.

Hazardous combustion prod-

ucts

Carbon oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Use water spray to cool unopened containers.

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

according to the Hazardous Products Regulations



# CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

SO.

Evacuate area.

Special protective equipment:

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emer-

gency procedures

Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g., by containment or

oil barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.

Soak up with inert absorbent material.

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

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

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.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventila-

tion.

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

Advice on safe handling : Do not get on skin or clothing.

Avoid breathing spray.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

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

other ignition sources. No smoking.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the

environment.

Do not spray on an open flame or other ignition source.

Conditions for safe storage : Store locked up.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Do not pierce or burn, even after use. Keep cool. Protect from sunlight.

Materials to avoid : Do not store with the following product types:

Self-reactive substances and mixtures

Organic peroxides Oxidizing agents Flammable solids Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Substances and mixtures which in contact with water emit

flammable gases

Explosives Gases

Recommended storage tem- :

perature

< 40 °C

Storage period : 60 Months

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrocarbons, C3-4-rich, petroleum distillate	68512-91-4	TWA	1,000 ppm	CA AB OEL
		STEL	1,000 ppm	ACGIH
Hydrocarbons, C12-C15, n- alkanes, isoalkanes, cyclics, < 2% aromatics	Not Assigned	TWA (Mist)	5 mg/m³	CA AB OEL
		STEL (Mist)	10 mg/m <sup>3</sup>	CA AB OEL

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

TWAEV (Mist)	5 mg/m³	CA QC OEL
STEV (Mist)	10 mg/m <sup>3</sup>	CA QC OEL
TWA (Mist)	1 mg/m³	CA BC OEL
TWA	525 mg/m <sup>3</sup>	CA ON OEL
TWA (Inha- lable particu- late matter)	5 mg/m³	ACGIH

**Engineering measures** : Minimize workplace exposure concentrations.

If sufficient ventilation is unavailable, use with local exhaust

ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust venti-

lation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the re-

commended guidelines, use respiratory protection.

Filter type : Self-contained breathing apparatus

Hand protection

Material : PVC
Break through time : > 480 min
Glove thickness : 0.35 mm

Remarks : Choose gloves to protect hands against chemicals depending

on the concentration 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 : Wear the following personal protective equipment:

Safety glasses

Always wear eye protection when the potential for inadvertent

eye contact with the product cannot be excluded.

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

Skin and body protection : Wear the following personal protective equipment:

If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic

protective clothing.

Hygiene measures : If exposure to chemical is likely during typical use, provide

eye flushing systems and safety showers close to the wor-

king place.

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES** 

Appearance : Aerosol containing a liquefied gas

Propellant : Hydrocarbons, C3-4-rich, petroleum distillate

Color : red

Odor : No data available

Odor Threshold : No data available

pH : Solvent mixture; pH value determination not possible, no

aqueous solution

Melting point/freezing point : No data available

Initial boiling point and boiling

range

Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : Not applicable

Relative vapor density : Not applicable

Relative density : 0.64 (25 °C)

Reference substance: Water

Density : No data available

Solubility(ies)

Water solubility : No data available

according to the Hazardous Products Regulations



# CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

Partition coefficient: n-

octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle characteristics

Particle size : Not applicable

#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Extremely flammable aerosol.

Vapors may form explosive mixture with air.

If the temperature rises there is danger of the vessels bursting

due to the high vapor pressure.

Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

### **Acute toxicity**

Not classified based on available information.

#### **Components:**

#### Hydrocarbons, C3-4-rich, petroleum distillate:

according to the Hazardous Products Regulations



# CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

Acute inhalation toxicity : LC50 (Rat): 276808 ppm

Exposure time: 4 h
Test atmosphere: gas

Remarks: Based on data from similar materials

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

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

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 5.6 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Remarks: Based on data from similar materials

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

Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

**Components:** 

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species : Rabbit

Result : No skin irritation

Remarks : Based on data from similar materials

Assessment : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Not classified based on available information.

**Components:** 

Hydrocarbons, C3-4-rich, petroleum distillate:

Species : Rabbit

Result : No eye irritation

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species : Rabbit

Result : No eye irritation

Remarks : Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

according to the Hazardous Products Regulations



# CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

### **Components:**

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Result : negative

Remarks : Based on data from similar materials

#### Germ cell mutagenicity

Not classified based on available information.

#### Components:

Hydrocarbons, C3-4-rich, petroleum distillate:

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

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Rat

Application Route: inhalation (gas) Method: OECD Test Guideline 474

Result: negative

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

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

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

#### Carcinogenicity

Not classified based on available information.

#### **Components:**

#### Hydrocarbons, C3-4-rich, petroleum distillate:

Species : Mouse

Application Route : inhalation (gas)
Exposure time : 103 weeks
Result : negative

Remarks : Based on data from similar materials

#### Reproductive toxicity

Not classified based on available information.

### STOT-single exposure

May cause drowsiness or dizziness.

according to the Hazardous Products Regulations



# CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

#### **Components:**

#### Hydrocarbons, C3-4-rich, petroleum distillate:

Assessment : May cause drowsiness or dizziness.

#### STOT-repeated exposure

Not classified based on available information.

#### Repeated dose toxicity

#### **Components:**

#### Hydrocarbons, C3-4-rich, petroleum distillate:

Species : Rat

NOAEL : 10000 ppm Application Route : inhalation (gas)

Exposure time : 90 Days

Method : OECD Test Guideline 413

#### **Aspiration toxicity**

Not classified based on available information.

#### **Components:**

#### Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

#### **SECTION 12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

### Components:

#### Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l

Exposure time: 96 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EL50 (Daphnia magna (Water flea)): > 1,000 mg/l

Exposure time: 48 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000

mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

according to the Hazardous Products Regulations



# CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)):

1,000 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

#### Persistence and degradability

#### **Components:**

#### Hydrocarbons, C3-4-rich, petroleum distillate:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 100 % Exposure time: 26 d

Remarks: Based on data from similar materials

#### Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 67.6 % Exposure time: 28 d

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

#### Bioaccumulative potential

#### Components:

### Hydrocarbons, C3-4-rich, petroleum distillate:

Partition coefficient: n-

: log Pow: 2.36

octanol/water

#### Mobility in soil

No data available

#### Other adverse effects

No data available

### **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **Disposal methods**

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM - PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

12/17/2024 11493361-00001 1.0 Date of first issue: 12/17/2024

> Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product. Please ensure aerosol cans are sprayed completely empty

(including propellant)

#### **SECTION 14. TRANSPORT INFORMATION**

#### International Regulations

**UNRTDG** 

**UN** number UN 1950 Proper shipping name : AEROSOLS

Class : 2.1

Packing group : Not assigned by regulation

Labels 2.1 Environmentally hazardous no

IATA-DGR

UN/ID No. UN 1950

Proper shipping name Aerosols, flammable

Class 2.1

Packing group Not assigned by regulation

Labels Flammable Gas

Packing instruction (cargo

aircraft)

Packing instruction (passen: 203

ger aircraft)

203

IMDG-Code

**UN** number UN 1950 Proper shipping name **AEROSOLS** 

Class 2.1

Packing group Not assigned by regulation

Labels 2.1 EmS Code F-D, S-U 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 1950 **AEROSOLS** Proper shipping name

Class 2.1

Packing group Not assigned by regulation

Labels 2.1

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

ERG Code : 126 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.

#### **SECTION 15. REGULATORY INFORMATION**

Volatile organic compounds

(VOC) content

Canada - Volatile Organic Compound Concentration Limits for

Certain Products Regulations

VOC content: 78.75 %

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

DSL : All chemical substances in this product comply with the CEPA

1999 and NSNR and are on or exempt from listing on the

Canadian Domestic Substances List (DSL).

#### **SECTION 16. OTHER INFORMATION**

#### 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

CA ON OEL : Ontario Table of Occupational Exposure Limits made under

the Occupational Health and Safety Act.

CA QC OEL : Québec. Regulation respecting occupational health and safe-

ty, Schedule 1, Part 1: Permissible exposure values for air-

borne contaminants

ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit

CA AB OEL / TWA : 8-hour Occupational exposure limit
CA AB OEL / STEL : 15-minute occupational exposure limit

CA BC OEL / TWA : 8-hour time weighted average

CA ON OEL / TWA : Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV : Time-weighted average exposure value

CA QC OEL / STEV : Short-term exposure value

AIIC - 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

according to the Hazardous Products Regulations



## CRACK DETECTION SYSTEM – PENETRANT, 259 g

Version Revision Date: SDS Number: Date of last issue: -

1.0 12/17/2024 11493361-00001 Date of first issue: 12/17/2024

- 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

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/

Revision Date : 12/17/2024 Date format : mm/dd/yyyy

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CA / Z8