

B chYg Zcf h\Y XcWcf

None.

("& A cgh]a dcfhUbh'gma dhca g'UbX YZZYVgZVch\ 'UW hY'UbX XY'UmYX

These information are not available.

("" ðX]W[h]cb'cZ'Ubm]a a YX]Uhy'a YX]W\ 'UhhYbh]cb'UbX'gdYVWU' hfYUha Ybh'bYXXYX

None.

G97H=C B) . :]fY!Z[\ h]b['a YUgi fYg

) "% 9I h]b[i]g\]b['a YX]U

Gi]hUV`Y YI h]b[i]g\]b['a YX]U

water spray, foam, alcohol resistant foam, fire extinguishing powder

I bgi]hUV`Y YI h]b[i]g\]b['a YX]U

water jet, carbon dioxide (CO2)

) "& GdYVWU` \ UnUfXg'Uf]g]b['Zfca h\Y'gi VghUbW'cf'a]I hi fY

Combustible.

Hazardous decomposition products: Section 10.

Danger of dust explosion.

Deposited combustible dust has considerable explosion potential.

< UnUfXci g'Vta Vi gh]cb'dfcXi Vhg

nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2), hydrogen cyanide (HCN, prussic acid), gas/vapor, toxic

) "" 5Xj]W'Zcf'Z]fYZ[\ hYfg

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

GdYVWU`dfchYVh]j Y'Yei]da YbhZcf'Z]fYZ[\ hYfg

wear self-contained breathing apparatus

G97H=C B `* . 5WVXYbhU` fY`YUgY`a YUgi fYg

* "% DYfgcbU`dfYWji h]cbgZdfchYVh]j Y'Yei]da Ybh'UbX`Ya Yf[YbVhdfcW'Xi fYg

: cf`bcb!Ya Yf[YbWmdYfgcbbY`

Remove persons to safety.

Ventilate affected area.

Control of dust.

Eliminate all ignition sources if safe to do so.

Do not breathe dust.

Avoid contact with skin and eyes.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

: cf`Ya Yf[YbWmfYgdcbXYfg`

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

*"& 9bj]fcb a YbhU`dfYWli h]cbg`

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

*" A Yh\cXgUbX`a UhYf]U`Zcf`WcbhU]ba YbhUbX`WYUb]b[`i d`

5Xj]W`cb`ck`hc`WcbhU]b`U`gd]`

Take up mechanically.

5Xj]W`cb`ck`hc`WYUb`i`d`U`gd]`

Take up mechanically.

Collect spillage.

C h\Yf`]bZcfa Uh]cb`fY`Uh]b[`hc`gd]`g`UbX`fY`YUgYg`

Place in appropriate containers for disposal.

Ventilate affected area.

*"(FYZYfYbW`hc`ch\Yf`gYW]cbg`

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

G97H=C B`+.`< UbX`]b[`UbX`ghcfU[Y`

+ "% DfYWli h]cbg`Zcf`gUZY`\ UbX`]b[`

Avoid contact with eyes.

A YUgi`fYg`hc`dfY] YbhZ]fY`Ugk`Y``Ug`UYf`cgc`UbX`Xi`gh[YbYfUh]cb`

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

GdYVZ]WbchYg#XYhU]`g

Layers, deposits and heaps of combustible dust must be considered, like any other source which can form a hazardous explosive atmosphere.

Dust deposits may accumulate on all deposition surfaces in a technical room.

Danger of dust explosion.

A YUgi fYg`hc`dfchYVh`h\Y`Ybj]fcb a Ybh

Avoid release to the environment.

5Xj]W`cb [YbYfU`cVW dUh]cbU` \m]]YbY

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

+ "& 7cbX]h]cbg`Zcf`gUZy`ghcfU[Yz]bWl X]b[`Ubm]bWta dUh]V`]h]Yg

9l d`cg]j Y`Uha cgd\YfYg

Removal of dust deposits.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

: `Ua a UV`]hm\UnUfXg

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take precautionary measures against static discharge.

Ground/bond container and receiving equipment.

=bWta dUh]V`Y`gi VghUbW`gcf`a]l hi fYg

Incompatible materials: see section 10.

DfchYVh`U[U]bghYl hYfbU`Yl dcbgi fYzgi W`Ug

heat, humidity, direct light irradiation, sunlight

7cbg]XYfUh]cb`cZch\Yf`UXj]W

Keep away from food, drink and animal feedingstuffs.

J Ybh]`Uh]cb`fYei]fYa Ybhg

Provision of sufficient ventilation.

GdYVZ]WXYg][bg`Zcf`ghcfU[Y`fcca`gcf`j YggY`g

Keep container tightly closed and in a well-ventilated place.

Keep cool.

Store in a dry place.

DUW`U[]b[`Wta dUh]V`]h]Yg

Keep only in original container.

+ "" GdYVZ]WYbX`i`gYfgL

No information available.

G97H-CB ; . 9l dcgi fY V`bhf`g#dYfgcbU`dfchYVh]cb

, "% 7cbhf`dUfUa YhYfg

C VV dUh]cbU`Yl dcgi fY`ja]hj U'i Yg`fK cf_d`UW`9l dcgi fY`@ja]hgk									
7ci b! hfm	B Ua Y`cZU[Ybh	75GBc	→XYbh] Z]Yf	HK 5 Qlda Q	HK 5 Q [#a `Q	GH9@ Qlda Q	GH9@ Q [#a `Q	B chU! h]cb	Gci fW
US	Particulates not otherwise regulated		PEL (CA)		10			dust	Cal/OSHA PEL
US	Particulates not otherwise regulated		PEL (CA)		5			r	Cal/OSHA PEL
US	particulates not otherwise classified		REL					appx-D	NIOSH REL
US	particulates not otherwise classified (PNOC)		PEL	1,766	15			i, dust	29 CFR 1910.1000
US	particulates not otherwise classified (PNOC)		PEL	529.5	5			partml, r, dust	29 CFR 1910.1000

B chU]cb

appx-D see Appendix D - Substances with No Established RELs

dust as dust

i inhalable fraction

partml particles/ml

r respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

, "& 9l dcgi fY V`bhf`g

5ddfcdf]Uhy Yb[]bYYf]b[V`bhf`g

General ventilation.

→X]j]Xi U`dfchYVh]cb`a YUgi fYg`fU`YfgcbU`dfchYVh]j Y`Yei]da Ybhk

9mY#ZUW`dfchYVh]cb

Wear eye/face protection.

D5 (\$) \$; 6 Dck XYf B Uhi fU`

< UbX`dfchYW]cb

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Use heat resistant gloves when handling hot / molten product.

C h \ Y f ` d f c h Y W] c b ` a Y U g i f Y g

Wear heat-resistant protective clothing when handling hot/molten product.

F Y g d] f U h c f m d f c h Y W] c b

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

P2 (filters at least 94 % of airborne particles, color code: White).

9 b j] f c b a Y b h U ` Y l d c g i f Y W b h f c ` g

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

G97H-C B ` . . D \ n g] W ` U b X ` W Y a] W ` d f c d Y f h] Y g

- "% = b Z c f a U h] c b ` c b ` V U g] W d \ n g] W ` U b X ` W Y a] W ` d f c d Y f h] Y g

5 d d Y U f U b W

Physical state

solid

Form

powder

Color

whitish

Odor

odorless

Odor threshold

these information are not available

C h \ Y f ` g U Z Y h m d U f U a Y h Y f g

pH (value)

these information are not available

Melting point/freezing point

~180– 730 °C

Initial boiling point and boiling range

these information are not available

Flash point

not applicable

Evaporation rate

these information are not available

Flammability (solid, gas)

this material is combustible, but will not ignite readily

Explosion limits of dust clouds

not determined

Vapor pressure

these information are not available

Density	these information are not available
Vapor density	these information are not available
Relative density	these information are not available
Gc`i V]`]hmf]Ygk	
Water solubility	not miscible in any proportion
DUfh]h]cb WtYZZ]V]Ybh	
n-octanol/water (log KOW)	these information are not available
Auto-ignition temperature	not relevant (Solid matter)
Decomposition temperature	these information are not available
J]gWt]g]hm	
Kinematic viscosity	not relevant (solid matter)
Dynamic viscosity	not relevant (solid matter)
Explosive properties	dust explosion hazards
Oxidizing properties	shall not be classified as oxidizing
- "& C h\ Yf`]bZcfa Uh]cb	
None	

G97H=C B %\$. GhUV]`]hmUbX`fYUW]j]hm

%"% FYUW]j]hm

This material is not reactive under normal ambient conditions.

%"& 7\Ya]WU`ghUV]`]hm

See below "Conditions to avoid".

%" Dcgg]V]`]hmicZ\UnUfXci g`fYUW]cbg

Danger of dust explosion.

%"(7cbX]h]cbg`hc`Uj c]X

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.

%") -bWta dUh]V`Y`a UhYf]U`g

oxidizers

%"* <UnUfXci g`XYWta dcg]h]cb`dfcXi Wtg

Pyrolysis products, toxic.
Hazardous combustion products: see section 5.

% % % =bZcfa Uh]cb`cb`hcl]Vt`c []WU` `YZZYVhg

7`Ugg]Z]WUh]cb`dfcVWXi fY

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

7`Ugg]Z]WUh]cb`UWV`hc`CG<5`<UnUfX`7ca a i b]WUh]cb`GhUbXUFX`f&-`7: F`%-`%\$`%&\$`\$L

5W hy`hcl]WVm

Classification could not be established because:

GdYVZ]WhUf[Yh'cf[Ub'hcl]Vhm! 'g]b[`Y'YI dcgi fY

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

GdYVZ]WhUf[Yh'cf[Ub'hcl]Vhm! fYdYUhyX `YI dcgi fY

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

5gd]fUh]cb `UnUfX

Shall not be classified as presenting an aspiration hazard.

G97H=C B %&. '9Wt`c []WU`]bZcfa Uh]cb

%&"% Hcl]Vhm

5ei Uh]Whcl]VhmfUW hYt

Test data are not available for the complete mixture.

5ei Uh]Whcl]VhmfVX fcb]Vt

Test data are not available for the complete mixture.

%&"& DYfg]ghYbW`UbX`XY[fUXUV]`]hm

6]cXY[fUXUh]cb

Data are not available.

DYfg]ghYbW`

Data are not available.

%&" 6]cUWV a i `Uh]j Y`dchYbh]U`

Test data are not available for the complete mixture.

%&"(A cV]]hm]b'gc]`

Data are not available.

%&") FYgi `hg'cZD6H'UbX`j Dj 6`UggYgga Ybh

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

%&"* Ch\Yf`UXj YfgY`YZZYVtg

Data are not available.

FYa Uf_g

Wassergefährdungsklasse, WGK (water hazard class): 2

G97H=C B % . 8]gdcgU`Vtbg]XYfUh]cbg

% "% K UghY`hfYUha`Ybh'a`Yh\`cXg

Dispose of contents/container in accordance with local/regional/national/international regulations.

GYk U[`Y`X]gdcgU`!fY`Yj`Ubh`]bZcfa`Uh]cb

Do not empty into drains.

K UghY`hfYUha`Ybh'cZ`Vt`bhU]bYfg#dUW_U[`Yg

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

FYa`Uf_g

Please consider the relevant national or regional provisions.

G97H=C B %(.`HfUbgdcfh`]bZcfa`Uh]cb

%{ "% I`B`bi`a`VYf

not subject to transport regulations

%{ "& I`B`dfcdYf`g\`]dd]b[`bUa`Y

-

%{ "" HfUbgdcfh`\`UnUfX`WUggfYgk

-

%{ "(DUW_]b[`[

D5 (\$) \$; 6 Dck XYf B Uhi fU`

7ca dfY\ Ybgj Y `9bj]fcb a YbhU` FYgdcbgYž7ca dYbgUh]cbžUbX`@]UV]`]hm5Vh`f79F 7@5Ł
 @]ghcZ< UnUfXci g`Gi VghUbWg`UbX FYdcfhUV`Y E i Ubh]h]Yg`f79F 7@5`gYVh]cb`%\$&UŁf(\$`7: F` \$&“(Ł
 none of the ingredients are listed

7`YUb`5]f`5Vh
 none of the ingredients are listed

F][\h`hc`?bck`< UnUfXci g`Gi VghUbW`@]gh
 < UnUfXci g`Gi VghUbW`@]gh`fB`>FH?Ł
 none of the ingredients are listed

7U`]Zcfb]U`9bj]fcb a YbhU` DfchYVh]cb`5[YbVh`f7U`#9D5Ł`Dfcdcg]h]cb`*)`!`GUZY`8f]b_]b[
 K UhYf`UbX`Hcl]W9bZcfW`a Ybh`5Vh`cZ`% , +
 none of the ingredients are listed

=bXi ghfmc`f`gYVh`c`f`gdYV]Z]WUj U]`UV`Y`[i]XUbW`f]Ł
 B D75!< A`=Gf``==

Hazardous Materials Identification System.
 American Coatings Association.

7UhY[cfm	F Uh]b[8YgW]dh]cb
Chronic	/	none
Health	0	no significant risk to health
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

B: D5f`+\$(

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

7UhY[cfm	8Y[fY`cZ \ UnUfX	8YgW]dh]cb
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

D5 (\$) \$; 6 Dck XYf B Uhi fU`

7\Ya JW` GUZYhm5ggYgga Ybh

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

G97H=C B `%*. `Ch\Yf `]bZcfa Uh]cbž]bWİ X]b[`XUhY`cZdfYdUfUh]cb `cf`UghfYj]g]cb

Date of preparation: 2019-10-17

Date of last revision: 2020-05-13.

5VVfYj]Uh]cbg`UbX`UW`cbma g

5VVf"	8YgW]dh]cbg`cZi gYX UVVfYj]Uh]cbg
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
IARC Mono-graphs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
ppm	Parts per million
STEL	Short-term exposure limit
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

?Ym`]hYfUhi fY`fYZYfYbW`g`UbX`gci fW`g`Zcf`XUHU

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

D5 (\$) \$; 6 Dck XYf B Uhi fU`

Transport of dangerous goods by road or rail (49 CFR US DOT).
 International Maritime Dangerous Goods Code (IMDG).
 Dangerous Goods Regulations (DGR) for the air transport (IATA).

7`Ugg]Z]WWh]cb`dfcWYXi fY

Physical and chemical properties.
 Health hazards.
 Environmental hazards.
 The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

@]ghcZfY`Yj Ubh'd\ fUgYg fWcXY`UbX`Zi ``hYI h'Ug'ghUHYX`]b`WUdhYf`&`UbX`" Ł

@]ghcZfY`Yj Ubh'd\ fUgYg fWcXY`UbX`Zi ``hYI h'Ug'ghUHYX`]b`WUdhYf`&`UbX`" Ł	
7cXY	HYI h
OSHA003	May form combustible dust concentrations in air.

F Ygdcbg]V`Y`Zcf`h`Y`gUZYhmXUHJ`g\`YYh

Chemical Regulatory Compliance Company Telephone: +1 (630) 410-1660
 Chicago, IL e-Mail: GHS@crc-us.com
 USA Website: www.crc-us.com

8]gWU]a Yf

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