

3/8" Chem-Stud, 1/2" Chem-Stud, 5/8" Chem-Stud, 3/4" Chem-Stud, 7/8" Chem-Stud, 1" Chem-Stud, 1-1/4" Chem-Stud

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation : 3/8" Chem-Stud, 1/2" Chem-Stud, 5/8" Chem-Stud, 3/4" Chem-Stud,

7/8" Chem-Stud, 1" Chem-Stud, 1-1/4" Chem-Stud

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

Specific use(s) : Building and construction work

1.3. Details of the supplier of the safety data sheet

Company : Powers Fasteners, Inc.

2 Powers Lane, Brewster, NY 10509

Telephone: 800-524-3244 Fax: 877-871-1965 Email: info@powers.com

1.4. Emergency telephone number

Emergency telephone : (CHEMTREC) Within USA: (800) 424-9300;

Outside USA: 01 (703) 527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EU) 1272/2008

CLP-Classification : This mixture is classified as hazardous according to regulation (EC) No.

1272/2008 [CLP].

Flam. Liq. 3 H226 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Skin Sens. 1 H317 STOT RE 1 H372 Aquatic Chronic 3 H412

Full text of H-phrases: see section 16

2.1.2. Classification according to EU Directives 67/548/EEC or 1999/45/EC

Classification : The product is classified as dangerous in accordance with Directive

1999/45/EC.

Xi; R43 R10 R52/53

Full text of R-phrases: see section 16



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2.2. GHS Label elements

2.2.1. Products is described and labeled according to the Global Harmonization System (GHS)

CLP pictograms :

GHS02





Signal word : Danger

Contains : Dibenzoyl peroxide

Hazard statements : H226 - Flammable liquid and vapour.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H372 - Causes damage to organs through prolonged or repeated exposure.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 - Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all

contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

2.2.2. Labelling according to Directives (67/548 - 1999/45)

Not relevant

2.3. Other hazards

Other hazards which do not result in : Results of PBT and vPvB assessment : classification : This information is not available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Substance name	Product identifier	%	Classification according to Directive 67/548/EEC
Styrene	(CAS No.) 100-42-5 (EC No.) 202-851-5 (EC Index) 601-026-00-0 (REACH-no.) 01-2119457861-32-XXXX	1 - 12,5	R10 Xn; R20 Xn; R48/20 Xn; R65 Xi; R36/37/38
Dibenzoyl peroxide	(CAS No.) 94-36-0 (EC No) 202-327-6 (EC Index) 617-008-00-0 (REACH-no) 01-2119511472-50-XXXX	0,5 - 2,5	E; R3 O; R7 Xi; R36 Xi; R43 N; R50/53
1,1'-(p-tolylimino)dipropan-2-ol	(CAS No.) 38668-48-3 (EC No) 254-075-1	0 - 0,75	T; R25 X; R41 R52/53



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Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Styrene	(CAS No.) 100-42-5 (EC No) 202-851-5 (EC Index) 601-026-00-0 (REACH-no) 01-2119457861-32-XXXX	1 - 12,5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304
Dibenzoyl peroxide	(CAS No.) 94-36-0 (EC No) 202-327-6 (EC Index) 617-008-00-0 (REACH-no) 01-2119511472-50-XXXX	0,5 - 2,5	Org. Perox. B, H241 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400
1,1'-(p-tolylimino)dipropan-2-ol	(CAS No.) 38668-48-3 (EC No) 254-075-1	0 - 0,75	Acute Tox. 2 (Oral), H300 Eye Dam. 1, H318 Aquatic Chronic 3, H412

Full text of R-, H- and EUH-phrases: see section 16

Identification of the mixture Mixture

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation. : Move to fresh air.

> Keep warm and in a quiet place. Call a physician if symptoms occur.

Skin contact : Take off all contaminated clothing immediately.

After contact with skin, wash immediately with plenty of water. .

Call a physician if irritation develops or persists.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least

Consult a physician if necessary.

Ingestion : Consult a physician.

Additional advice : First aider needs to protect himself.

See also section 8

Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance.

Treat symptomatically.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation : No adverse effects are expected. May be irritating. Skin contact : Causes skin irritation. May cause allergic skin reaction.

Eye contact : Causes serious eye irritation. Ingestion : No adverse effects are expected.

Other adverse effects : Causes damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

Extinguishing media <u>5.1.</u>

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which shall not be used : High volume water jet

for safety reasons



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5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

Specific hazards : Possible decomposition products are: COx.

Fire residues and contaminated fire extinguishing water must be disposed of in

accordance with local regulations.

5.3. Advice for firefighters

Advice for firefighters : Special protective equipment for firefighters

In the event of fire, cool tanks with water spray.

Keep away from open flames, hot surfaces and sources of ignition.

No smoking.

Fire residues and contaminated fire extinguishing water must be disposed of

in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel : Evacuate personnel to safe areas.

Wear personal protective equipment.

See also section 8

Ensure adequate ventilation.

Avoid contact with skin, eyes and clothing.

Do not breathe vapours/dust.

Keep away from open flames, hot surfaces and sources of ignition. Ensure all equipment is electrically grounded before beginning transfer

operations

Take precautionary measures against static discharges.

Advice for emergency responders : Only qualified personnel equipped with suitable protective equipment may

intervene.

See also section 8.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Prevent further leakage or spillage if safe to do so.

Take up mechanically and collect in suitable container for disposal.

Sweep up and shovel into suitable containers for disposal.

Dam up.

Dispose of in accordance with local regulations.

Local authorities should be advised if significant spillages cannot be

contained.

6.4. Reference to other sections

See also section 8
See also section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling : Ensure adequate ventilation.

See also section 8.

Avoid contact with skin, eyes and clothing.

Do not breathe vapours/dust.

Ensure all equipment is electrically grounded before beginning transfer



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operations.

Take any precaution to avoid mixing with Incompatible materials Take care to avoid waste and spillage when weighing, loading and

mixing the product.

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

Do not puncture or incinerate.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and immediately after handling the product.

Remove and wash contaminated clothing before re-use.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep tightly closed in a dry, cool and well-ventilated place.

Keep away from open flames, hot surfaces and sources of ignition.

Keep away from food, drink and animal feedingstuffs.

Keep at temperatures below 25 ℃.

Keep away from heat. Protect from sunlight.

Do not store near or with any of the incompatible materials listed in

section 10.

7.3 Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s)

Styrene (100-42-5)			
Austria	MAK (mg/m³)	340 mg/m³	
Austria	MAK (ppm)	20 ppm	
Austria	MAK Short time value (ppm)	80 ppm	
Belgium	Limit value (mg/m³)	216 mg/m ³	
Belgium	Limit value (ppm)	50 ppm	
Belgium	Short time value (mg/m³)	432 mg/m³	
Belgium	Short time value (ppm)	100 ppm	
Bulgaria	OEL TWA (mg/m³)	85,0 mg/m ³	
Bulgaria	OEL STEL (mg/m³)	215,0 mg/m ³	
France	VME (mg/m³)	215 mg/m ³	
France	VME (ppm)	50 ppm	
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	86 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)	
Germany	TRGS 900 Occupational exposure limit value (ppm)	20 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)	
Germany	TRGS 903 (BGW)	600 mg/g (Medium: urine - Time: end of shift - Parameter: Mandelic acid plus Phenylglyoxylic acid (measured as mg/g Creatinine) 600 mg/g (Medium: urine - Time: end of several shifts - Parameter: Mandelic acid plus Phenylglyoxylic acid (measured as mg/g Creatinine; for long-term exposures)	
Greece	OEL TWA (mg/m³)	425 mg/m ³	



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Styrene (100-42-5)			
Greece	OEL TWA (ppm)	100 ppm	
Greece	OEL STEL (mg/m³)	1050 mg/m ³	
Greece	OEL STEL (ppm)	250 ppm	
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20 ppm	
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	40 ppm	
Latvia	OEL TWA (mg/m³)	10 mg/m ³	
Spain	VLA-ED (mg/m³)	86 mg/m³ (endocrine disrupter)	
Spain	VLA-ED (ppm)	20 ppm (endocrine disrupter)	
Spain	VLA-EC (mg/m³)	172 mg/m³	
Spain	VLA-EC (ppm)	40 ppm	
Switzerland	VLE (mg/m³)	170 mg/m³	
Switzerland	VLE (ppm)	40 ppm	
Switzerland	VME (mg/m³)	85 mg/m ³	
Switzerland	VME (ppm)	20 ppm	
United Kingdom	WEL TWA (mg/m³)	430 mg/m ³	
United Kingdom	WEL TWA (ppm)	100 ppm	
United Kingdom	WEL STEL (mg/m³)	1080 mg/m ³	
United Kingdom	WEL STEL (ppm)	250 ppm	
Czech Republic	Expozi ní limity (PEL) (mg/m3)	100 mg/m ³	
Denmark	Grænseværdie (kortvarig) (mg/m3)	105 mg/m³	
Denmark	Grænseværdie (kortvarig) (ppm)	25 ppm	
Finland	HTP-arvo (8h) (mg/m3)	86 mg/m ³	
Finland	HTP-arvo (8h) (ppm)	20 ppm	
Finland	HTP-arvo (15 min)	430 mg/m³	
Finland	HTP-arvo (15 min) (ppm)	100 ppm	
Hungary	AK-érték	50 mg/m ³	
Hungary	CK-érték	50 mg/m ³	
Ireland	OEL (8 hours ref) (mg/m3)	85 mg/m ³	
Ireland	OEL (8 hours ref) (ppm)	20 ppm	
Ireland	OEL (15 min ref) (mg/m3)	170 mg/m³	
Ireland	OEL (15 min ref) (ppm)	40 ppm	
Lithuania	IPRV (mg/m3)	90 mg/m³	
Lithuania	IPRV (ppm)	10 ppm (for planning of new facilities or replacing the old ones)	
Lithuania	TPRV (mg/m3)	200 mg/m³	
Lithuania	TPRV (ppm)	50 ppm	
Norway	Gjennomsnittsverdier (AN) (mg/m3)	105 mg/m ³	
Norway	Gjennomsnittsverdier (AN) (ppm)	25 ppm	
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m3)	131,25 mg/m ³	
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	37,5 ppm	
Poland	NDS (mg/m3)	50 mg/m ³	
Poland	NDSCh (mg/m3)	200 mg/m ³	
Romania	OEL TWA (mg/m³)	50 mg/m ³	
Romania	OEL TWA (ppm)	12 ppm	
Romania	OEL STEL (mg/m³)	150 mg/m³	



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Styrene (100-42-5)			
Romania	OEL STEL (ppm)	35 ppm	
Slovakia	NPHV (priemerná) (mg/m3)	86 mg/m ³	
Slovakia	NPHV (priemerná) (ppm)	20 ppm	
Slovakia	NPHV (Hrani ná) (mg/m3)	200 mg/m ³	
Sweden	nivågränsvärde (NVG) (mg/m3)	43 mg/m ³	
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm	
Sweden	kortidsvärde (KTV) (mg/m3)	86 mg/m ³	
Sweden	kortidsvärde (KTV) (ppm)	20 ppm	

Recommended monitoring procedures: : Concentration measurement in air

Personal monitoring

8.2. Exposure controls

Personal protective equipment : The type of protective equipment must be selected according to the

concentration and amount of the dangerous substance at the specific

workplace.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Respirator with a full face mask (EN 136), Respirator with a half face mask (EN 140), Recommended Filter type: A (EN 141).

Hand protection : Impervious gloves (EN 374). The selection of specific gloves for a

specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal

protection), and the instructions/specification of the supplier of gloves.

Butyl rubber. (EN 374) Break through time : > 120 min

Eye protection : Safety glasses (EN 166)

Skin and body protection : Wear suitable protective clothing.

Thermal hazard protection : Not required under normal use.

Engineering control measures : Use only in area provided with appropriate exhaust ventilation.

Take necessary action to avoid static electricity discharge (which might

cause ignition of organic vapours).

Ensure that eyewash stations and safety showers are close to the

workstation location.

Organisational measures to prevent /limit releases, dispersion and

exposure

See also section 7

Environmental exposure controls : The product should not be allowed to enter drains, water courses or the

soil.

Comply with applicable Community environmental protection

legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : capsules
Colour : colourless
Odour : characteristic



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pH : No data available
Melting point/range : No data available
Boiling point/boiling range : No data available

Flash point : 31 °C resin

Evaporation rate : No data available

Flammability (solid, gas) : not applicable

Explosion limits : No data available

Vapour pressure : No data available

Vapour density : No data available

Relative density : No data available

Water solubility : Insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : no data available

Viscosity : 420 - 520 mPa.s resin

Explosive properties : not applicable

The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the

molecule.

Oxidizing properties : not applicable

The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with

oxidising properties.

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity : Flammable liquid and vapour.

See also section 10.5

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : heat :

Polymerisation can occur.

10.4. Conditions to avoid

Conditions to avoid : Keep away from heat and sources of ignition.

See also section 7 Handling and storage

10.5. Incompatible materials

Incompatible materials : Strong oxidizing agents Strong bases Strong acids See also section 7

Handling and storage

10.6. Hazardous decomposition products

Hazardous decomposition products : Burning produces noxious and toxic fumes. (COx).



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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met.)

Skin corrosion/irritation : Causes skin irritation. pH: No data available

Serious eye damage/irritation : Causes serious eye irritation.

pH: No data available

Respiratory/skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met.)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met.)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met.)

Specific target organ toxicity (single

exposure)

: Not classified (Based on available data, the classification criteria are not met.)

Specific target organ toxicity (repeated

exposure)

: Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met.)

Further information

Symptoms related to the physical, chemical and toxicological characteristics, See section 4.2.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity effects : Harmful to aquatic life with long lasting effects .

Styrene (100-42-5)	
LC50/96h/fish	3,24 - 4,99 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50/48h/daphnia	3,3 - 7,4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	1,4 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
LC50 fish 2	19,03 - 33,53 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 other aquatic organisms 2	500 mg/l Bacteria
EC50 other aquatic organisms 2	0,72 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)
NOEC (acute)	44 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])
NOEC (additional information)	NOEC, Daphnia: 1,01 mg/l (21d)

12.2. Persistence and degradability

Persistence and degradability : no data available

12.3. Bioaccumulative potential

Bioaccumulation : no data available
Partition coefficient: n-octanol/water : No data available



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12.4. Mobility in soil

Mobility : No data available

12.5. Results of PBT and vPvB assessment

PBT/vPvB : This information is not available.

12.6. Other adverse effects

Further information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products : Handle with care.

See also section 7 Handling and storage

Do not flush into surface water or sanitary sewer system.

Do not let product enter drains.

Dispose of in accordance with local regulations.

Where possible recycling is preferred to disposal or incineration. Collect and dispose of waste product at an authorised disposal facility.

Contaminated packaging : In accordance with local and national regulations.

Additional ecological information : Should not be released into the environment.

List of suggested waste codes/waste designations in accordance with the EWC:

: Waste codes should be assigned by the user, preferably in discussion with the

waste disposal authorities.

The following Waste Codes are only suggestions:

150110* - packaging containing residues of or contaminated by dangerous

substances

SECTION 14: Transport information

14.1. UN number

UN-No. : 1866

14.2. UN proper shipping name

Proper shipping name IATA/IMDG : IATA : RESIN SOLUTION

14.3. Transport hazard class(es)

14.3.1. Overland transport

ADR/RID : No good of class 3 according to ADR/RID chapter 2.2.3.1.5

14.3.2. Inland waterway transport (ADN)

No data available

14.3.3. Transport by sea

IMDG : If shipped by vessel in quantities LESS than 30L, IMDG 2.3.2.5 exception applies: Not

regulated as a hazardous material.

State on shipping documents: "Transport in accordance with 2.3.2.5 of the IMDG

code."

Class : -

Subsidiary Class : IATA: 3 - Flammable liquids



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14.3.4. Air transport

Class :

Subsidiary Class : IATA: 3 - Flammable liquids

14.4. Packing group

Packing group : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6 Special precautions for user

No data available

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

No data available

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Restrictions on use :

3. Liquid substances or mixtures, which are regarded as dangerous according to the definitions in Council Directive 67/548/EEC and Directive

1999/45/EC. : Styrene - 1,1'-(p-tolylimino)dipropan-2-ol

40. Substances meeting the criteria of flammability in Directive 67/548/EEC and classified as flammable, highly flammable or extremely flammable regardless of whether they appear in Part 3 of Annex VI to

Regulation (EC) No 1272/2008 or not. : Styrene

This product contains an ingredient according to the

candidate list of Annex XIV of the REACH

Regulation 1907/2006/EC. : none

Authorisations : Not applicable

Special rules on packaging : Tactile warning of danger (EN/ISO 11683)

15.1.2. National regulations

DE: WGK : :

DE: German storage class (LGK) : LGK 3 - Flammable liquid materials (Flashpoint < 55 ℃)
DE: Risk classification according to VbF : A II - Liquids with a flashpoint between 21 ℃ and 55 ℃

FR: Installations classées : 143X

15.2. Chemical safety assessment

Chemical Safety Assessment : For the following substances of this mixture a chemical safety

assessment has been carried out:

Styrene

Dibenzoyl peroxide



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SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 2 (Oral) : Acute toxicity Category 2

Acute Tox. 4 (Inhalation:dust,mist) : Acute toxicity Category 4

Aquatic Acute 1 : Hazardous to the aquatic environment - Aquatic Acute 1

Aquatic Chronic 3 : Hazardous to the aquatic environment - chronic hazard category 3

Asp. Tox. 1 : Aspiration hazard Category 1

Eye Dam. 1 : Serious eye damage/eye irritation Category 1 Eye Irrit. 2 : Serious eye damage/eye irritation Category 2

Flam. Liq. 3 : Flammable liquids Category 3
Org. Perox. B : Organic peroxide Category B
Skin Irrit. 2 : skin corrosion/irritation Category 2
Skin Sens. 1 : Skin sensitisation, hazard category 1

STOT RE 1 : Specific target organ toxicity (repeated exposure) Category 1 STOT SE 3 : Specific target organ toxicity (single exposure) Category 3

H226 : Flammable liquid and vapour.

H241 : Heating may cause a fire or explosion.

H300 : Fatal if swallowed.

H304 : May be fatal if swallowed and enters airways.

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

H372 : Causes damage to organs through prolonged or repeated exposure.

H400 : Very toxic to aquatic life.

H412 : Harmful to aquatic life with long lasting effects.

R10 : Flammable.

R20 : Harmful by inhalation.
R25 : Toxic if swallowed.

R3 : Extreme risk of explosion by shock, friction, fire or other sources of ignition.

R36 : Irritating to eyes.

R36/37/38 : Irritating to eyes, respiratory system and skin.

R41 : Risk of serious damage to eyes.

R43 : May cause sensitisation by skin contact.

R48/20 : Harmful: danger of serious damage to health by prolonged exposure through inhalation. R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

R65 : Harmful: may cause lung damage if swallowed.

R7 : May cause fire. Explosive

N : Dangerous for the environment

O : oxidizing
T : Toxic
Xi : Irritant
Xn : Harmful

Sources of key data used to compile

the Safety Data Sheet

: European Chemicals Bureau. ECHA website. SDS from supplier.

Abbreviations and acronyms : ADN = Accord Européen relatif au Transport International des Marchandises

Dangereuses par voie de Navigation du Rhin

ADR = Accord européen relatif au transport international des marchandises

Dangereuses par Route



3/8" Chem-Stud, 1/2" Chem-Stud, 5/8" Chem-Stud, 3/4" Chem-Stud, 7/8" Chem-Stud, 1" Chem-Stud, 1-1/4" Chem-Stud

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CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods Code

LEL = Lower Explosive Limit/Lower Explosion Limit

UEL = Upper Explosion Limit/Upper Explosive Limit

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals

EC50 = Median Effective Concentration

LC50 = Median lethal concentration

LD50 = Median lethal dose

not applicable

TLV = Threshold limits

TWA = time weighted average

STEL = Short term exposure limit

persistent, bioaccumulating and toxic (PBT).

vPvB = very persistent and very bioaccumulating

WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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