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acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: May 14, 2018 Revision: May 14, 2018

1 Identification

· Product identifier

· Trade name: MM30 · Product code: 26030

· Recommended use and restriction on use

· Recommended use: Corrosion inhibitors

· Restrictions on use: Contact manufacturer/supplier

Details of the supplier of the Safety Data Sheet

· Manufacturer/Supplier:

FERTAN LLC

3414 Peachtree Road N.E.

Suite 1600

Atlanta, GA 30326

USA

(888)611-7112

contact@fertanusa.com http://www.fertanusa.com

· Emergency telephone number:

ChemTel Inc.

(800)255-3924 (North America)

+1 (813)248-0585 (International)

2 Hazard(s) identification

Claus Assessed 4 11000

· Classification of the substance or mixture

Flam. Aerosol 1	H222	Extremely flammable aerosol.
Press. Gas	H280	Contains gas under pressure; may explode if heated.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Dam. 1	H318	Causes serious eye damage.
Carc. 2	H351	Suspected of causing cancer.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.

- Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms:











GHS02 GHS04 GHS05 GHS07 GHS08

· Signal word: Danger · Hazard statements:

H222 Extremely flammable aerosol.

H280 Contains gas under pressure; may explode if heated.

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	315	Causes skin irritation.	
	318	Causes serious eye damage.	
	351	Suspected of causing cancer.	
НЗ	335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.	
H3	373	May cause damage to organs through prolonged or repeated exposure.	
НЗ	304	May be fatal if swallowed and enters airways.	
·Pr	ecaution	ary statements:	
P2	201	Obtain special instructions before use.	
	202	Do not handle until all safety precautions have been read and understood	od.
P2	210	Keep away from heat/sparks/open flames/hot surfaces No smoking.	
P2	211	Do not spray on an open flame or other ignition source.	
	251	Pressurized container: Do not pierce or burn, even after use.	
	260	Do not breathe mist/vapors/spray.	
	264	Wash thoroughly after handling.	
	271	Use only outdoors or in a well-ventilated area.	
	280	Wear protective gloves/protective clothing/eye protection/face protection	١.
	301+P310	, ,	
	331	Do NOT induce vomiting.	
	302+P352	on our and the proving or obselve the contract of the contr	
	304+P340		
P3	305+P351	+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove of	ontact lenses, if
		present and easy to do. Continue rinsing.	
	308+P313		
	332+P313		
	362+P364		
	103+P233		
	105 140 - 5400	Store locked up.	
	110+P403		00°E
	110+P412		
P5	501	Dispose of contents/container in accordance with local/regional/nation regulations.	nai/international
· O1	ther haz	ards There are no other hazards not otherwise classified that have been identi	fied.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Components:					
115-10-6 dimethyl ether					
Flam. Gas 1, H220 Press. Gas, H280					
64742-49-0 Naphtha (petroleum), hydrotreated light (Nota P, <0.1% benzene)	10-20%				
♦ Asp. Tox. 1, H304	-				
5593-70-4 tetra-n-butoxytitanium	10-20%				
♠ Flam. Liq. 3, H226					
Eye Dam. 1, H318					
Skin Irrit. 2, H315; STOT SE 3, H335-H336					
1330-20-7 xylene	10-20%				
♠ Flam. Liq. 3, H226					
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♠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	
100-41-4 ethylbenzene Flam. Liq. 2, H225 Carc. 2, H351; STOT RE 2, H373; Asp. Tox. 1, H304 Acute Tox. 4, H332 Eye Irrit. 2B, H320	1-5%
7429-90-5 aluminium powder (stabilised) The property of the stabilised of the stabi	1-5%

Additional information:

For the wording of the listed Hazard Statements, refer to section 16.

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

Description of first aid measures

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Unlikely route of exposure.

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

A person vomiting while lying on their back should be turned onto their side.

· Most important symptoms and effects, both acute and delayed:

Headache

Dizziness

Coughing

Breathing difficulty

Irritant to skin and mucous membranes.

Strong irritant with the danger of severe eye injury.

Acidosis

Nausea

Disorientation

Danger:

Danger of pulmonary edema.

Danger of impaired breathing.

Causes serious eye damage.

Danger of disturbed cardiac rhythm.

Danger of convulsion.

Indication of any immediate medical attention and special treatment needed:

May cause neurotoxic effects.

If swallowed or in case of vomiting, danger of entering the lungs.

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Medical supervision for at least 48 hours. If necessary oxygen respiration treatment.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents: Water stream.
- Special hazards arising from the substance or mixture

Danger of receptacles bursting because of high vapor pressure if heated.

Formation of toxic gases is possible during heating or in case of fire.

- Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information:

Eliminate all ignition sources if safe to do so.

Cool endangered containers with water fog.

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Keep away from ignition sources.

Protect from heat.

· Environmental precautions

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up

Allow to evaporate.

Absorb liquid components with liquid-binding material.

Do not flush with water or aqueous cleansing agents

Send for recovery or disposal in suitable receptacles.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling
- Precautions for safe handling:

The usual precautionary measures for handling chemicals should be followed.

Use only in well ventilated areas.

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Avoid splashes or spray in enclosed areas.

Information about protection against explosions and fires:

Do not spray on a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120 °F / 49 °C, i.e. electric lights. Do not pierce or burn, even after use.

Emergency cooling must be available in case of nearby fire.

· Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Observe official regulations on storing packagings with pressurized containers.

Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from oxidizing agents.

Further information about storage conditions:

Protect from heat and direct sunlight.

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

· Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

· Control parameters

Control parameters						
· Components with limit values that require monitoring at the workplace:						
115-10-6 dimet	115-10-6 dimethyl ether					
WEEL (USA) Long-term value: 1000 ppm						
EL (Canada)	Long-term value: 1000 ppm					
1330-20-7 xyler	ne					
PEL (USA)	Long-term value: 435 mg/m³, 100 ppm					
REL (USA)	Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm					
TLV (USA)	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI					
EL (Canada)	Short-term value: 150 ppm Long-term value: 100 ppm					
EV (Canada)	Short-term value: 650 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm					
LMPE (Mexico)	Short-term value: 150 ppm Long-term value: 100 ppm A4, IBE					
100-41-4 ethylbenzene						
PEL (USA)	Long-term value: 435 mg/m³, 100 ppm					
REL (USA)	Short-term value: 545 mg/m³, 125 ppm					
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TLV (USA)

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Long-term value: 435 mg/m³, 100 ppm

Long-term value: 87 mg/m³, 20 ppm

BEI

EL (Canada) | Long-term value: 20 ppm

IARC 2B

EV (Canada) Short-term value: 540 mg/m³, 125 ppm

Long-term value: 435 mg/m³, 100 ppm

LMPE (Mexico) Long-term value: 20 ppm

Ingredients with biological limit values:

1330-20-7 xylene

BEI (USA) 1.5 g/g creatinine

Medium: urine Time: end of shift

Parameter: Methylhippuric acids

100-41-4 ethylbenzene

BEI (USA) 0.7 g/g creatinine

Medium: urine

Time: end of shift at end of workweek

Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)

Medium: end-exhaled air

Time: not critical

Parameter: Ethyl benzene (semi-quantitative)

· Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

- · Engineering controls: Provide adequate ventilation.
- · Breathing equipment:

Use suitable respiratory protective device in case of insufficient ventilation.

NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· For the permanent contact gloves made of the following materials are suitable:

Fluorocarbon rubber (Viton)

Butyl rubber, BR

Nitrile rubber, NBR

Eye protection:

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Safety glasses

- · Body protection: Solvent resistant protective clothing
- Limitation and supervision of exposure into the environment No relevant information available.
- · Risk management measures No relevant information available.

Information on basic physical and chemical properties					
Appearance:					
Form:	Aerosol				
Color:	Silver-colored				
Odor:	Characteristic				
Odor threshold:	Not determined.				
pH-value:	Not determined.				
Melting point/Melting range:	Not applicable, as aerosol.				
Boiling point/Boiling range:	Not applicable, as aerosol.				
Flash point:	-42 °C (-43.6 °F)				
Flammability (solid, gaseous):	Not applicable.				
Auto-ignition temperature:	Not determined.				
Decomposition temperature:	Not determined.				
Danger of explosion:	Product is not explosive. However, formation of explosive ai vapor mixtures are possible.				
Explosion limits					
Lower:	2.7 Vol %				
Upper:	32 Vol %				
Oxidizing properties:	Non-oxidizing.				
Vapor pressure:	Not determined.				
Density:					
Relative density:	Not determined.				
Vapor density:	Not determined.				
Evaporation rate:	Not applicable.				
Solubility in / Miscibility with					
Water:	Not miscible or difficult to mix.				
Partition coefficient (n-octanol/wa	ter): Not determined.				
Viscosity					
Dynamic:	Not determined.				
Kinematic:	Not determined.				
· VOC (California):	< 65 Vol %				





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Other information

No relevant information available.

10 Stability and reactivity

- · Reactivity: No relevant information available.
- · Chemical stability:
- Thermal decomposition / conditions to be avoided:

Danger of receptacles bursting because of high vapor pressure if heated.

· Possibility of hazardous reactions

Extremely flammable aerosol.

Develops readily flammable gases / fumes.

Reacts with oxidizing agents.

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.

Toxic fumes may be released if heated above the decomposition point.

· Conditions to avoid

Keep ignition sources away - Do not smoke.

Store away from oxidizing agents.

- · Incompatible materials No relevant information available.
- · Hazardous decomposition products

Under fire conditions only:

Carbon monoxide and carbon dioxide

Toxic metal oxide smoke

11 Toxicological information

- Information on toxicological effects
- · Acute toxicity:

Acute toxicity.					
· LD/LC50 values that are relevant for classification:					
ATE (Acute Toxicity Estimate)					
Oral	LD50	>5,000 mg/kg (rat)			
Dermal	LD50	>5,000 mg/kg (rabbit)			
Inhalative	LC50/4h	>30 mg/l			
1330-20-7	1330-20-7 xylene				
Oral	LD50	4,300 mg/kg (rat)			
Dermal	LD50	2,000 mg/kg (rabbit)			
100-41-4	100-41-4 ethylbenzene				
Oral	LD50	3,500 mg/kg (rat)			
Dermal	LD50	17,800 mg/kg (rabbit)			
- Drimony irritant affact:					

- Primary irritant effect:
- · On the skin: Irritant to skin and mucous membranes.
- On the eye: Strong irritant with the danger of severe eye injury.
- · Sensitization: Based on available data, the classification criteria are not met.
- IARC (International Agency for Research on Cancer):

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100-41-4 ethylbenzene

2B

NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Inhalation.

Eve contact.

Skin contact.

- · Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Suspected of causing cancer.
- · Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure:

May cause respiratory irritation.

May cause drowsiness or dizziness.

- · STOT-repeated exposure: May cause damage to organs through prolonged or repeated exposure.
- · Aspiration hazard: May be fatal if swallowed and enters airways.

12 Ecological information

- ·Toxicity
- · Aquatic toxicity

Toxic to aquatic life with long lasting effects.

1	13	30	1_2	U ⁻ .	7 x	مار	no
		Ju		U-1		vic	

LC50 13.4 mg/l (pimephales promelas)

100-41-4 ethylbenzene

EC50 1-10 mg/kg (daphnia)

LC50 1-10 mg/l (Green Algae (chlorophyta))

4.2 mg/l (Oncorhynchus mykiss)

- Persistence and degradability No relevant information available.
- · Bioaccumulative potential: No relevant information available.
- · Mobility in soil: No relevant information available.
- Additional ecological information
- · General notes:

Do not allow product to reach ground water, water course or sewage system, even in small quantities. Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · **vPvB**: Not applicable.
- · Other adverse effects No relevant information available.

13 Disposal considerations

· Waste treatment methods

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· Recommendation:

Contact waste processors for recycling information.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- Uncleaned packagings
- · Recommendation: Disposal must be made according to official regulations.

Transport information	
UN-Number	
DOT, ADR, IMDG, IATA	UN1950
UN proper shipping name	
DOT	Aerosols
ADR, IMDG	AEROSOLS
IATA	Aerosols, flammable
Transport hazard class(es)	
DOT	
LAMILE DE	
Class	2.1
Label	2.1
ADR	
8	
Class	2.1 5F
Label	2.1
IMDG, IATA	
**	
Class	2.1
Label	2.1
Packing group	Aerosols are not assigned a packing group.
Environmental hazards	Product contains environmentally hazardo substances: zinc powder
Marine pollutant:	·



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Special precautions for user

Not applicable.

· EMS Number:

F-D,S-U

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code

Not applicable.

- Transport/Additional information:
- · DOT



Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

· ADR



Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

·IMDG



Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

·IATA



Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA
- Section 302 (extremely hazardous substances):

None of the ingredients are listed.

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

1330-20-7 xylene

7440-66-6 zinc powder

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100-41-4 ethylbenzene	, terminal or program,
7429-90-5 aluminium powder (stabilised)	
· TSCA (Toxic Substances Control Act)	
All ingredients are listed.	
· Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):	
115-10-6 dimethyl ether	10000
· Proposition 65 (California)	
· Chemicals known to cause cancer:	
100-41-4 ethylbenzene	
· Chemicals known to cause developmental toxicity for females:	
None of the ingredients are listed.	
· Chemicals known to cause developmental toxicity for males:	
None of the ingredients are listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients are listed.	
· EPA (Environmental Protection Agency):	
1330-20-7 xylene	I
7440-66-6 zinc powder	D, I, II
100-41-4 ethylbenzene	D
· IARC (International Agency for Research on Cancer):	
100-41-4 ethylbenzene	2B
· Canadian Domestic Substances List (DSL):	
All ingredients are listed.	

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Date of preparation / last revision May 14, 2018 / -

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistant, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health Administration

Flam. Gas 1: Flammable gases - Category 1

Flam. Aerosol 1: Aerosols - Category 1

Press. Gas: Gases under pressure – Compressed gas

Flam. Liq. 2: Flammable liquids – Category 2 Flam. Liq. 3: Flammable liquids – Category 3

Flam. Sol. 1: Flammable solids - Category 1

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Water-react. 2: Substances and mixtures which in contact with water emit flammable gases - Category 2

Acute Tox. 4: Acute toxicity - Category 4

Skin Irrit. 2: Skin corrosion/irritation - Category 2

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

Carc. 2: Carcinogenicity – Category 2 Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

·Sources

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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