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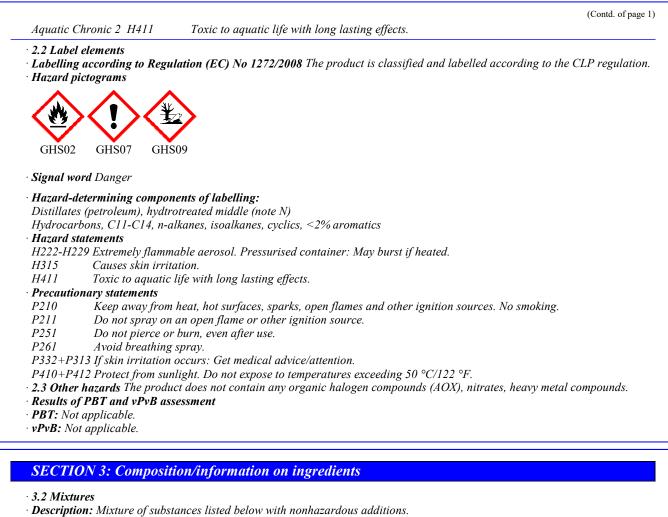
1.1 Product ider	•		
Trade name: <u>ZI</u>	EP 45 DUAL	FORCE	
Sector of Use SU Product categor Process categor PROC7 Industr PROC11 Non i Environmental ERC8a Widesp	1-C79F-0DS ntified uses J22 Profess y PC24 Lub y tial spraying ndustrial spr release categ read use of t	of the substance or mixture and uses advised against ional uses: Public domain (administration, education, entertainment, services, cra bricants, greases, release products raying	ıftsmen)
Application of the Screw loosing as Lubricant		the mixture	
1.3 Details of th Manufacturer/S ZEP UK Ltd Tanhouse Lane Widnes Cheshiro United Kingdom Tel: +44 (0)151 Fax: +44 (0)151 @: info@zep.co web: www.zep.ci	upplier: e, WA8 0RD 422 1000 422 1011 uk	f the safety data sheet	
	op Zoom 64 250 100 64 266 710		
ZEP ITALIA SRI Via Netunese Kn 04011 Aprilia (I Tel: +39.06.926 Fax: +39.06.927 @: tecnico@zep Sito: www.zep.it	1. 25.000 T) - Italy 691 747061		
<i>Further informa</i> <i>Customer Servic</i> <i>NL: Tel: + 31 10</i> <i>B: Tel: +32 2 34</i> <i>IT: Tel: +39 069</i> <i>UK: Tel: +44 15</i> <i>1.4 Emergency 37</i> <i>Customer Servic</i> <i>NL: Tel: + 31 10</i> <i>B: Tel: +32 2 34</i> <i>IT: Tel: +39 069</i>	e 54 250 100 F 57 0117 Fax: 51 422 1000 5 elephone nu 64 54 250 100 F 57 0117 Fax: 50 266 91Fax:	Fax: + 31 164 266 710 +32 2 347 1395 +39 06.927 470 61 Fax: +44 151 422 1011	
SECTION 2:	Hazards	identification	
		stance or mixture	
Aerosol 1 Skin Irrit. 2	H222-H2 H315	Regulation (EC) No 1272/2008 29 Extremely flammable aerosol. Pressurised container: May burst if heated. Causes skin irritation.	
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.	

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· Dangerous components:		
CAS: 64742-46-7	Distillates (petroleum), hydtrotreated middle (note N)	50-75%
EINECS: 265-148-2	🚯 Asp. Tox. 1, H304	
Reg.nr.: 01-2119489867-12-xxxx	Aquatic Chronic 2, H411	
EC number: 926-141-6	<i>Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics</i>	10-25%
Reg.nr.: 01-2119456620-43	🚱 Asp. Tox. 1, H304	
CAS: 124-38-9	carbon dioxide	1-2.5%
EINECS: 204-696-9	🔗 Press. Gas (Ref. Liq.), H281	
CAS: 57855-77-3	calcium sulphonate	1-2.5%
EINECS: 260-991-2	🚯 Skin Irrit. 2, H315; Eye Irrit. 2, H319	
Reg.nr.: 01-2119980985-16-0000		
	ALKYL DITHIOPHOSPHATE	0.1-1%
	🚯 Skin Sens. 1B, H317	
	Aquatic Chronic 4, H413	
Ingredients according to Deterger	nts Regulation 648/2004/EC For the wording of the listed hazard phrases refer	to section 16.

SECTION 4: First aid measures

• 4.1 Description of first aid measures

- · General information: Immediately remove any clothing soiled by the product.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.

• After skin contact:

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

• After swallowing: Seek immediate medical advice.

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- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.
- · Additional information Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures
- Wear protective equipment. Keep unprotected persons away.
- · 6.2 Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- 6.4 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.

SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling Keep away from heat and direct sunlight. Ensure good ventilation/exhaustion at the workplace.
- Information about fire and explosion protection: Do not spray onto a naked flame or any incandescent material. Keep ignition sources away - Do not smoke. Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50° C, i.e. electric lights. Do not pierce or burn, even after use.
- 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Observe official regulations on storing packagings with pressurised containers.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed. Protect from heat and direct sunlight.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
124-38-9 carbon dioxide (1-2.5%)
WEL (Great Britain)	Short-term value: 27400 mg/m³, 15000 ppm
	Short-term value: 27400 mg/m³, 15000 ppm Long-term value: 9150 mg/m³, 5000 ppm
	Long-term value: 9000 mg/m³, 5000 ppm
	$(C_{2}, t_{1}, t_{2}, t_{3}, t_{3},$

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123-92-2 Isoamyl acetate (0.1-1%) WEL (Great Britain) Short-term value: 541 mg/m², 100 ppm Long-term value: 270 mg/m³, 50 ppm IOELV (European Union) Short-term value: 540 mg/m², 100 ppm Long-term value: 270 mg/m³, 50 ppm • Additional information: The lists valid during the making were used as basis. • 8.2 Exposure controls Personal protective equipment: General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Avoid contact with the skin. Respiratory protection: Use suitable respiratory protective device only when aerosol or mist is formed. Filter A Protection of hands: Protection of hands: Protection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. Pertention time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. The determined penetration times according to EN 1523-1:2015 are not perfor		(Contd. of page
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maximum wearing time, which corresponds to 50% of the penetration time, is recommended. • Not suitable are gloves made of the following materials: Strong material gloves

9.1 Information on basic physical a	nd chemical properties
General Information	
Appearance:	
Form:	Aerosol
Colour:	Light brown
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling ra	inge: 208 °C
Flash point:	<0 °C
Flammability (solid, gas):	Not applicable.
Ignition temperature:	230 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	0.6 Vol %
Upper:	6 Vol %
Vapour pressure at 20 °C:	1 hPa

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Density at 20 °C:	0.862 g/cm^3
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
Solubility in / Miscibility with	
water:	Insoluble.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	72.8 %
EŬ-VOC:	174.2 g/l
EU-VOC	15.00%
Swiss VOC:	0.00 %
Solids content:	0.1 %
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

10.2 Chemical stability

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

• Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Oral LD50 >5,000 mg/kg (Rat) (OECD 401)

Dermal LD50 >5,000 mg/kg (Rabbit) (OECD 402 (24 h))

Inhalative LC50/8 h >5,000 mg/m3 (Rat) (OECD 403)

Primary irritant effect:

Skin corrosion/irritation

Causes skin irritation.

- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.

• STOT-repeated exposure Based on available data, the classification criteria are not met.

• Aspiration hazard

May be fatal if swallowed and enters airways.

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SECTION 12: Ecological information

· 12.1 Toxicity

• Aquatic toxicity:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics</th>EL50 (48 h)>1,000 mg/l (Daphnia magna (water flea)) (OECD 202)

OECD test 301 F 69 % (biodegradation in % after 28 days) Readily Biodegradable

• 12.2 Persistence and degradability No further relevant information available.

- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- Ecotoxical effects:
- · Remark: Toxic for fish

• Additional ecological information:

• General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Also poisonous for fish and plankton in water bodies.

- Toxic for aquatic organisms
- · 12.5 Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations

· European waste catalogue

15 00 00 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED

15 01 00 packaging (including separately collected municipal packaging waste)

15 01 04 metallic packaging

• Uncleaned packaging:

· Recommendation: Disposal in accordance with administrative provisions

14.1 UN-Number ADR, IMDG, IATA	UN1950
14.2 UN proper shipping name	
ADR	1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
IMDG	AEROSOLS (Distillates (petroleum), hydtrotreated middle (no
IATA	N)), MARINE POLLUTANT AEROSOLS, flammable
14.2 The second base of the second state of th	
14.3 Transport hazard class(es)	
ADR	
Class	2 5F Gases.

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Label	2.1
IMDG	
Class Label	2.1 2.1
Class	2.1
Label	2.1
14.4 Packing group ADR, IMDG, IATA	Void
14.5 Environmental hazards:	Product contains environmentally hazardous substances: Distillates (petroleum), hydtrotreated middle (note N)
Marine pollutant:	Yes Symbol (fish and tree) Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
14.6 Special precautions for user Danger code (Kemler): EMS Number:	Warning: Gases. - F-D,S-U
Stowage Code	SW1 Protected from sources of heat. SW2 Clear of living quarters.
Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 exce for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2.
	For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
14.7 Transport in bulk according to Annex II of the IBC Code	
Transport/Additional information:	**
ADR	
Limited quantities (LQ)	1L.
Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
Transport category Tunnel restriction code	2 D
	D
IMDG Limited quantities (LQ)	IL
Limitea quantities (LQ) Excepted quantities (EQ)	IL Code: E0
Excepted quantities (EQ)	Not permitted as Excepted Quantity
UN "Model Regulation":	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDO

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Reg. (EC) n. 1272/2008 - CLP;
Reg. (EC) n. 1907/2006 - Reach;
Reg. (EC) n. 2015/830 annex II of REACH;
Reg. (EC) n. 648/04 (Detergents);
Reg. (EC) n. 528/12 (Biocides BPR);
Reg. (EC) n. 1223/2009 (Cosmetics);

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Dir. 06/08 ADR – RID - IMDG - IATA;
Dir. 47/08 (Aerosols); Dir. 12/18 (Seveso III);
Dir. 2008/98/CE and Reg. (EC) n.1357/2014 (Waste management)

· Directive 2012/18/EU

- Named dangerous substances ANNEX I None of the ingredients is listed.
- · Seveso category

E2 Hazardous to the Aquatic Environment P3b FLAMMABLE AEROSOLS

Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t

- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· National regulations:

• Technical instructions (air):

ClassShare in %NK50-75

• Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 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.

· Relevant phrases

H281 Contains refrigerated gas; may cause cryogenic burns or injury. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life. · Department issuing SDS: Customer Service NL: Tel: + 31 164 250 100 Fax: + 31 164 266 710 B: Tel: +32 2 347 0117 Fax: +32 2 347 1395 IT: Tel: +39 069 266 91Fax: +39 06.927 470 61 UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011 Contact: Customer Service NL: Tel: + 31 164 250 100 Fax: + 31 164 266 710 B: Tel: +32 2 347 0117 Fax: +32 2 347 1395 IT: Tel: +39 069 266 91Fax: +39 06.927 470 61 UK: Tel: +44 151 422 1000 Fax: +44 151 422 1011 Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic compounds) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Aerosol 1: Aerosols – Category 1 Press. Gas (Ref. Liq.): Gases under pressure - Refrigerated liquefied gas Acute Tox. 4: Acute toxicity - inhalation – Category 4 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 Skin Sens. 1B: Skin sensitisation - Category 1B Asp. Tox. 1: Aspiration hazard - Category 1 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2 Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard - Category 4 (Contd. on page 9) GB

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• * Data compared to the previous version altered.

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Annex: Exposure scenario	
Short title of the exposure scenari	
For the finished product.	v
ZEP 45 DUAL FORCE	
	uses: Public domain (administration, education, entertainment, services, craftsmen)
Product category PC24 Lubrican	
Process category	s, srouses, release produces
PROC7 Industrial spraying	
PROC11 Non industrial spraying	,
Environmental release category	
	active processing aid (no inclusion into or onto article, indoor)
	vactive processing aid (no inclusion into or onto article, outdoor)
	esses covered in the Exposure Scenario See section 1 of the annex to the Safety Data Sheet
Conditions of use	
Duration and frequency 5 workda	rys/week.
Physical parameters	
Physical state Aerosol	
	the mixture The substance is main component.
Used amount per time or activity	
Other operational conditions	
Other operational conditions affe	cting environmental exposure Use only on hard ground.
Other operational conditions affe	cting worker exposure
Avoid contact with the skin.	
Avoid long-term or repeated skin c	
Take precautionary measures agai	
Keep away from sources of ignition	n - No smoking.
Indoor application.	
Outdoor application.	
Do not breathe aerosol.	
	cting consumer exposure Keep out of the reach of children.
	cting consumer exposure during the use of the product Not applicable.
Risk management measures	
Worker protection	No second and a second s
Organisational protective measur	es ivo speciai measures requirea.
Technical protective measures	aguinm out
Provide explosion-proof electrical	
Use product only in enclosed syste	
	e available on processing machines
Personal protective measures Avoid contact with the skin.	
Protective gloves Use suitable respiratory protective	e device only when aerosol or mist is formed.
Filter A	uevice only when derosol of mist is joi med.
Filler A Measures for consumer protection	n
Ensure adequate labelling.	1
Ensure adequate tabetting. Keep locked up and out of the reac	ch of children
Environmental protection measure	
Water Do not allow to reach sewa	
Soil Prevent contamination of soil.	
Disposal measures	
Disposal in accordance with admin	nistrative provisions
Ensure that waste is collected and	
	lisposed together with household garbage. Do not allow product to reach sewage system.
Waste type Partially emptied and i	
Exposure estimation	norouneu puenuzinz
	nosura Scanario
Consumer Not relevant for this Ex	