Safety Data Sheet
PETRONAS PARAFLU HT

Revision Date: 20/12/2022
version 5

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

MIXTURE IDENTIFICATION:
Trade name: **PETRONAS PARAFLU HT**
Trade code: 76057
Registration Number N/A

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RECOMMENDED USE: Concentrate coolant.
USES ADVISED AGAINST: This product should not be used for other purposes than those specified without the advice of an expert.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

COMPANY: PETRONAS LUBRICANTS ITALY S.P.A.
Via Santena 1
10029 Villastellone (Torino)
Tel: +39.01196131 Fax : +39.0119613313

COMPETENT PERSON FOR SAFETY DATA OF PRODUCT:
Information on the legislation compliance info-regulation.eu@pli-petronas.com

1.4. EMERGENCY TELEPHONE NUMBER

Emergency Answer Service (24h/7d):
+44 1235 239670

SECTION 2: HAZARDS IDENTIFICATION



2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Regulation (EC) n. 1272/2008 (CLP)

Acute Tox. 4	Harmful if swallowed.
STOT RE 2	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

Adverse physicochemical, human health and environmental effects:
No other hazards

2.2. LABEL ELEMENTS

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words



Warning

Hazard statements

H302	Harmful if swallowed.
H373	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P264	Wash the hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P501	Dispose of contents/container in accordance with local, regional, national, international regulation

Contains
Ethylene glycol

Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. OTHER HAZARDS

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

N.A.

3.2. MIXTURES

Glycols, additives, water.

Hazardous components within the meaning of the CLP regulation and related classification:

QTY	NAME	IDENT. NUMB.	CLASSIFICATION	REGISTRATION NUMBER
90.0-100.0 %	Ethylene glycol	CAS:107-21-1 EC:203-473-3 Index:603-027-00-1	Acute Tox. 4, H302; STOT RE 2, H373	01-2119456816-28-XXXX

0.3-<0.5 %	(Benzothiazol-2-ylthio)acetic acid	CAS:6295-57-4 EC:228-565-0	Acute Tox. 4, H302; Eye Dam. 1, H318; Aquatic Chronic 3, H412; Repr. 2, H361	01-2120762667-41-XXXX

H-phrases and list of abbreviations: see heading 16.

SECTION 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

IN CASE OF SKIN CONTACT:

Remove contaminated clothes and shoes and rinse thoroughly with plenty of water and soap.

IN CASE OF EYES CONTACT:

Rinse thoroughly with plenty of water for at least 10 minutes keeping eyelids open. Remove contact lenses if this can be done easily. Obtain medical attention in case of development and persistence of pain and redness. In case of contact with hot product, rinse thoroughly with plenty of water to dissipate heat. Obtain immediate medical attention to assess eye conditions and the correct treatment to be practiced.

IN CASE OF INGESTION:

Obtain IMMEDIATE MEDICAL ATTENTION if the product has been swallowed and show label or package. Do not induce absolutely vomiting to avoid aspiration into the respiratory tracts. If vomiting occurs spontaneously, keep head down to avoid the risk of aspiration into the lungs. Never give anything by mouth to an unconscious person.

IN CASE OF INHALATION:

Expose affected person to fresh air and obtain medical attention if necessary.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Refer to section 11.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Refer to section 4.1.

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

This product has no special fire risk. In case of fire use foam, carbon dioxide, dry chemical powder and water mist.

Cool down with water the containers don't get involved in fire to avoid their possible explosion.

Avoid high pressure water jet. Use water jet only to cool down surfaces exposed to fire.

SUITABLE EXTINGUISHING MEDIA:

Water.

Carbon dioxide (CO_2).

EXTINGUISHING MEDIA WHICH MUST NOT BE USED FOR SAFETY REASONS:
None in particular.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Don't breathe combustion fumes: fire can form harmful compounds.
Do not inhale explosion and combustion gases.
Burning produces heavy smoke.
HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon, compounds of sulphur, phosphorus, nitrogen and products of incomplete combustion.

5.3. ADVICE FOR FIREFIGHTERS

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Avoid ingestion of product. Avoid contact with skin and eyes by wearing appropriate protective clothing. Avoid to breathe fumes and aereosols.
Surfaces on which the product has been spilled may become slippery.
Wear personal protection equipment.
See protective measures under point 7 and 8.

6.2. ENVIRONMENTAL PRECAUTIONS

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Avoid flame and/or spark near leak and produced waste. Do not smoke. In case of large spills dike, absorb and shovel up into suitable containers for disposal. Contain small spills with absorbent material. Put dirty material in suitable container. Dispose of dirty material in accordance with local or national regulations.

6.4. REFERENCE TO OTHER SECTIONS

See also section 8 and 13

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Avoid ingestion. Avoid frequent and prolonged skin contact and contact with eyes. Provide adequate ventilation to avoid mist or aereosol. Don't smoke or use spare flames; avoid contact with spark or other sources of ignition. Don't work near open container to avoid high concentration of vapours. Don't eat or drink during use.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store under cover in the original container securely closed away from heat and sources of ignition. Do not store in the open air. Assure a correct ventilation of premises and the control of possible leak. Keep out of flame or spark and avoid the accumulation of electrostatic charges. Keep out of reach of children and away from food and drink.

Storage class (TRGS 510, Germany): 10

7.3. SPECIFIC END USE(S)

Refer to the uses listed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Community Occupational Exposure Limits (OEL)

	OEL TYPE	LONG TERM MG/M3	LONG TERM PPM	SHORT TERM MG/M3	SHORT TERM PPM	NOTES
Ethylene glycol CAS: 107-21-1	CHINA	20.000		40.000		
	EU	52.000	20.000	104.000	40.000	

Predicted No Effect Concentration (PNEC) values

	PNEC LIMIT	EXPOSURE ROUTE	EXPOSURE FREQUENCY	REMARK
Ethylene glycol CAS: 107-21-1	10 mg/l	Fresh Water		
	1 mg/l	Soil (agricultural)		
	20.9 mg/l	Marine water		

Derived No Effect Level (DNEL) values

WORKER INDUSTRY	WORKER PROFESSIONAL	CONSUMER	EXPOSURE ROUTE	EXPOSURE FREQUENCY	REMARK

Ethylene glycol CAS: 107-21-1	106 mg/kg	Human Dermal	Long Term, systemic effects	
	35	Human Inhalation	Long Term, local effects	mg/m3
	53 mg/kg	Human Dermal	Long Term, systemic effects	
	7	Human Inhalation	Long Term, local effects	mg/m3

8.2. EXPOSURE CONTROLS

TECHNICAL PRECAUTIONS:

Avoid production and diffusion of mist and aerosol with utilization of localized ventilation/aspiration or other required precautions. Adopt all required precaution to avoid product immission in environment (e.g., blasting systems, catch basins, ...).

EYE PROTECTION:

Chemical goggles and face shield in case of oil splashes.

PROTECTION FOR SKIN:

Wear suitable protective clothing (for further information, refer to CEN-EN 14605); change it immediately in case of large contamination and wash it before subsequent use.

Practice reasonable personal cleanliness.

PROTECTION FOR HANDS:

Wear suitable gloves (i.e. neoprene, nitrile). Gloves should be changed when they show wear. The kind of gloves and the term of use must be decided from employer with regard to processing and to allow for DPI legislation and glove producer's indications. Wear gloves only with clean hands.

RESPIRATORY PROTECTION:

None required under normal conditions of use. Use approved full face respirator with organic vapour filter cartridge if the recommended exposure limits are exceeded.

ENVIRONMENTAL EXPOSURE CONTROLS:

Refer to technical precautions and also to sections 6.2, 6.3, 7.2, 12 and 13.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE LIQUID
APPEARANCE AND COLOUR: LIQUID YELLOW
ODOUR: NOT RELEVANT
ODOUR THRESHOLD: NOT RELEVANT
PH: 7.70 (ASTM D1287)
MELTING POINT / FREEZING POINT: N.A.
INITIAL BOILING POINT AND BOILING RANGE: 108 °C (226 °F) (ASTM D1120)
FLASH POINT: >110 °C (230 °F) (ASTM D93)
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: N.A.

VAPOUR DENSITY: N.A.
VAPOUR PRESSURE: N.A.
DENSITY 1.11 G/CM3 (ASTM D5931)
SOLUBILITY IN WATER: MISCIBLE
SOLUBILITY IN OIL: N.A.
PARTITION COEFFICIENT (N-OCTANOL/WATER): N.A.
AUTO-IGNITION TEMPERATURE: N.A.
DECOMPOSITION TEMPERATURE: N.A.
KINEMATIC VISCOSITY AT 100°C N.A.
KINEMATIC VISCOSITY AT 40°C N.A.
EXPLOSIVE PROPERTIES: N.A.
OXIDIZING PROPERTIES: N.A.
FLAMMABILITY: N.A.
VOLATILE ORGANIC COMPOUNDS - VOCS = N.A.
PARTICLE CHARACTERISTICS:
PARTICLE SIZE: N.A.

9.2. OTHER INFORMATION

FREEZING POINT N.A.
POUR POINT N.A.
DROPPING POINT N.A.
SUBSTANCE GROUPS RELEVANT PROPERTIES
MISCIBILITY: N.A.
CONDUCTIVITY: N.A.
NO OTHER RELEVANT INFORMATION

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

Read carefully all information provided in other sections of heading 10.

10.2. CHEMICAL STABILITY

The product is stable under normal conditions of use.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Not expected under normal conditions of use.

10.4. CONDITIONS TO AVOID

This product must be kept far from heat sources. In any case, it is suggested to avoid temperatures above 100°C to prevent evaporation of product water.

10.5. INCOMPATIBLE MATERIALS

This product is alkaline: has to avoid contact with acid substances. This contact may prime a neutralization reaction that sometimes can be violent and give origin to heat development and product jets. Avoid contact with strong oxidizing agents and other hard bases too.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of carbon and compounds of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008

ACUTE TOXICITY:
Harmful if swallowed. Excessive exposure may cause central nervous system effects and kidney damage.
While to not cause harm if accidentally swallowed in small doses, ingestion of large quantities may cause gastro-intestinal effects.

SKIN CORROSION OR IRRITATION:
This product is not classified in this hazard class, but prolonged or repeated skin contact sometimes may cause irritations and dermatitis.

SERIOUS EYE DAMAGE OR EYE IRRITATION:
This product is not classified in this hazard class, but direct contact may cause slight irritations.

RESPIRATORY SENSITIZATION:
This product is not classified in this hazard class.

SKIN SENSITIZATION:
This product is not classified in this hazard class.

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.

SPECIFIC TARGET ORGAN TOXICITY (STOT) – SINGLE EXPOSURE:
This product is not classified in this hazard class, but inhalation of mists and vapours generated at elevated temperatures sometimes may cause respiratory irritation.

SPECIFIC TARGET ORGAN TOXICITY (STOT) – REPEATED EXPOSURE:
This product is classified in this hazard class.

ASPIRATION HAZARD:
This product is not classified in this hazard class.

11.2 INFORMATION ON OTHER HAZARDS

Endocrine disrupting properties:
No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Eco-Toxicological Information:
This product is not classified dangerous for the environment.

No endocrine disruptor substances present in concentration >= 0.1%

12.2. PERSISTENCE AND DEGRADABILITY

Data on biodegradability of product are not available.

12.3. BIOACCUMULATIVE POTENTIAL

Not available.

12.4. MOBILITY IN SOIL

As the dispersion in the environment may result in contamination of environmental matrix (soil, subsoil, surface water and groundwater), do not release in the environment.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

Not available.

12.6. ENDOCRINE DISRUPTING PROPERTIES

No effect known.

12.7 OTHER ADVERSE EFFECTS

No effect known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Prevent contamination of soil, drains and surface waters.Do not discharge in sewers, tunnels or water courses. Dispose in accordance with local or national regulations via authorised person/licensed waste disposal contractor.

The used product has to be considered a special waste to be classified in accordance to Directive 2008/98/EC on waste and related legislation.

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: TRANSPORT INFORMATION

14.1. UN NUMBER OR ID NUMBER

N/A

14.2. UN PROPER SHIPPING NAME

ADR-Shipping Name: N/A
IATA-Technical name: N/A
IMDG-Technical name: N/A

14.3. TRANSPORT HAZARD CLASS(ES)

ADR-Class: N/A
IATA-Class: N/A
IMDG-Class: N/A

14.4. PACKING GROUP

ADR-Packing Group: N/A
IATA-Packing group: N/A
IMDG-Packing group: N/A

14.5. ENVIRONMENTAL HAZARDS

Toxic Ingredients Qty: 0.00
High Toxicity Ingredients Qty: 0.00
Marine pollutant: No
Environmental Pollutant: No
IMDG-EMS: N/A

14.6. SPECIAL PRECAUTIONS FOR USER

Road and Rail (ADR-RID) :
ADR-Label: N/A
ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A
ADR-Transport category (Tunnel restriction code): N/A

Air (IATA) :

IATA-Passenger Aircraft: N/A
IATA-Cargo Aircraft: N/A
IATA-Label: N/A
IATA-Subsidiary hazards: N/A
IATA-Erg: N/A
IATA-Special Provisioning: N/A

Sea (IMDG) :

IMDG-Stowage Code: N/A
IMDG-Stowage Note: N/A
IMDG-Subsidiary hazards: N/A
IMDG-Special Provisioning: N/A

14.7. MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

N.A.

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT IN QUESTION

Regulation (EC) No 1272/2008, with all National and European related legislations - on classification, labelling and packaging of substances and mixtures - and following adjustments to technical and scientific progress.

Regulation (EC) No 790/2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Regulation (EC) No 1907/2006, with all National and European related legislations - concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EU) No 878/2020 amending Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Directives 89/391/EC, 89/654/EC, 89/655/EC, 89/656/EC, 90/269/EC, 90/270/EC, 90/394/EC, 90/679/EC and all following updates, togeher with its national implementation about improvement of worker safety and health.

Directives 98/24/EC and all following updates, together with its national implementation about protection of worker safety and health against chemical agent risks.

Directive 1991/156/EC and all following updates, together with national waste legislation

EC directives and national environment protection legislation (air, water and soil)

Regulation 648/2004/EC on detergents

Directive 2012/18/UE, together with its national realization, on the control of major-accident hazards involving dangerous substances.

REGULATION (EU) N. 286/2011 (ATP 2 CLP)

REGULATION (EU) N. 618/2012 (ATP 3 CLP)

REGULATION (EU) N. 487/2013 (ATP 4 CLP)

REGULATION (EU) N. 944/2013 (ATP 5 CLP)

REGULATION (EU) N. 605/2014 (ATP 6 CLP)
REGULATION (EU) N. 2015/1221 (ATP 7 CLP)
REGULATION (EU) N. 2016/918 (ATP 8 CLP)
REGULATION (EU) N. 2016/1179 (ATP 9 CLP)
REGULATION (EU) N. 2017/776 (ATP 10 CLP)
REGULATION (EU) N. 2018/669 (ATP 11 CLP)
REGULATION (EU) N. 2021/849 (ATP 17 CLP)

RESTRICTIONS RELATED TO THE PRODUCT OR THE SUBSTANCES CONTAINED ACCORDING TO ANNEX XVII REGULATION (EC) 1907/2006 (REACH) AND SUBSEQUENT MODIFICATIONS:
Restrictions related to the product: 3, 40
Restrictions related to the substances contained: 70
PROVISIONS RELATED TO DIRECTIVE EU 2012/18 (SEVESO III):

N.A.
REGULATION (EU) NO 649/2012 (PIC REGULATION)

No substances listed
GERMAN WATER HAZARD CLASS.
N.A.
SVHC SUBSTANCES:
No data available

15.2. CHEMICAL SAFETY ASSESSMENT

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

SECTION 16: OTHER INFORMATION

Sheet complies with the criteria of Regulation (EU) No. 878/2020 as well as with Regulation (EC) No. 1272/2008 and following adjustments.
This document was prepared by a competent person who has received appropriate training.
This product must not be used in applications other than recommended without first seeking the advice of the Technical Department.
This SDS cancels and replaces any preceding release.

This product must be stored, handled and used according to correct industrial hygienic practices and in compliance with laws in force.
The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be considered as any guarantee of specific properties.

Caption about heading 3, H-statements:

CODE	DESCRIPTION
H302	Harmful if swallowed.
H318	Causes serious eye damage.

H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)
H412	Harmful to aquatic life with long lasting effects.

CODE	HAZARD CLASS AND HAZARD CATEGORY	DESCRIPTION
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

CLASSIFICATION ACCORDING TO REGULATION (EC) NR. 1272/2008	CLASSIFICATION PROCEDURE
3.1/4/Oral	Calculation method
3.9/2	Calculation method

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

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

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

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

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep away from heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

*** Sheet model entirely changed in compliance to regulatory update.**