

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Issue date: 1/9/2023 Revision date: 3/8/2023 Version: 1.0

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

1.1. Product identifier

Product form : Mixture Trade name SOL 1205

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Asphalt, Shoes, Adhesives, Modifying agent for Plastic

1.2.2. Uses advised against

Restrictions on use : Not available

1.3. Details of the supplier of the safety data sheet

Manufacturer Supplier Kumho Petrochemical Co.Ltd TsafeE GmbH

287-1, Pyeongyeo-Dong, Yeosu-si Jeollanam-do, Korea Landwehrplatz 6, 66111 Saarbruecken, Germany

T +82 61 688 3060 ~ 9 - F +82 61 688 3168 T +49 177 9166175 tsg@tsafeg.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) Universitätsmedizin Göttingen - Georg- August-Universität	Robert-Koch Straße 40 37075 Göttingen	+49 (0) 551 19240	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

	_	100	100	_	-	_	-	4
C	o	111	Ю	O	п	е	п	т
_	•	••••	r	•	•••	•		•

Phosphorous acid, mixed 2,4-bis(1,1dimethylpropyl)phenyl and 4-(1,1dimethylpropyl)phenyl triesters (939402-02-5)

PBT: not relevant - no registration required vPvB: not relevant - no registration required

3/8/2023 (Revision date) EN (English) 1/11

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Component			
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (2082-79-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII		

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
STYRENE-BUTADIENE RUBBER	CAS-No.: 9003-55-8	99.5	Not classified
Phosphorous acid, mixed 2,4-bis(1,1-dimethylpropyl)phenyl and 4-(1,1-dimethylpropyl)phenyl triesters	CAS-No.: 939402-02-5 EC-No.: 700-485-5	0.1 – 0.3	Not classified
Octadecyl 3-(3,5-di-tert-butyl-4- hydroxyphenyl)propionate	CAS-No.: 2082-79-3 EC-No.: 218-216-0	0.1 – 0.3	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Specific treatment is necessary.

Remove person to fresh air and keep comfortable for breathing.

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable

for breathing.

Move the affected person away from the contaminated area and into the fresh air.

First-aid measures after skin contact : Wash contaminated clothing before reuse.

Immediately rinse with plenty of water (for at least 15 minutes).

After contact with skin, take off immediately all contaminated clothing, and wash

immediately with plenty of water and soap.

First-aid measures after eye contact : Do not rub eyes.

Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes

minimum).

First-aid measures after ingestion : Rinse mouth thoroughly with water.

Call a poison center or a doctor if you feel unwell.

Give nothing to drink.

Do not induce vomiting (irritation of the stomach possible).

Ask for medical advice.

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

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO2). Dry powder.

Special protective equipment and precautions for fire-fighters.

Unsuitable extinguishing media : Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Could be ignited by heat, sparks or flames.

Could burn but do not ignite readily.

Contains gas under pressure; may explode if heated.

Fire produces a combination of irritating, corrosive and toxic gases.

Explosion hazard : Pressurised container: May burst if heated.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

Vapour could cause dizziness or suffocation.

5.3. Advice for firefighters

Firefighting instructions : Inhalation of material could be harmful.

Withdraw immediately in case of rising sound from venting devices or discolouration from

tank.

Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Complete protective clothing.

Notify fire brigade and environmental authorities.

Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Stop leak if safe to do so.

Avoid contact with skin, eyes and clothing. Ventilate confined spaces before entering.

Only qualified personnel equipped with suitable protective equipment may intervene.

Move containers from fire area if it can be done without personal risk.

6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

Do not attempt to take action without suitable protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

In case of large spillages: Notify authorities if liquid enters sewers or public waters.

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : If spillage occurs on the public highway, indicate the danger and notify the authorities

(police, fire brigade).

Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable

waste treatment techniques.

For large spills, confine the spill in a dike and charge it with wet sand or earth for

subsequent safe disposal.

Collect leaking and spilled liquid in sealable containers as far as possible.

Small spills: Use suitable disposal containers.

Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

3/8/2023 (Revision date) EN (English) 3/11

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment.

Conform to current legislation, regulations and orders. Read and follow the Safety Data Sheet (SDS) before use.

Avoid any direct contact with the product.
Use only outdoors or in a well-ventilated area.
Ensure good ventilation of the work station.

Hygiene measures : Do not eat, drink or smoke when using this product.

Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Check leak tightness / impermeability prior to use.

Avoid static, spark, and fire hazards. Protect from heat and direct sunlight. Do not heat the storage container.

Do not re-use empty containers without proper cleaning or reconditioning.

Store in a well-ventilated place.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Measure concentrations regularly, and at the time of any change occuring in conditions likely to have consequences on workers exposure.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):









8.2.2.1. Eye and face protection

Eye protection:

Safety glasses.

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Effective dust mask.

High efficiency particulate air filter (HEPA filter).

Carefully comply with the instructions for use.

Wear suitable respiratory equipment in case of insufficient ventilation.

In case of insufficient ventilation, wear suitable respiratory equipment.

Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid Colour : white. Odour : Rubbers. Odour threshold : Not available Melting point : Not available Freezing point : Not available : Not available Boiling point Flammability : Not available : Not applicable Explosive limits Lower explosion limit : Not applicable : Not applicable Upper explosion limit Flash point : > 288 °C Auto-ignition temperature : 440 °C Decomposition temperature : Not available рΗ : Not available pH solution : Not available Viscosity, kinematic : > 0.91 - < 0.97 Solubility : insoluble in water. Partition coefficient n-octanol/water (Log Kow) : Not available Vapour pressure : Not available Vapour pressure at 50°C : Not available : Not available Density Relative density : Not available Relative vapour density at 20°C : Not applicable : Not available Particle size Particle size distribution : Not available : Not available Particle shape Particle aspect ratio : Not available Particle aggregation state : Not available Particle agglomeration state : Not available Particle specific surface area : Not available Particle dustiness : Not available

3/8/2023 (Revision date) EN (English) 5/11

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. Hazardous polymerisation: Not available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Prevents handling of incompatible substances or mixtures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not available
Acute toxicity (dermal) : Not available
Acute toxicity (inhalation) : Not available

Phosphorous acid, mixed 2,4-bis(1,1-dimethylpropyl)phenyl and 4-(1,1-dimethylpropyl)phenyl triesters (939402-02-5)			
LD50 oral rat > 2000 mg/kg bodyweight Guidline: OECD Guideline 420 (Acute Oral Toxicity - Fixied Dose Method)			
LD50 dermal rat	> 2000 g/kg OECD Guideline 402 (Acute Dermal Toxicity)		

Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (2082-79-3)		
LD50 oral rat > 5000 mg/kg bodyweight Species: other: Tif: RAlf(SPF)		
LD50 dermal rat > 2000 mg/kg bodyweight Species: other: Tif: RAlf(SPF)		
LC50 Inhalation - Rat > 1.81 mg/l air Species: other: Tif. RAI		

Skin corrosion/irritation : Not available
Serious eye damage/irritation : Not available
Respiratory or skin sensitisation : Not available
Germ cell mutagenicity : Not available

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Carcinogenicity : Not available

NOAEL (chronic, oral, animal/male, 2 years) ≥ 218 mg/kg bodyweight Species: other: CFY

Reproductive toxicity : Not available

Phosphorous acid, mixed 2,4-bis(1,1-dimethylpropyl)phenyl and 4-(1,1-dimethylpropyl)phenyl triesters (939402-02-5)

NOAEL (animal/male, F1) 1000 mg/kg bodyweight Species: Wistar rat

Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (2082-79-3)

NOAEL (animal/female, F0/P) ≥ 373.04 mg/kg bodyweight Species: other: Crl:COBS CD (SD) BR

STOT-single exposure : Not available

STOT-repeated exposure : Not available

Aspiration hazard : Not available

SOL 1205

Viscosity, kinematic > 0.91 - < 0.97

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short–term

(acute)

cute)

Hazardous to the aquatic environment, long-term (chronic)

Not rapidly degradable

: Not available

: Not available

Phosphorous acid, mixed 2,4-bis(1,1-dimethylpropyl)phenyl and 4-(1,1-dimethylpropyl)phenyl triesters (939402-02-5)		
LC50 - Fish [1] 100 mg/l Species: Oncorhynchus mykiss (previous name: Salmo gairdneri)		
NOEC (chronic)	320 mg/l Speices: activated sludge a predominantly domestic sewage	
NOEC chronic fish 100 mg/l Species: other: Gobiocypris rarus		

Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (2082-79-3)			
LC50 - Fish [1]	> 100 mg/l Species: Lepomis macrochirus		
LC50 - Fish [2]	> 100 mg/l Species: Oncorhynchus mykiss (previous name: Salmo gairdneri)		
EC50 72h - Algae [1]	> 30 mg/l Species: Desmodesmus subspicatus (previous name: Scendesmus subspicatus)		
NOEC chronic crustacea	≥ 2 mg/l Species: Daphnia magna		
NOEC chronic algae	30 mg/l Species: Desmodesmus subspicatus (previous name: Scendesmus subspicatus)		

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Phosphorous acid, mixed 2,4-bis(1,1-dimethylpropyl)phenyl and 4-(1,1-dimethylpropyl)phenyl triesters (939402-02-5)			
BCF - Fish [1] > 40 - < 352 Speices: Cyprinus carpio			
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate (2082-79-3)			
BCF - Fish [1] > 210 - < 1470 Species: Cyprinus carpio			
Bioaccumulative potential Reduced Bioaccumulation.			

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component			
Phosphorous acid, mixed 2,4-bis(1,1-dimethylpropyl)phenyl and 4-(1,1-dimethylpropyl)phenyl triesters (939402-02-5)	PBT: not relevant – no registration required vPvB: not relevant – no registration required		
Octadecyl 3-(3,5-di-tert-butyl-4- hydroxyphenyl)propionate (2082-79-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII		

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations

Waste treatment methods : Separate using oil separator.

Recycle the material as far as possible.

The generation of waste should be avoided or minimized wherever possible.

Incinerate contaminated materials at an authorized installation.

Dispose of contaminated materials in accordance with current regulations.

Dispose of contents/container in accordance with licensed collector's sorting instructions

and in accordance to local and regional legislation.

: Disposal must be done according to official regulations.

HP Code : Auto detect - Auto detect

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID		
14.1. UN number or ID number						
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated		
14.2. UN proper shipping name						
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated		

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Storage class (LGK, TRGS 510) : LGK 13 - Non-combustible solids

3/8/2023 (Revision date) EN (English) 9/11

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Joint storage table

LGK 2A LGK 2B LGK 3 LGK 4.1A LGK 1 LGK 4.1B LGK 4.2 LGK 4.3 LGK 5.1A LGK 5.1B LGK 6.1A LGK 5.1C LGK 6.1B LGK 5.2 LGK 6.1C LGK 6.1D LGK 6.2 LGK 7 LGK 8A LGK 8B LGK 11 LGK 12 LGK 10 LGK 13 LGK 10-13

Joint storage not permitted for Joint storage with restrictions permitted for

: LGK 4.1A, LGK 5.1C Joint storage permitted for

: LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12,

LGK 13, LGK 10-13

: LGK 1, LGK 6.2, LGK 7

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:			
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways		
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road		
ATE	Acute Toxicity Estimate		
BCF	Bioconcentration factor		
BLV	Biological limit value		
BOD	Biochemical oxygen demand (BOD)		
COD	Chemical oxygen demand (COD)		
DMEL	Derived Minimal Effect level		
DNEL	Derived-No Effect Level		
EC-No.	European Community number		
EC50	Median effective concentration		
EN	European Standard		
IARC	International Agency for Research on Cancer		
IATA	International Air Transport Association		
IMDG	International Maritime Dangerous Goods		
LC50	Median lethal concentration		
LD50	Median lethal dose		
LOAEL	Lowest Observed Adverse Effect Level		
NOAEC	No-Observed Adverse Effect Concentration		
NOAEL	No-Observed Adverse Effect Level		
NOEC	No-Observed Effect Concentration		
OECD	Organisation for Economic Co-operation and Development		
OEL	Occupational Exposure Limit		
PBT	Persistent Bioaccumulative Toxic		
PNEC	Predicted No-Effect Concentration		
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail		

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:		
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU, TSAFEG

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.