

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

1.1. Product identifier

Name of the substance	Polyol ester
Trade name of the substance	SYLVAROAD™ RP 1000 PERFORMANCE ADDITIVE
Identification number	-
Registration number	-
Synonyms	None.
SDS number	13673
Product code	200000001616
Issue date	15-October-2013
Version number	5,1
Revision date	25-January-2022
Supersedes date	04-September-2018

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

Identified uses	Industrial uses: Uses of substances as such or in preparations at industrial sites. Formulation [mixing] of preparations and/or re-packaging (excluding alloys).
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company name	Kraton Chemical B.V.
Address	Transistorstraat 16, 1322 CE Almere, The Netherlands
Phone	+31 36 546 2800
Email address	regulatory.eu@kraton.com

1.4. Emergency telephone number EU NCEC +44 1865 407 333

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary Not available.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms	None.
Signal word	None.
Hazard statements	The substance does not meet the criteria for classification.

Precautionary statements

Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Polyol ester	100	Proprietary	-	-	

Classification: -

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed Direct contact with eyes may cause temporary irritation.

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

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Water spray, dry chemical, carbon dioxide. Foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Wear suitable protective equipment. Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear appropriate personal protective equipment.

For emergency responders Keep unnecessary personnel away.

6.2. Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

6.3. Methods and material for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections Not available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Avoid release to the environment. Observe good industrial hygiene practices. Follow all SDS/label precautions even after container is emptied because they may retain product residues.

7.2. Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Keep containers closed when not in use. Store at ambient temperature and atmospheric pressure.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection Wear appropriate chemical resistant gloves.
- Other Wear suitable protective clothing.

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

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Eye wash fountain and emergency showers are recommended.

Environmental exposure controls Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid.

Form Liquid.

Colour Yellow

Odour Mild

Melting point/freezing point Not available.

Boiling point or initial boiling point and boiling range > 300 °C (> 572 °F)

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

- Flammability limit - lower (%) Not available.
- Flammability limit - upper (%) Not available.

Flash point 279,4 °C (534,9 °F) Cleveland open cup (Ambient Conditions); ASTM D92

Auto-ignition temperature Not available.

Decomposition temperature	Not available.
pH	Not available.
Solubility(ies)	
Solubility (water)	0,6 mg/l OECD 105 at 20°C
Partition coefficient (n-octanol/water)	Not available.
Vapour pressure	< 0,1 mPa SPARC v4,6
Vapour density	Not available.
Relative density	0,927 ASTM D1475 at 20°C
Particle characteristics	Not available.
Other safety characteristics	
Pour point	-48 °C (-54,4 °F) ASTM D97
Viscosity	100,8 mm ² /s ASTM D445 at 20°C

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Strong oxidising agents. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

SECTION 11: Toxicological information

General information No data on possible toxicity effects have been found.

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Polyol ester	Irritation Corrosion - Eye, No eye irritation.; Data is for similar product. Result: Negative Species: New Zealand white rabbit Organ: Eye Test Duration: 72 hr Observation Period: 72 hr Notes: OECD 405

Ingestion Expected to be a low ingestion hazard.

Symptoms Exposure may cause temporary irritation, redness, or discomfort.

11.1. Information on toxicological effects

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

Components	Species	Test Results
Polyol ester		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
	Sprague-Dawley rat	> 2000 mg/kg, 14 days At this dose no death occurred.; Data is for similar product.; OECD 402.
Inhalation		
LC50	Wistar rat	> 5,22 mg/l, 4 h (As Aerosol); At this dose no death occurred.; Data is for similar product.; OECD 436
Oral		
LD50	Rat	> 2000 mg/kg

Components	Species	Test Results
	Sprague-Dawley rat	> 2000 mg/kg, 14 days At this dose no death occurred.; Data is for similar product.; OECD 423
<u>Subacute</u>		
Dermal		
NOAEL	Sprague-Dawley rat	>= 2000 mg/kg/day, 28 days Data is for similar product.; OECD 411
Oral		
NOAEL	Rat	>= 1000 mg/kg/day, 28 days Data is for similar product.; OECD 407
<u>Subchronic</u>		
Dermal		
NOAEL	Sprague-Dawley rat	>= 2000 mg/kg/day, 6 hours Developmental Effects; Data is for similar product.; OECD 414

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Corrosivity		
Polyol ester		Irritation Corrosion - Skin, No skin irritation.; Data is for similar product. Result: Negative Species: New Zealand white rabbit Organ: Skin Test Duration: 4 hr Observation Period: 3 days Notes: OECD 404
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Eye contact		
Polyol ester		Irritation Corrosion - Eye, No eye irritation.; Data is for similar product. Result: Negative Species: New Zealand white rabbit Organ: Eye Test Duration: 72 hr Observation Period: 72 hr Notes: OECD 405
Respiratory sensitisation	Not available.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	
Skin Sensitisation		
Polyol ester		Maximisation assay (Magnusson and Kligman), Not a skin sensitizer.; Data is for similar product.; OECD 406 Result: Negative Species: Guinea pig Organ: Skin Notes: OECD 406
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are carcinogenic.	
Mutagenicity		
Polyol ester		In vitro gene mutation study in mammalian cells, This material is considered to be non-clastogenic to human lymphocytes in vitro.; Data is for similar product.; OECD 476 Result: Negative Species: Mouse Organ: mammalian cell COMET assay (L5178Y mouse lymphoma cells) Notes: OECD 476
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Mixture versus substance information	No information available.

11.2. Information on other hazards

Endocrine disrupting properties	Not available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Polyol ester		
<i>Acute</i>		
Other	EL50 Pseudokirchnerella subcapitata	> 110 mg/l, 72 hr >> Water solubility; Data is for similar product.; OECD 201
Aquatic		
<i>Acute</i>		
Crustacea	EL50 Daphnia magna	> 106 mg/l, 48 hr >> Water solubility; Data is for similar product.; OECD 202
Fish	LL50 Danio rerio	> 102 mg/l, 96 hr >> Water solubility; Data is for similar product.; OECD 203
<i>Chronic</i>		
Crustacea	EL50 Daphnia magna	> 0,11 g/l, 21 days >> Water solubility; Data is for similar product.; OECD 211

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability The product is biodegradable.

Biodegradability

Percent Degradation (Aerobic Biodegradation)

Polyol ester	86,6 % CO2 Evolution Test, Data is for similar product.; OECD 301B Result: Readily biodegradable Species: Activated sewage sludge Test Duration: 28 days
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12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Endocrine disrupting properties Not available.

12.7. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number Not available.
14.2. UN proper shipping name Not available.
14.3. Transport hazard class(es)
Class Not available.
Subsidiary risk -
Hazard No. (ADR) Not available.
Tunnel restriction code Not available.
14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Not available.

RID

14.1. UN number Not available.
14.2. UN proper shipping name Not available.
14.3. Transport hazard class(es)
Class Not available.
Subsidiary risk -
14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Not available.

ADN

14.1. UN number Not available.
14.2. UN proper shipping name Not available.
14.3. Transport hazard class(es)
Class Not available.
Subsidiary risk -
14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Not available.

IATA

14.1. UN number Not available.
14.2. UN proper shipping name Not available.
14.3. Transport hazard class(es)
Class Not available.
Subsidiary risk -
14.4. Packing group Not available.
14.5. Environmental hazards No.
14.6. Special precautions for user Not available.

IMDG

14.1. UN number Not available.
14.2. UN proper shipping name Not available.
14.3. Transport hazard class(es)
Class Not available.
Subsidiary risk -
14.4. Packing group Not available.
14.5. Environmental hazards
Marine pollutant No.
EmS Not available.
14.6. Special precautions for user Not available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

Water hazard class

AwSV

Generally hazardous to water

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

Not applicable.

Full text of any H-statements not written out in full under Sections 2 to 15

None.

Revision information

SECTION 16: Other information: Disclaimer

Training information

Follow training instructions when handling this material.

Disclaimer

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