

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

1.1. Product identifier

Name of the substance	Terpene Resin
Trade name of the substance	SYLVARES™ TP 2040HM
Identification number	-
Registration number	-
Synonyms	None.
SDS number	9107
Product code	200000000729
Issue date	15-December-2016
Version number	4,0
Revision date	03-June-2022
Supersedes date	01-November-2019

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 May form explosible dust-air mixture if dispersed.

2.2. Label elements

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

Contains:	Terpene Phenolic
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

May form explosible dust-air mixture if dispersed. This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Terpene Phenolic	99-100	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).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

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 Do not rub eyes. 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 Dusts may irritate the respiratory tract, skin and eyes.

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

SECTION 5: Firefighting measures

General fire hazards May form combustible dust concentrations in air.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Apply extinguishing media carefully to avoid creating airborne dust.

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 High concentration of airborne dust may form explosive mixture with air. Static charges generated by emptying package in or near flammable vapour may cause flash fire. 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 In case of fire and/or explosion do not breathe fumes. 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. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Minimise dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Wear appropriate personal protective equipment. 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

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at ambient temperature and atmospheric pressure. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Belgium. Exposure Limit Values

Additional components	Type	Value	Form
Dust	TWA	3 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Additional components	Type	Value	Form
Dust	TWA	3,5 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.

Czech Republic. OELs. Government Decree 361

Additional components	Type	Value	Form
Dust	TWA	5 mg/m ³	Dust.

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Additional components	Type	Value	Form
Dust	TWA	5 mg/m ³	Fine dust, respiratory fraction
		1 mg/m ³	Total dust.

Finland

Additional components	Type	Value
Dust	TWA	5 mg/m ³
		10 mg/m ³

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Additional components	Type	Value	Form
Dust	VME	5 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.
Regulatory status:	Regulatory binding (VRC)		
Regulatory status:	Regulatory binding (VRC)		

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Additional components	Type	Value	Form
Dust	TWA	4 mg/m ³	Inhalable dust.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Additional components	Type	Value	Form
Dust	AGW	10 mg/m ³	Inhalable fraction.
		1,25 mg/m ³	Respirable fraction.

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Additional components	Type	Value	Form
Dust	TWA	5 mg/m ³	Respirable dust.
		10 mg/m ³	Total dust.

Ireland. Occupational Exposure Limits

Additional components	Type	Value	Form
Dust	TWA	4 mg/m ³	Respirable dust.
		10 mg/m ³	Total inhalable dust.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Additional components	Type	Value	Form
Dust	TWA	5 mg/m ³	Dust.

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Additional components	Type	Value	Form
Dust	TWA	5 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.

Netherlands

Additional components	Type	Value	Form
Dust	TWA (MAC)	5 mg/m ³	Respirable dust.
		10 mg/m ³	Total dust.

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Additional components	Type	Value	Form
Dust	TWA	10 mg/m ³	Total
		10 mg/m ³	Dust.

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Additional components	Type	Value	Form
Dust	TWA	10 mg/m ³	Inhalable fraction.
		1,25 mg/m ³	Respirable fraction.

Spain. Occupational Exposure Limits

Additional components	Type	Value	Form
Dust	TWA	3 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Additional components	Type	Value	Form
Dust	TWA	5 mg/m ³	Inhalable dust.
		2,5 mg/m ³	Respirable dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Additional components	Type	Value	Form
Dust	TWA	3 mg/m ³	Respirable dust.
		10 mg/m ³	Inhalable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Additional components	Type	Value	Form
Dust	TWA	4 mg/m ³	Respirable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Additional components	Type	Value	Form
		10 mg/m ³	Inhalable dust.
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	Explosion-proof general and local exhaust ventilation. 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	Use personal protective equipment as required. 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. Suitable gloves can be recommended by the glove supplier.		
- Other	Wear suitable protective clothing.		
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.		
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.		
Hygiene measures	When using, do not eat, drink or smoke. 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. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.		

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Solid.
Form	Flakes.
Colour	Light yellow.
Odour	Mild. Phenolic.
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Flash point	211,0 °C (411,8 °F) Setaflash Closed Cup
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	Not available.
Solubility(ies)	
Solubility (water)	< 0,1 % at 25°C
Partition coefficient (n-octanol/water)	Not available.

Vapour pressure	< 0,001 mm Hg at 20°C
Vapour density	Not available.
Relative density	1 at 25°C/25°C (water=1)
Particle characteristics	Not available.
Other safety characteristics	
Chemical family	Terpene Resin
Density	1000,00 kg/m ³ at 20°C
Evaporation rate	0 (n-BuAc=1) estimated
Percent volatile	0,1 % by weight (estimated)
Softening point	125 °C (257 °F) Ring & Ball
Viscosity	7815 cP Brookfield at 150°C
Weighted solids	100 %

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. Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimise dust generation and accumulation.
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 Not available.

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms Dusts may irritate the respiratory tract, skin and eyes.

11.1. Information on toxicological effects

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

Components	Species	Test Results
Terpene Phenolic		
Acute		
Oral		
<i>Solid</i>		
LD50	Rat	> 7000 mg/kg

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

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitisation	Not available.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are carcinogenic.
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 available.

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

11.2. Information on other hazards

Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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.
12.2. Persistence and degradability	No data is available on the degradability of this product.
12.3. Bioaccumulative potential	No data available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
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. Dispose of contents/container in accordance with local/regional/national/international regulations.
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 Not available.
for user

ADN

- 14.1. UN number Not available.
14.2. UN proper shipping Not available.
name
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 Not available.
for user

IATA

- 14.1. UN number Not available.
14.2. UN proper shipping Not available.
name
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 Not available.
for user

IMDG

- 14.1. UN number Not available.
14.2. UN proper shipping Not available.
name
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 Not available.
for user
14.7. Transport in bulk Not applicable.
according to Annex II of
MARPOL 73/78 and the IBC
Code

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

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

Water hazard class

AwSV

WGK1

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 2: Hazards identification: 2,3. Other hazards
SECTION 8: Exposure controls/personal protection: Environmental exposure controls
SECTION 11: Toxicological information: Endocrine disrupting properties
SECTION 12: Ecological information: 12,6. Endocrine disrupting properties
SECTION 12: Ecological information: 12,5. Results of PBT and vPvB assessment
SECTION 16: Other information: Disclaimer
GHS: Classification

Training information

Follow training instructions when handling this material.

Disclaimer

KRATON CORPORATION urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information set forth in this document, as of the date of this document, is based on present knowledge, obtained from reliable sources and made to our reasonable ability and in good faith. Such information is made without any warranty or guarantee whatsoever, and shall establish no legal duty or responsibility on the part of the author(s), their employer or its affiliates. The information given is designed only as guidance and its completeness is not guaranteed. The information is not a guarantee of any specific product properties, features, qualities or specifications.

The information relates only to the specific product designated as shipped, and may not be valid for such product used in combination with any other materials or products, or in any process, unless expressly specified in this document. Nothing set forth in this document shall be construed as a recommendation or license to use any product in conflict with, or as claimed by, any existing patents rights. The user alone must finally determine whether a contemplated use of a product will infringe any such patents. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities are in compliance with all Local, Federal and International Legislation and Local Permits.

We, for ourselves and on behalf of our affiliates, expressly disclaim any and all liability for any damages or injuries arising out of any activities relating in any way to the information set forth in this document. Due to the proliferation of sources for information, we are not and cannot be responsible for SDSs obtained from any other source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

*KRATON, the KRATON logo, the "Green Super Drop" logo, 1101, ABIETA, AQUATAC, BiaXam, BI-THIN, CENTURY, CENWAX, CirKular+, ELEXAR, ELLAMERA, E-LEXAR, HiMA, IMSS, IPD, NEXAR, PER-SUST, PriMul, RAD-THICK, REFLECTAID, REvolution, SYLFAT, SYLVABIND, SYLVABLEND, SYLVACLEAR, SYLVACOTE, SYLVADERM, SYLVAFUEL, SYLVAGEL, SYLVAGUM, SYLVALITE, SYLVAMIN, SYLVAPINE, SYLVAPRINT, SYLVARES, SYLVAROAD, SYLVAROS, SYLVASOLV, SYLVATAC, SYLVATAL, SYLVATRAXX, TER-SET, UNICLEAR, UNIDYME, UNIFLEX, UNI-REZ, UNI-TAC, and ZONATAC are either trademarks or registered trademarks of Kraton Corporation, or its subsidiaries or affiliates, in one or more, but not all countries.

©2016-2022 Kraton Corporation