Safety data sheet
according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

PAG 150 240 ml
Art.: 8FX 351 213-041

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture:
Refrigeration machine oil
Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet
Behr Hella Service GmbH, Dr.-Manfred-Behr-Str. 1, D-74523 Schwäbisch Hall
Telephone: +49 (0) 7907 9446 483 31, Fax: +49 (0) 7907 9446 483 73

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone
Emergency information services / official advisory body:
+49 228 19240 (D-53113 Bonn, 24 hour)
Telephone number of the company in case of emergencies:
Tel.: +49 (0) 7907 9446 483 31

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)
Not determined
2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments)
The mixture is not classified as dangerous in the terms of the directive 1999/45/EC.
2.2 Label elements
2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)
Not determined
2.2.2 Labeling according to Directives 67/548/EEC and 1999/45/EC (including amendments)

Symbols: Not applicable
Indications of danger: ---
R-phrases:

S-phrases:

Additions:
Safety data sheet available for professional user on request.

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revised on / Version: 19.01.2011 / 0005
Replaces revision of / Version: 15.05.2009 / 0004
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2.3 Other hazards
The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

SECTION 3: Composition/information on ingredients

Polyglycols
3.1 Substance
n.a.
3.2 Mixture

Tris(methylphenyl)phosphate	
Registration number (REACH)	--
Index	015-016-00-3
EINECS, ELINCS, NLP	215-548-8
CAS	CAS 1330-78-5
content %	1-<2,5
Classification according to Directive 67/548/EEC	Harmful, Xn, R21/22 Dangerous for the environment, N, R51 Dangerous for the environment, R53
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H312 Acute Tox. 4, H302 Aquatic Chronic 2, H411

For the text of the R-phrases / H-phrases and classification codes (GHS/CLP), see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
Inhalation
Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.
Skin contact
Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.
Eye contact
Wash thoroughly for several minutes using copious water. Seek medical help if necessary.
Ingestion
Rinse the mouth thoroughly with water.
Do not induce vomiting. Consult doctor immediately.
Give water to drink.
4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
The following may occur:
Irritation of the eyes
Skin irritation possible with prolonged contact.
With oil mist formation:
Irritation of the respiratory tract
Ingestion:
Irritation of the stomach
Gastrointestinal disturbances
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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4.3 Indication of any immediate medical attention and special treatment needed
Indications for the physician:
Symptomatic treatment

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
CO2
Dry extinguisher
Alcohol resistant foam
Cool container at risk with water.
Unsuitable extinguishing media
High volume water jet
5.2 Special hazards arising from the substance or mixture
In case of fire the following can develop:
Oxides of carbon
Irritating vapours
Toxic pyrolysis products.
5.3 Advice for firefighters
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure sufficient supply of air.
Avoid contact with eyes or skin.
Do not carry cleaning cloths soaked in product in trouser pockets.
If applicable, caution - risk of slipping
6.2 Environmental precautions
If leakage occurs, dam up.
Resolve leaks if this possible without risk.
Prevent surface and ground-water infiltration, as well as ground penetration.
If accidental entry into drainage system occurs, inform responsible authorities.
6.3 Methods and material for containment and cleaning up
Soak up with absorbent material (e.g. universal binding agent) and dispose of according to Section 13.
6.4 Reference to other sections
For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.
7.1 Precautions for safe handling
7.1.1 General recommendations

Ensure good ventilation.
Avoid aerosol formation.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Do not heat to temperatures close to flash point.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Suitable container:
Steel
Protect against moisture and store closed.
Protect from direct sunlight and warming.
Only store at temperatures from 15°C to 35°C.
Stability during storage:
min. 24 months.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Tris(methylphenyl)phosphate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - oral	Short term, systemic effects	DNEL	157,5	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,03	mg/kg	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	1,11	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,47	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,28	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,06	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	16	mg/cm2	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	3,33	mg/kg bw/day	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	74	mg/kg bw/day	
Consumer	Human - dermal	Short term, systemic effects	DNEL	37	mg/kg bw/day	
Consumer	Human - dermal	Short term, local effects	DNEL	8	mg/cm2	
	Environment - freshwater		PNEC	0,000146	mg/l	
	Environment - sediment, freshwater		PNEC	0,0404	mg/kg dw	
	Environment - sediment, marine		PNEC	0,00404	mg/kg dw	

	Environment - soil		PNEC	0,00000 317	mg/kg dw	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - oral (animal feed)		PNEC	0,67	g/kg feed	

8.2 Exposure controls
8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.

8.2.2 Individual protection measures, such as personal protective equipment
General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection: Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection: Chemical resistant protective gloves (EN 374).
If applicable
Protective Neoprene® / polychloroprene gloves (EN 374).
Protective nitrile gloves (EN 374)
Protective hand cream recommended.

Skin protection - Other: Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)

Respiratory protection: Normally not necessary.
If fumes build up, use suitable breathing mask.
Filter A P 3 (EN 14387), code colour brown, white

Thermal hazards:
If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls
No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined

Melting point/freezing point:	<-40 °C (Setting point)
Initial boiling point and boiling range:	>200 °C
Flash point:	225 °C (Cleveland, open cup)
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	<5 mmHg (20°C)
Vapour density (air = 1):	>1
Density:	1,029 g/ml (15°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	133 cSt (40°C)
Explosive properties:	Not determined
Oxidising properties:	Not determined

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity
See also Subsection 10.2 to 10.6.
The product has not been tested.

10.2 Chemical stability
See also Subsection 10.1 to 10.6.
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
See also Subsection 10.1 to 10.6.

10.4 Conditions to avoid
See also section 7.
Strong heat
Protect from humidity.

10.5 Incompatible materials
See also section 7.
Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products
See also Subsection 10.1 to 10.5.
See also section 5.2

SECTION 11: Toxicological information

Possibly more information on health effects, see Section 2.1 (classification).

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Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes

Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						n.d.a.
Other information:						Classification according to calculation procedure.

Tris(methylphenyl)phosphate

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	20000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	3500	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	11,1	mg/l/1h	Rat		Aerosol
Skin corrosion/irritation:				Rabbit		Mild irritant
Serious eye damage/irritation:				Rabbit		Not irritant
Respiratory or skin sensitisation:				Guinea pig		Not sensitizising
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Reproductive toxicity:						
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1000	mg/kg bw/d	Rat		
Symptoms:						mucous membrane irritation

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

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Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.

Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.
Other information:							According to the recipe, contains no AOX.

Tris(methylphenyl)phosphate							
Toxicity/effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Toxicity to fish:	LC50	96h	0,6	mg/l	Oncorhynchus mykiss		
Toxicity to daphnia:	EC50	48h	0,146	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae:	NOEC/NOEL	72h	2,5	mg/l	Chlorella pyrenoidosa	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability:		28d	80	%			
Bioaccumulative potential:	BCF		144				Not to be expected
Results of PBT and vPvB assessment							Negative
Other adverse effects:	AOX						Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Water solubility:			<0,1	g/l			

SECTION 13: Disposal considerations

13.1 Waste treatment methods
For the substance / mixture / residual amounts

Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of.
EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)
13 02 06 synthetic engine, gear and lubricating oils
Recommendation:
Pay attention to local and national official regulations
E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations
15 01 01 paper and cardboard packaging
15 01 04 metallic packaging
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.

SECTION 14: Transport information

General statements

UN number:	n.a.

Transport by road/by rail (ADR/RID)

UN proper shipping name:	
Transport hazard class(es):	n.a.
Packing group:	n.a.
Classification code:	n.a.
LQ (ADR 2013):	n.a.
LQ (ADR 2009):	n.a.
Environmental hazards:	Not applicable
Tunnel restriction code:	

Transport by sea (IMDG-code)

UN proper shipping name:	
Transport hazard class(es):	n.a.
Packing group:	n.a.
Marine Pollutant:	n.a
Environmental hazards:	Not applicable

Transport by air (IATA)

UN proper shipping name:	
Transport hazard class(es):	n.a.
Packing group:	n.a.
Environmental hazards:	Not applicable

Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

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

For classification and labelling see Section 2.
Observe restrictions: n.a.
VOC 1999/13/EC ---

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

These details refer to the product as it is delivered.
Revised sections: 1 - 16
The following phrases represent the posted R phrases / H phrases, Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
21/22 Harmful in contact with skin and if swallowed.
51 Toxic to aquatic organisms.

53 May cause long-term adverse effects in the aquatic environment.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H411 Toxic to aquatic life with long lasting effects.

Acute Tox. — Acute toxicity - dermal
Acute Tox. — Acute toxicity - oral
Aquatic Chronic — Hazardous to the aquatic environment - chronic

Any abbreviations and acronyms used in this document:

AC Article Categories
acc., acc. to according, according to
ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV Biological monitoring guidance value (EH40, UK)
BOD Biochemical oxygen demand
BSEF Bromine Science and Environmental Forum
bw body weight
CAS Chemical Abstracts Service
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC Collaborative International Pesticides Analytical Council
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
COD Chemical oxygen demand
CTFA Cosmetic, Toiletry, and Fragrance Association
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
DT50 Dwell Time - 50% reduction of start concentration
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ERC Environmental Release Categories
ES Exposure scenario
etc. et cetera

EU European Union
EWC European Waste Catalogue
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
HET-CAM Hen's Egg Test - Chorionallantoic Membrane
HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
IBC (Code) International Bulk Chemical (Code)
IC Inhibitory concentration
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform ChemicaL Information Database
LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute of Occupational Safety and Health (United States of America)
NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern

Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.
These statements were made by:

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