

# SAFETY DATA SHEET

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

1.1. Product identifier	
Trade name or designation of the mixture	Husqvarna XP Power 2
Registration number	-
UFI	0E00-V0C8-H00Q-WNPA
Synonyms	None.
Product number	583 95 29-04 (200L); 583 95 29-03 (60L); 583 95 29-02 (25L), 583 95 29-01 (5L); 589 22 76-10 (5L); 582 20 20-05 (5L), 589 22 76-01 (1L)
Issue date	03-June-2020
Version number	01
Revision date	-
Supersedes date	-
1.2. Relevant identified uses of	the substance or mixture and uses advised against
Identified uses	Petrol for 2-stroke engine.
Uses advised against	None known.
1.3. Details of the supplier of th	e safety data sheet
Company name	Husqvarna AB
	Drottninggatan 2
	561 82 Huskvarna, Sweden
Telephone	+46 (0)36-14 65 00
Contact person	Accessory Department
E-mail	sds.info@husqvarnagroup.com
1.4. Emergency telephone number	+1-760-476-3961 (Access code 333721)
General in EU	112 (Available 24 hours a day, SDS/Product information may not be available for

General in EU 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

The mixture 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

Physical hazards			
Flammable liquids		Category 1	H224 - Extremely flammable liquid and vapour.
Health hazards			
Skin corrosion/irritati	on	Category 2	H315 - Causes skin irritation.
Specific target organ exposure	toxicity - single	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.
Aspiration hazard		Category 1	H304 - May be fatal if swallowed and enters airways.
Environmental hazards			
Hazardous to the aquatic environment, long-term aquatic hazard		Category 2	H411 - Toxic to aquatic life with long lasting effects.
Hazard summary	cause drowsine	May be ignited by heat, sparks or flames. May be fatal if swallowed and enters airways. May cause drowsiness and dizziness. Causes skin irritation. Dangerous for the environment if discharged into watercourses.	
2.2. Label elements			
Label according to Regulat	ion (EC) No. 1272/200	)8 as amended	
UFI	0E00-V0C8-H0	0Q-WNPA	
Contains:	Low boiling poir	nt naphtha (Gasoline)	

Husqvarna XP Power 2

Hazard pictograms



Signal word	Danger
Hazard statements	
H224	Extremely flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
Response	
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P331	Do NOT induce vomiting.
Storage	Not assigned.
Disposal	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental label information	None.
2.3. Other hazards	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

## **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

#### **General information**

Chemical name		%	CAS-No. / EC No.	<b>REACH Registration No.</b>	Index No.	Notes
Naphtha (petroleum), full-ı alkylate, butane-contg	range	67 - 74	68527-27-5 271-267-0	01-2119471477-29-0018	649-282-00-2	
	Flam. Liq. Chronic 2;I		Tox. 1;H304, Skin li	rit. 2;H315, STOT SE 3;H33	36, Aquatic	Р
Hydrocarbons, C >= 5, C5	-6-Rich	26 - 33	68476-50-6 270-690-8	01-2119489866-14-0003	649-401-00-8	
	Flam. Liq. Chronic 2;ł	, , ,	Tox. 1;H304, Skin li	rit. 2;H315, STOT SE 3;H33	36, Aquatic	
Fully synthetic 2-stroke oil		2	-	-	-	
			-			
Classification:	-					

#### List of abbreviations and symbols that may be used above

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The product is an alkylate gasoline mixed with a fully synthetic 2-stroke oil. The following compounds may be present: Benzene (CAS 71-43-2) <0.1% v/v; n-hexane (CAS 110-54-3) <0.5% v/v; aromatic hydrocarbons <0.5% v/v.

Composition comments

The full text for all H-statements is displayed in section 16.

## **SECTION 4: First aid measures**

 General information
 Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

 4.1. Description of first aid measures
 Inhalation

 Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON

	CENTRE or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Husqvarna XP Power 2

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

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

Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain.

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

### **SECTION 5: Firefighting measures**

00	
General fire hazards	Extremely flammable liquid and vapour.
5.1. Extinguishing media	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
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	Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
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. 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 ro	lassa massuras

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.
For emergency responders	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.
6.2. Environmental precautions	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	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent product from entering drains.
	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.
	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	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Petrol for 2-stroke engine.

## **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 offect levels (DNEL a	

## Derived no effect levels (DNELs)

Conorol Population	5)			
General Population		Value	Accomment factor	Notoo
<u>Components</u> Low boiling point naphtha (G		Value	Assessment factor	NULES
Low boining point naphtna (G Long-term, Local, Inhala Short-term, Local, Inhala Short-term, Systemic, In	ation	180 mg/m3 640 mg/m3 1200 mg/m3		
<u>Workers</u>				
Components		Value	Assessment factor	Notes
Low boiling point naphtha (G	asoline) (CAS -)			
Long-term, Local, Inhala Short-term, Local, Inhala Short-term, Systemic, In	ation	840 mg/m3 1100 mg/m3 1300 mg/m3		
Predicted no effect concentrations (PNECs)	Not available.			
8.2. Exposure controls				
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation should be use Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommen exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling product.		e process enclosures, local rne levels below recommended ntain airborne levels to an	
Individual protection measures	, such as perso	nal protective equipmen	t	
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). Face shield is recommended.			
Skin protection				
- Hand protection	(EN 374) with	9	Omin permeation time). Glo	cal resistant protective gloves ove material: Nitrile rubber.
- Other	Wear appropri	Wear appropriate chemical resistant clothing.		
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapour cartridge and full facepiece. Use filter type AX according to EN 14387.			
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.			
Hygiene measures	When using do not 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.			
Environmental exposure controls	with the requir	ements of environmental odifications to the proces	protection legislation. Fum	hecked to ensure they comply e scrubbers, filters or sary to reduce emissions to

## **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Mobile. Liquid.
Colour	Blue.
Odour	Hydrocarbon. Mild.
Odour threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.

Initial boiling point and boiling	30 - 200 °C (86 - 392 °F)
range	
Flash point	< 0 °C (< 32.0 °F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	7.6 %
Flammability limit - upper (%)	1.4 %
Vapour pressure	50 - 65 kPa (38 °C)
Vapour density	> 3 Air = 1
Relative density	0.68 - 0.72 (15.4 °C)
Solubility(ies)	< 50 μg/l (20 °C)
Partition coefficient (n-octanol/water)	Log Kow: >3
Auto-ignition temperature	400 °C (752 °F) Approx.
Decomposition temperature	Not available.
Viscosity	< 1 mm²/s (kinematic) (38 °C)
Explosive properties	Not explosive.
Oxidising properties	Not oxidising. Does not meet the criteria as an oxidizer.
9.2. Other information	No relevant additional information available.

## **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	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

## **SECTION 11: Toxicological information**

General information	Occupational exposure to	the substance or mixture may cause adverse effects.	
Information on likely routes of exposure			
Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting.		
Skin contact	Causes skin irritation.	Causes skin irritation.	
Eye contact	Direct contact with eyes m	nay cause temporary irritation.	
Ingestion	Droplets of the product as chemical pneumonia.	pirated into the lungs through ingestion or vomiting may cause a serious	
Symptoms	Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.		
11.1. Information on toxicological effects			
Acute toxicity	May be fatal if swallowed	and enters airways. Narcotic effects.	
Components	Species	Test Results	
Low boiling point naphtha (Ga	asoline) (CAS -)		
<u>Acute</u>			
Dermal			
LD50	Rabbit	> 2000 mg/kg	
Inhalation			

> 5.2 mg/l

> 5000 mg/kg

Rat

Rat

Causes skin irritation.

LC50

**Oral** LD50

Skin corrosion/irritation

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.
Skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	May be fatal if swallowed and enters airways.
Mixture versus substance information	No information available.
Other information	No additional adverse health effects noted.

## **SECTION 12: Ecological information**

12.1. Toxicity	May cause long lasting harmful effects to aquatic life.			
Product		Species	Test Results	
Husqvarna XP Power 2 (CAS Miz	xture)			
Aquatic				
Algae	NOEC	Pseudokirchneriella subcapitata	100 mg/l, 72 Hours OECD 201, ref. report 081/15	
Crustacea	NOEC	Daphnia magna	100 mg/l, 48 Hours OECD 202, ref. report 086/15	
Acute				
Algae	EC50	Pseudokirchneriella subcapitata	> 100 mg/l, 72 Hours OECD 201, ref. report 081/15	
Crustacea	EC50	Daphnia magna	> 100 mg/l, 48 Hours OECD 202, ref. report 086/15	
Components		Species	Test Results	
Naphtha (petroleum), full-range a	alkylate, butan	e-contg (CAS 68527-27-5)		
Aquatic				
Acute				
Algae	EL50	Pseudokirchnerella subcapitata	3.1 mg/l, 72 hours (OECD 201)	
Crustacea	EL50	Daphnia magna	4.5 mg/l, 48 hours (OECD 202)	
Fish	LL50	Pimephales promelas	8.2 mg/l, 96 hours (EPA 66013-75-009	
Chronic				
Crustacea	NOELR	Daphnia magna	2.6 mg/l, 21 days (OECD 211)	
2.2. Persistence and legradability	Expected	Expected to be inherently biodegradable.		
2.3. Bioaccumulative potentia	d			
Partition coefficient n-octanol/water (log Kow) Husqvarna XP Power 2		> 3 (Log Kow)		
Bioconcentration factor (BCF)	Not availal	Not available.		
2.4. Mobility in soil	No data av	No data available.		
I2.5. Results of PBT and vPvB assessment	This mixtu	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.		
12.6. Other adverse effects	The produ	The product contains volatile substances, which may spread in the atmosphere.		
SECTION 13: Disposal co	onsideratio	ons		
3.1. Waste treatment methods	5			
	<b>D</b> :			

**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. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.
SECTION 14: Transport in	formation
ADR	
14.1. UN number	UN1203
14.2. UN proper shipping name	GASOLINE
14.3. Transport hazard clas	s(es)
Class	3
Subsidiary risk	-
Label(s)	3

ADR	
14.1. UN number	UN1203
14.2. UN proper shipping	GASOLINE
name	
14.3. Transport hazard class	s(es)
Class	3
Subsidiary risk	
Label(s)	3
Hazard No. (ADR)	33
Tunnel restriction code	D/E
14.4. Packing group	ll
14.5. Environmental hazards	s Yes
14.6. Special precautions	Read safety instructions, SDS and emergency procedures before handling.
for user	
RID	
14.1. UN number	UN1203
14.2. UN proper shipping	GASOLINE
name	
14.3. Transport hazard class	s(es)
Class	3
Subsidiary risk	-
Label(s)	3
14.4. Packing group	ll
14.5. Environmental hazards	s Yes
14.6. Special precautions	Read safety instructions, SDS and emergency procedures before handling.
for user	
ADN	
14.1. UN number	UN1203
14.2. UN proper shipping	GASOLINE
name	
14.3. Transport hazard class	
Class	3
Subsidiary risk	•
Label(s)	3
14.4. Packing group	
14.5. Environmental hazards	
14.6. Special precautions	Read safety instructions, SDS and emergency procedures before handling.
for user	
	1014202
14.1. UN number	UN1203
14.2. UN proper shipping	Gasoline
name	
14.3. Transport hazard class	
Class Subsidiery risk	3
Subsidiary risk	-
14.4. Packing group	
14.5. Environmental hazards ERG Code	3H
14.6. Special precautions	Read safety instructions, SDS and emergency procedures before handling.
for user	
IMDG	
14.1. UN number	UN1203
14.2. UN proper shipping	GASOLINE
name	

14.3. Transport hazard class	(es)	
Class	3	
Subsidiary risk		
14.4. Packing group		
14.5. Environmental hazards	Yes	
Marine pollutant EmS	F-E, S-E	
14.6. Special precautions	Read safety instructions, SDS and emergency procedures before handling.	
for user		
14.7. Transport in bulk	Not applicable.	
according to Annex II of MARPOL 73/78 and the IBC		
Code		
SECTION 15: Bogulatory in	aformation	
SECTION 15: Regulatory in		
	nental regulations/legislation specific for the substance or mixture	
EU regulations		
	09 on substances that deplete the ozone layer, Annex I and II, as amended	
Not listed.	4 On persistent organic pollutants, Annex I as amended	
Not listed.	4 On persistent organic polititants, Annex i as amendeu	
	2 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended	
Not listed.		
Regulation (EU) No. 649/201	2 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended	
Not listed.		
• • • •	2 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended	
Not listed. Regulation (FU) No. 649/201	2 concerning the export and import of dangerous chemicals, Annex V as amended	
Not listed.		
	6 Annex II Pollutant Release and Transfer Registry, as amended	
Not listed.		
	06, REACH Article 59(10) Candidate List as currently published by ECHA	
Not listed.		
UFI	0E00-V0C8-H00Q-WNPA	
Authorisations		
• • • •	06, REACH Annex XIV Substances subject to authorisation, as amended	
Not listed.		
Restrictions on use		
• • • •	06, REACH Annex XVII Substances subject to restriction on marketing and use as amended	
Not listed.	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 maj	or accident hazards involving dangerous substances, as amended	
Not listed.		
Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP	
	Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.	
	Directive 2012/18/EU on major accident hazards involving dangerous substances: Part 2 (Named	
	dangerous substances) - 34. Petroleum products and alternative fuels.	
National regulations	Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as	
	amended.	
	Young people under 18 years old are not allowed to work with this product according to EU	
	Directive 94/33/EC on the protection of young people at work, as amended.	
15.2. Chemical safety assessment	Chemical Safety Assessment has been carried out.	

## **SECTION 16: Other information**

#### List of abbreviations

	<ul> <li>PBT: Persistent, bioaccumulative and toxic.</li> <li>vPvB: Very Persistent and very Bioaccumulative.</li> <li>CEN: European Committee for Standardisation.</li> <li>EC50: Effective Concentration, 50%.</li> <li>EL50: Effective level, 50%.</li> <li>LD50: Lethal Dose, 50%.</li> <li>LL50: Lethal level, 50%.</li> <li>NOEC: No observed effect concentration.</li> <li>NOEL: No observed effect level.</li> </ul>
References	ECHA registered substances database
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	H224 Extremely flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.
Training information	Follow training instructions when handling this material.
Disclaimer	Husqvarna AB cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.